



September 28, 2018

Service Request No:R1808653

Ms. Alene Onion
New York State DEC
625 Broadway
Albany, NY 12233-3502

Laboratory Results for: LCI 2018

Dear Ms.Onion,

Enclosed are the results of the sample(s) submitted to our laboratory September 11, 2018
For your reference, these analyses have been assigned our service request number **R1808653**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and ALS Environmental 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. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7472. You may also contact me via email at Janice.Jaeger@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

A handwritten signature in black ink, appearing to read "Janice Jaeger".

Janice Jaeger
Project Manager

CC: Jason Fagel



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Narrative Documents

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Client: New York State DEC
Project: LCI 2018
Sample Matrix: Water

Service Request: R1808653
Date Received: 09/11/2018

CASE NARRATIVE

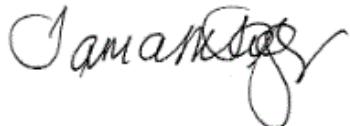
All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV, validation deliverables including all summary forms and associated raw data. Analytical procedures performed by the lab are validated in accordance with NELAC standards. Any parameters that are not included in the lab's NELAC accreditation are identified on a "Non-Certified Analytes" report in the Miscellaneous Forms Section of this report. Individual analytical results requiring further explanation are flagged with qualifiers and/or discussed below. The flags are explained in the Report Qualifiers and Definitions page in the Miscellaneous Forms section of this report.

Sample Receipt:

Three water samples were received for analysis at ALS Environmental on 09/11/2018. Any discrepancies noted upon initial sample inspection are noted on the cooler receipt and preservation form included in this data package. The samples were received in good condition and consistent with the accompanying chain of custody form. Samples are refrigerated at 6°C upon receipt at the lab except for aqueous samples designated for metals analyses, which are stored at room temperature.

General Chemistry:

No significant anomalies were noted with this analysis.

A handwritten signature in black ink that appears to read "Samanta".

Approved by _____

Date 09/28/2018



SAMPLE DETECTION SUMMARY

CLIENT ID: 19PKTP19FW		Lab ID: R1808653-001				
Analyte	Results	Flag	MDL	MRL	Units	Method
Alkalinity, Total as CaCO ₃	65.6		1.0	2.0	mg/L	SM 2320 B-1997 (2011)
Ammonia as Nitrogen, undistilled	0.0100		0.0008	0.0050	mg/L	ASTM D6919-09
Nitrogen, Total Kjeldahl (TKN)	0.81		0.08	0.10	mg/L	351.2
Phosphorus, Total	0.0095		0.0020	0.0050	mg/L	365.1

CLIENT ID: 19PKTP18DS		Lab ID: R1808653-002				
Analyte	Results	Flag	MDL	MRL	Units	Method
Alkalinity, Total as CaCO ₃	66.0		1.0	2.0	mg/L	SM 2320 B-1997 (2011)
Ammonia as Nitrogen, undistilled	0.0073		0.0008	0.0050	mg/L	ASTM D6919-09
Nitrogen, Total Kjeldahl (TKN)	0.80		0.08	0.10	mg/L	351.2
Phosphorus, Total	0.0092		0.0020	0.0050	mg/L	365.1

CLIENT ID: 19PKTP18DD		Lab ID: R1808653-003				
Analyte	Results	Flag	MDL	MRL	Units	Method
Ammonia as Nitrogen, undistilled	5.43		0.0008	0.0050	mg/L	ASTM D6919-09
Nitrate+Nitrite as Nitrogen	0.0060		0.0007	0.0020	mg/L	353.2
Nitrogen, Total Kjeldahl (TKN)	5.57		0.08	0.10	mg/L	351.2
Phosphorus, Total	0.87		0.10	0.25	mg/L	365.1



Sample Receipt Information

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Client: New York State DEC
Project: LCI 2018/PK2018

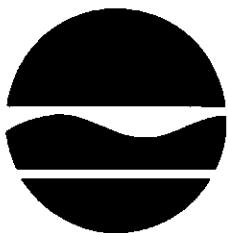
Service Request:R1808653

SAMPLE CROSS-REFERENCE

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R1808653-001	19PKTP19FW	9/6/2018	1032
R1808653-002	19PKTP18DS	9/6/2018	0957
R1808653-003	19PKTP18DD	9/6/2018	1003

CHAIN OF CUSTODY

Page 1 of 1



**New York State Department of
Environmental Conservation –
Division of Water**

Special Analysis Instructions:

Relinquished by Sampler:	Date:	Time:	Received by:	Date:	Time:	Laboratory Receipt Notes:
Relinquished by: <i>Hunter Ackerman</i>	Date: 9/10/18	Time: 11:06	Received by: <i>H.A.</i>	Date: 9/10/18	Time: 11:06 am	Sample Type: R1808653 Property ID: New York State DEC Samples ID: LCI 2018
Relinquished by: <i>J. A.</i>	Date: 9/10/18	Time: 1600	Received by Laboratory: <i>Leigh J. A.</i>	Date: 9/11/18	Time: 0915	5



Cooler Receipt and Preservation Check Form

R1808653

New York State DEC
LCI 2018

5

Project/Client _____

Folder Number _____

Cooler received on 9/11/18 by: QCOURIER: ALS UPS ~~REDEX~~ VELOCITY CLIENT

1	Were Custody seals on outside of cooler?	<u>Y</u> N
2	Custody papers properly completed (ink, signed)?	<u>Y</u> N
3	Did all bottles arrive in good condition (unbroken)?	<u>Y</u> N
4	Circle: <u>Wet Ice</u> Dry Ice Gel packs present?	<u>Y</u> N

5a	Perchlorate samples have required headspace?	<u>Y</u> N <u>N/A</u>
5b	Did VOA vials, Alk, or Sulfide have sig* bubbles?	<u>Y</u> N <u>N/A</u>
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as:	Bulk Encore 5035set <u>N/A</u>

8. Temperature Readings Date: 9/11/18 Time: 0935 ID: IR#7 JR#910 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>1.9</u>						
Correction Factor (°C)	<u>+0.4</u>						
Corrected Temp (°C)	<u>2.3</u>						
Temp from: Type of bottle	<u>Cult tubes</u>						
Within 0-6°C?	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N
If <0°C, were samples frozen?	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N	<u>Y</u> N

If out of Temperature, note packing/ice condition: _____ Ice melted Poorly Packed (described below) Same Day Rule

& Client Approval to Run Samples: _____ Standing Approval Client aware at drop-off Client notified by: _____

All samples held in storage location: Raw by Q on 9/11/18 at 0936
 5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 9/11/18 Time: 1440 by: Q

9. Were all bottle labels complete (i.e. analysis, preservation, etc.)?

YES NO

10. Did all bottle labels and tags agree with custody papers?

YES NO

11. Were correct containers used for the tests indicated?

YES NO

12. Were 5035 vials acceptable (no extra labels, not leaking)?

YES NO

13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized

Tedlar® Bags Inflated

N/A

pH	Lot of test paper	Reagent	Preserved?		Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
			Yes	No						
≥12		NaOH								
≤2		HNO ₃								
≤2	<u>9/9318</u>	H ₂ SO ₄	✓		<u>B260002C</u>	<u>5/20</u>				
<4		NaHSO ₄								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na ₂ S ₂ O ₃ (625, 608, CN), ascorbic (phenol).					
		Na ₂ S ₂ O ₃								
		ZnAcetate	-	-						
		HCl	**	**						

**VOAs and 1664 Not to be tested before analysis.
Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).Bottle lot numbers: Albany
Explain all Discrepancies/ Other Comments:Headspace: TB - all vials001 - 2 vials 005 - 1 vial002 - 1 vial 006 - 1 vial003 - 1 vial004 - 2 vialsLabels secondary reviewed by: QPC Secondary Review: 9/13/18

*significant air bubbles: VOA > 5-6 mm : WC > 1 in. diameter

CLRES	BULK
DO	FLDT
HPROD	HGFB
HTR	LL3541
PH	SUB
SO3	MARRS
ALS	REV

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Internal Chain of Custody Report

Client: New York State DEC
Project: LCI 2018/PK2018

Service Request: R1808653

Bottle ID	Methods	Date	Time	Sample Location / User	Disposed On
R1808653-001.01					
	351.2,353.2,365.1,ASTM D6919-09				
		9/11/2018	1447	SMO / GLAFORCE	
		9/12/2018	1058	RT000412 / GLAFORCE	
		9/12/2018	1100	R-016 / GLAFORCE	
		9/17/2018	1346	In Lab / MROGERSON	
		9/17/2018	2236	R-016 / MROGERSON	
		9/26/2018	2110	R-002 / DWARD	
R1808653-001.02					
	SM 2320 B-1997(2011)				
		9/11/2018	1447	SMO / GLAFORCE	
		9/13/2018	1348	RT000314 / GLAFORCE	
		9/13/2018	1353	R-014 / GLAFORCE	
R1808653-002.01					
	351.2,365.1,353.2,ASTM D6919-09				
		9/11/2018	1447	SMO / GLAFORCE	
		9/12/2018	1058	RT000412 / GLAFORCE	
		9/12/2018	1100	R-016 / GLAFORCE	
		9/17/2018	1346	In Lab / MROGERSON	
		9/17/2018	2236	R-016 / MROGERSON	
		9/26/2018	2110	R-002 / DWARD	
R1808653-002.02					
	SM 2320 B-1997(2011)				
		9/11/2018	1447	SMO / GLAFORCE	
		9/13/2018	1348	RT000314 / GLAFORCE	
		9/13/2018	1353	R-014 / GLAFORCE	
R1808653-003.01					
	351.2,365.1,353.2,ASTM D6919-09				
		9/11/2018	1447	SMO / GLAFORCE	
		9/12/2018	1058	RT000412 / GLAFORCE	
		9/12/2018	1100	R-016 / GLAFORCE	
		9/17/2018	1346	In Lab / MROGERSON	
		9/17/2018	2236	R-016 / MROGERSON	
		9/26/2018	2110	R-002 / DWARD	



Miscellaneous Forms

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REPORT QUALIFIERS AND DEFINITIONS

- | | |
|--|--|
| <p>U Analyte was analyzed for but not detected. The sample quantitation limit has been corrected for dilution and for percent moisture, unless otherwise noted in the case narrative.</p> <p>J Estimated value due to either being a Tentatively Identified Compound (TIC) or that the concentration is between the MRL and the MDL. Concentrations are not verified within the linear range of the calibration. For DoD: concentration >40% difference between two GC columns (pesticides/Aroclors).</p> <p>B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.</p> <p>E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.</p> <p>E Organics- Concentration has exceeded the calibration range for that specific analysis.</p> <p>D Concentration is a result of a dilution, typically a secondary analysis of the sample due to exceeding the calibration range or that a surrogate has been diluted out of the sample and cannot be assessed.</p> <p>* Indicates that a quality control parameter has exceeded laboratory limits. Under the öNotesö column of the Form I, this qualifier denotes analysis was performed out of Holding Time.</p> <p>H Analysis was performed out of hold time for tests that have an öimmediateö hold time criteria.</p> <p># Spike was diluted out.</p> | <p>+ Correlation coefficient for MSA is <0.995.</p> <p>N Inorganics- Matrix spike recovery was outside laboratory limits.</p> <p>N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.</p> <p>S Concentration has been determined using Method of Standard Additions (MSA).</p> <p>W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.</p> <p>P Concentration >40% difference between the two GC columns.</p> <p>C Confirmed by GC/MS</p> <p>Q DoD reports: indicates a pesticide/Aroclor is not confirmed (>100% Difference between two GC columns).</p> <p>X See Case Narrative for discussion.</p> <p>MRL Method Reporting Limit. Also known as:
LOQ Limit of Quantitation (LOQ)
The lowest concentration at which the method analyte may be reliably quantified under the method conditions.</p> <p>MDL Method Detection Limit. A statistical value derived from a study designed to provide the lowest concentration that will be detected 99% of the time. Values between the MDL and MRL are estimated (see J qualifier).</p> <p>LOD Limit of Detection. A value at or above the MDL which has been verified to be detectable.</p> <p>ND Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.</p> |
|--|--|



Rochester Lab ID # for State Certifications¹

Connecticut ID # PH0556	Maine ID #NY0032	New Hampshire ID # 294100 A/B
Delaware Approved	New Jersey ID # NY004	
DoD ELAP #65817	New York ID # 10145	Pennsylvania ID# 68-786
Florida ID # E87674	North Carolina #676	Rhode Island ID # 158
		Virginia #460167

¹ Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state or agency requirements. The test results meet requirements of the current NELAP/TNI standards or state or agency requirements, where applicable, except as noted in the case narrative. Since not all analyte/method/matrix combinations are offered for state/NELAC accreditation, this report may contain results which are not accredited. For a specific list of accredited analytes, contact the laboratory or go to <https://www.alsglobal.com/locations/americas/north-america/usa/new-york/rochester-environmental>

ALS Laboratory Group

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
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.

ALS Group USA, Corp.

dba ALS Environmental

Analyst Summary report

Client: New York State DEC
Project: LCI 2018/PK2018**Service Request:** R1808653**Sample Name:** 19PKTP19FW
Lab Code: R1808653-001
Sample Matrix: Water**Date Collected:** 09/6/18
Date Received: 09/11/18**Analysis Method**351.2
353.2
365.1
ASTM D6919-09
SM 2320 B-1997(2011)**Extracted/Digested By**

NSMITH

MROGERSON

MROGERSON
AMOSES
CWOODS**Analyzed By**CWOODS
MROGERSON
MROGERSON
AMOSES
CWOODS**Sample Name:** 19PKTP18DS
Lab Code: R1808653-002
Sample Matrix: Water**Date Collected:** 09/6/18
Date Received: 09/11/18**Analysis Method**351.2
353.2
365.1
ASTM D6919-09
SM 2320 B-1997(2011)**Extracted/Digested By**

NSMITH

MROGERSON

MROGERSON
AMOSES
CWOODS**Analyzed By**CWOODS
MROGERSON
MROGERSON
AMOSES
CWOODS**Sample Name:** 19PKTP18DD
Lab Code: R1808653-003
Sample Matrix: Water**Date Collected:** 09/6/18
Date Received: 09/11/18**Analysis Method**351.2
353.2
365.1
ASTM D6919-09**Extracted/Digested By**

NSMITH

MROGERSON

MROGERSON
AMOSES**Analyzed By**CWOODS
MROGERSON
MROGERSON
AMOSES



INORGANIC PREPARATION METHODS

The preparation methods associated with this report are found in these tables unless discussed in the case narrative.

Water/Liquid Matrix

Analytical Method	Preparation Method
200.7	200.2
200.8	200.2
6010C	3005A/3010A
6020A	ILM05.3
9014 Cyanide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Reactivity	SW846 Ch7, 7.3.4.2
9034 Sulfide Acid Soluble	9030B
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual Cyanide	SM 4500-CN-G
SM 4500-CN-E WAD Cyanide	SM 4500-CN-I

Solid/Soil/Non-Aqueous Matrix

Analytical Method	Preparation Method
6010C	3050B
6020A	3050B
6010C TCLP (1311) extract	3005A/3010A
6010 SPLP (1312) extract	3005A/3010A
7196A	3060A
7199	3060A
9056A Halogens/Halides	5050
300.0 Anions/ 350.1/ 353.2/ SM 2320B/ SM 5210B/ 9056A Anions	DI extraction

For analytical methods not listed, the preparation method is the same as the analytical method reference.



Sample Results

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General Chemistry

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dba ALS Environmental

Analytical Report

Client: New York State DEC
Project: LCI 2018/PK2018
Sample Matrix: Water
Sample Name: 19PKTP19FW
Lab Code: R1808653-001

Service Request: R1808653
Date Collected: 09/06/18 10:32
Date Received: 09/11/18 09:15

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO ₃	SM 2320 B-1997(2011)	65.6	mg/L	2.0	1	09/17/18 18:29	NA	
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0100	mg/L	0.0050	1	09/18/18 14:32	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0020 U	mg/L	0.0020	1	09/17/18 18:40	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	0.81	mg/L	0.10	1	09/24/18 18:29	09/21/18	
Phosphorus, Total	365.1	0.0095	mg/L	0.0050	1	09/21/18 17:13	09/19/18	

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dba ALS Environmental

Analytical Report

Client: New York State DEC
Project: LCI 2018/PK2018
Sample Matrix: Water

Sample Name: 19PKTP18DS
Lab Code: R1808653-002

Service Request: R1808653
Date Collected: 09/06/18 09:57
Date Received: 09/11/18 09:15

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO ₃	SM 2320 B-1997(2011)	66.0	mg/L	2.0	1	09/17/18 18:43	NA	
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0073	mg/L	0.0050	1	09/19/18 06:18	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0020 U	mg/L	0.0020	1	09/17/18 18:41	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	0.80	mg/L	0.10	1	09/24/18 18:29	09/21/18	
Phosphorus, Total	365.1	0.0092	mg/L	0.0050	1	09/21/18 17:14	09/19/18	

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dba ALS Environmental

Analytical Report

Client: New York State DEC
Project: LCI 2018/PK2018
Sample Matrix: Water

Sample Name: 19PKTP18DD
Lab Code: R1808653-003

Service Request: R1808653
Date Collected: 09/06/18 10:03
Date Received: 09/11/18 09:15

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Ammonia as Nitrogen, undistilled	ASTM D6919-09	5.43	mg/L	0.0050	1	09/18/18 15:04	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0060	mg/L	0.0020	1	09/17/18 18:43	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	5.57	mg/L	0.10	1	09/24/18 18:30	09/21/18	
Phosphorus, Total	365.1	0.87	mg/L	0.25	50	09/21/18 18:02	09/19/18	



QC Summary Forms

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General Chemistry

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client: New York State DEC
Project: LCI 2018/PK2018
Sample Matrix: Water
Sample Name: Method Blank
Lab Code: R1808653-MB1

Service Request: R1808653
Date Collected: NA
Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO ₃	SM 2320 B-1997(2011)	2.0	U	mg/L	2.0	1	09/17/18 15:29	NA
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0050	U	mg/L	0.0050	1	09/18/18 14:00	NA
Nitrate+Nitrite as Nitrogen	353.2	0.0020	U	mg/L	0.0020	1	09/17/18 18:17	NA
Nitrogen, Total Kjeldahl (TKN)	351.2	0.10	U	mg/L	0.10	1	09/24/18 18:25	09/21/18
Phosphorus, Total	365.1	0.0050	U	mg/L	0.0050	1	09/21/18 16:47	09/19/18

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Analytical Report

Client: New York State DEC
Project: LCI 2018/PK2018
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: R1808653-MB2

Service Request: R1808653
Date Collected: NA
Date Received: NA

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Q
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0050	U	mg/L	0.0050	1	09/19/18 02:50

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QA/QC Report

Client: New York State DEC
Project: LCI 2018/PK2018
Sample Matrix: Water

Service Request: R1808653
Date Analyzed: 09/17/18 - 09/24/18

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
R1808653-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits	
Alkalinity, Total as CaCO ₃	SM 2320 B-1997(2011)	21.2	20.0	106	70-130	
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.549	0.500	110	70-130	
Nitrate+Nitrite as Nitrogen		353.2	0.531	0.500	106	70-130
Nitrogen, Total Kjeldahl (TKN)		351.2	2.31	2.50	92	70-130
Phosphorus, Total		365.1	0.0247	0.0250	99	70-130

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QA/QC Report

Client: New York State DEC
Project: LCI 2018/PK2018
Sample Matrix: Water

Service Request: R1808653
Date Analyzed: 09/19/18

Lab Control Sample Summary
General Chemistry Parameters

Units: mg/L
Basis: NA

Lab Control Sample
R1808653-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.500	0.500	100	70-130

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QA/QC Report

Client: New York State DEC
Project: LCI 2018/PK2018

Service Request:R1808653

Continuing Calibration Blank (CCB) Summary

Ammonia as Nitrogen, undistilled

Analysis Method: ASTM D6919-09 **Units:** mg/L

Analysis	Date						Result	Q
	Lot	Lab Code	Analyzed	MRL				
CCB1	607265	RQ1809914-10	09/18/18 14:00	0.0050			0.0050	U
CCB2	607265	RQ1809914-11	09/18/18 17:12	0.0050			0.0050	U
CCB3	607265	RQ1809914-12	09/18/18 20:25	0.0050			0.0050	U
CCB4	607269	RQ1809917-10	09/19/18 02:50	0.0050			0.0050	U
CCB5	607269	RQ1809917-11	09/19/18 06:02	0.0050			0.0050	U
CCB6	607269	RQ1809917-12	09/19/18 09:15	0.0050			0.0050	U

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QA/QC Report

Client: New York State DEC
Project: LCI 2018/PK2018

Service Request:R1808653

Continuing Calibration Blank (CCB) Summary
Nitrate+Nitrite as Nitrogen

Analysis Method: 353.2 **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	MRL	Result	Q
CCB1	607038	RQ1809814-02	09/17/18 18:17	0.0020	0.0020	U
CCB2	607038	RQ1809814-06	09/17/18 18:33	0.0020	0.0020	U
CCB3	607038	RQ1809814-08	09/17/18 18:50	0.0020	0.0020	U
CCB4	607038	RQ1809814-09	09/17/18 19:06	0.0020	0.0020	U
CCB5	607038	RQ1809814-11	09/17/18 20:19	0.0020	0.0020	U
CCB6	607038	RQ1809814-13	09/17/18 20:35	0.0020	0.0020	U

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QA/QC Report

Client: New York State DEC
Project: LCI 2018/PK2018

Service Request:R1808653

Continuing Calibration Blank (CCB) Summary
Nitrogen, Total Kjeldahl (TKN)

Analysis Method: 351.2 **Units:**mg/L

	Analysis Lot	Lab Code	Date Analyzed	MRL	Result	Q
CCB1	608071	RQ1810164-07	09/24/18 18:24	0.10	0.10	U
CCB2	608071	RQ1810164-08	09/24/18 18:33	0.10	0.10	U
CCB3	608071	RQ1810164-09	09/24/18 18:41	0.10	0.10	U
CCB4	608071	RQ1810164-10	09/24/18 18:50	0.10	0.10	U
CCB5	608071	RQ1810164-11	09/24/18 19:06	0.10	0.10	U
CCB6	608071	RQ1810164-12	09/24/18 19:15	0.10	0.10	U

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QA/QC Report

Client: New York State DEC
Project: LCI 2018/PK2018

Service Request: R1808653

Continuing Calibration Blank (CCB) Summary
Phosphorus, Total

Analysis Method: 365.1 **Units:** mg/L

	Analysis Lot	Lab Code	Date Analyzed	MRL	Result	Q
CCB1	607786	RQ1810073-02	09/21/18 16:45	0.0050	0.0050	U
CCB2	607786	RQ1810073-04	09/21/18 16:58	0.0050	0.0050	U
CCB3	607786	RQ1810073-06	09/21/18 17:12	0.0050	0.0050	U
CCB4	607786	RQ1810073-07	09/21/18 17:25	0.0050	0.0050	U
CCB5	607786	RQ1810073-09	09/21/18 17:39	0.0050	0.0050	U
CCB6	607786	RQ1810073-11	09/21/18 17:52	0.0050	0.0050	U
CCB7	607786	RQ1810073-13	09/21/18 18:06	0.0050	0.0050	U

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QA/QC Report

Client: New York State DEC
Project: LCI 2018/PK2018

Service Request: R1808653

Continuing Calibration Verification (CCV) Summary

Ammonia as Nitrogen, undistilled

Analysis Method: ASTM D6919-09

Units: ppm

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	607265	RQ1809914-07	09/18/18 13:43	1.00	0.909	91	90-110
CCV2	607265	RQ1809914-08	09/18/18 16:56	1.00	1.09	109	90-110
CCV3	607265	RQ1809914-09	09/18/18 20:09	1.00	1.04	104	90-110
CCV4	607269	RQ1809917-07	09/19/18 02:34	1.00	1.06	106	90-110
CCV5	607269	RQ1809917-08	09/19/18 05:46	1.00	1.08	108	90-110
CCV6	607269	RQ1809917-09	09/19/18 08:59	1.00	1.09	109	90-110

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QA/QC Report

Client: New York State DEC
Project: LCI 2018/PK2018

Service Request: R1808653

Continuing Calibration Verification (CCV) Summary

Nitrate+Nitrite as Nitrogen

Analysis Method: 353.2

Units: mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	607038	RQ1809814-01	09/17/18 18:15	1.00	1.03	103	90-110
CCV2	607038	RQ1809814-05	09/17/18 18:32	1.00	1.03	103	90-110
CCV3	607038	RQ1809814-07	09/17/18 18:48	1.00	1.00	100	90-110
CCV4	607038	RQ1809814-10	09/17/18 19:05	1.00	1.04	104	90-110
CCV5	607038	RQ1809814-12	09/17/18 20:17	1.00	1.03	103	90-110
CCV6	607038	RQ1809814-14	09/17/18 20:34	1.00	1.05	105	90-110

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QA/QC Report

Client: New York State DEC
Project: LCI 2018/PK2018

Service Request: R1808653

Continuing Calibration Verification (CCV) Summary

Nitrogen, Total Kjeldahl (TKN)

Analysis Method: 351.2

Units: mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	608071	RQ1810164-01	09/24/18 18:24	4.00	3.95	99	90-110
CCV2	608071	RQ1810164-02	09/24/18 18:32	4.00	3.91	98	90-110
CCV3	608071	RQ1810164-03	09/24/18 18:41	4.00	3.94	99	90-110
CCV4	608071	RQ1810164-04	09/24/18 18:49	4.00	3.94	99	90-110
CCV5	608071	RQ1810164-05	09/24/18 19:06	4.00	3.88	97	90-110
CCV6	608071	RQ1810164-06	09/24/18 19:14	4.00	3.94	98	90-110

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QA/QC Report

Client: New York State DEC
Project: LCI 2018/PK2018

Service Request: R1808653

Continuing Calibration Verification (CCV) Summary

Phosphorus, Total

Analysis Method: 365.1

Units: mg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	607786	RQ1810073-01	09/21/18 16:44	0.0500	0.0493	99	90-110
CCV2	607786	RQ1810073-03	09/21/18 16:57	0.0500	0.0492	98	90-110
CCV3	607786	RQ1810073-05	09/21/18 17:11	0.0500	0.0488	98	90-110
CCV4	607786	RQ1810073-08	09/21/18 17:24	0.0500	0.0488	98	90-110
CCV5	607786	RQ1810073-10	09/21/18 17:38	0.0500	0.0495	99	90-110
CCV6	607786	RQ1810073-12	09/21/18 17:51	0.0500	0.0490	98	90-110
CCV7	607786	RQ1810073-14	09/21/18 18:05	0.0500	0.0489	98	90-110



Raw Data

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General Chemistry

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Analytical Report

Client: New York State DEC
Project: LCI 2018/PK2018
Sample Matrix: Water
Sample Name: 19PKTP19FW
Lab Code: R1808653-001

Service Request: R1808653
Date Collected: 09/06/18 10:32
Date Received: 09/11/18 09:15

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO ₃	SM 2320 B-1997(2011)	65.6	mg/L	2.0	1	09/17/18 18:29	NA	
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0100	mg/L	0.0050	1	09/18/18 14:32	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0020 U	mg/L	0.0020	1	09/17/18 18:40	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	0.81	mg/L	0.10	1	09/24/18 18:29	09/21/18	
Phosphorus, Total	365.1	0.0095	mg/L	0.0050	1	09/21/18 17:13	09/19/18	

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Analytical Report

Client: New York State DEC
Project: LCI 2018/PK2018
Sample Matrix: Water

Sample Name: 19PKTP18DS
Lab Code: R1808653-002

Service Request: R1808653
Date Collected: 09/06/18 09:57
Date Received: 09/11/18 09:15

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO ₃	SM 2320 B-1997(2011)	66.0	mg/L	2.0	1	09/17/18 18:43	NA	
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0073	mg/L	0.0050	1	09/19/18 06:18	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0020 U	mg/L	0.0020	1	09/17/18 18:41	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	0.80	mg/L	0.10	1	09/24/18 18:29	09/21/18	
Phosphorus, Total	365.1	0.0092	mg/L	0.0050	1	09/21/18 17:14	09/19/18	

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Analytical Report

Client: New York State DEC
Project: LCI 2018/PK2018
Sample Matrix: Water

Sample Name: 19PKTP18DD
Lab Code: R1808653-003

Service Request: R1808653
Date Collected: 09/06/18 10:03
Date Received: 09/11/18 09:15

Basis: NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Ammonia as Nitrogen, undistilled	ASTM D6919-09	5.43	mg/L	0.0050	1	09/18/18 15:04	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0060	mg/L	0.0020	1	09/17/18 18:43	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	5.57	mg/L	0.10	1	09/24/18 18:30	09/21/18	
Phosphorus, Total	365.1	0.87	mg/L	0.25	50	09/21/18 18:02	09/19/18	

Analytical Results Summary

Instrument Name: R-Buret-02		Analyst: CWOODS		Analysis Lot:		607098	Method/Testcode: SM 2320 B-1997(2011)/Alkalinity								
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC? Tier	
RQ1809849-03	Alkalinity, Total as CaCO3 MB			Water	-0.80 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 11:44	N	IV
RQ1809849-04	Alkalinity, Total as CaCO3 LCS			Water	19.60 mg/L		19.6 mg/L	1	1.0	2.0	98		9/17/18 11:48	N	IV
R1808737-008	Alkalinity, Total as CaCO3 N/A			Water	83.60 mg/L		83.6 mg/L	1	1.0	2.0			9/17/18 12:10	N	IV
RQ1809849-01	Alkalinity, Total as CaCO3 DUP		R1808737-008	Water	82.00 mg/L		82.0 mg/L	1	1.0	2.0	2		9/17/18 12:16	N	IV
R1808737-009	Alkalinity, Total as CaCO3 N/A			Water	83.60 mg/L		83.6 mg/L	1	1.0	2.0			9/17/18 12:21	N	IV
RQ1809849-02	Alkalinity, Total as CaCO3 DUP		R1808737-009	Water	83.60 mg/L		83.6 mg/L	1	1.0	2.0	<1		9/17/18 12:27	N	IV
R1808737-010	Alkalinity, Total as CaCO3 N/A			Water	28.80 mg/L		28.8 mg/L	1	1.0	2.0			9/17/18 12:31	N	IV
R1808737-011	Alkalinity, Total as CaCO3 N/A			Water	24.00 mg/L		24.0 mg/L	1	1.0	2.0			9/17/18 12:35	N	IV
R1808737-012	Alkalinity, Total as CaCO3 N/A			Water	20.40 mg/L		20.4 mg/L	1	1.0	2.0			9/17/18 12:39	N	IV
R1808737-013	Alkalinity, Total as CaCO3 N/A			Water	79.60 mg/L		79.6 mg/L	1	1.0	2.0			9/17/18 12:53	N	IV
R1808737-014	Alkalinity, Total as CaCO3 N/A			Water	0.80 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 12:56	N	IV
R1808869-001	Alkalinity, Total as CaCO3 N/A			Water	72.40 mg/L		72.4 mg/L	1	1.0	2.0			9/17/18 13:01	N	IV
R1808869-003	Alkalinity, Total as CaCO3 N/A			Water	148.00 mg/L		148 mg/L	1	1.0	2.0			9/17/18 13:06	N	IV
R1808869-007	Alkalinity, Total as CaCO3 N/A			Water	79.20 mg/L		79.2 mg/L	1	1.0	2.0			9/17/18 13:12	N	IV
R1808869-011	Alkalinity, Total as CaCO3 N/A			Water	48.40 mg/L		48.4 mg/L	1	1.0	2.0			9/17/18 13:17	N	IV
R1808869-013	Alkalinity, Total as CaCO3 N/A			Water	16.80 mg/L		16.8 mg/L	1	1.0	2.0			9/17/18 13:21	N	IV
R1808869-017	Alkalinity, Total as CaCO3 N/A			Water	16.40 mg/L		16.4 mg/L	1	1.0	2.0			9/17/18 13:25	N	IV
R1808869-019	Alkalinity, Total as CaCO3 N/A			Water	12.80 mg/L		12.8 mg/L	1	1.0	2.0			9/17/18 13:28	N	IV
R1808869-021	Alkalinity, Total as CaCO3 N/A			Water	89.20 mg/L		89.2 mg/L	1	1.0	2.0			9/17/18 13:34	N	IV
R1808869-023	Alkalinity, Total as CaCO3 N/A			Water	94.40 mg/L		94.4 mg/L	1	1.0	2.0			9/17/18 13:48	N	IV
R1808840-001	Alkalinity, Total as CaCO3 N/A			Water	54.40 mg/L		54.4 mg/L	1	1.0	2.0			9/17/18 13:53	N	IV
R1808840-002	Alkalinity, Total as CaCO3 N/A			Water	50.40 mg/L		50.4 mg/L	1	1.0	2.0			9/17/18 13:58	N	IV
R1808840-003	Alkalinity, Total as CaCO3 N/A			Water	26.00 mg/L		26.0 mg/L	1	1.0	2.0			9/17/18 14:02	N	IV
R1808840-004	Alkalinity, Total as CaCO3 N/A			Water	28.40 mg/L		28.4 mg/L	1	1.0	2.0			9/17/18 14:06	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-Buret-02		Analyst: CWOODS		Analysis Lot:		607101	Method/Testcode: SM 2320 B-1997(2011)/Alkalinity								
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC? Y/N	Tier
RQ1809850-03	Alkalinity, Total as CaCO3 MB			Water	-1.20 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 13:43	N	IV
RQ1809850-04	Alkalinity, Total as CaCO3 LCS			Water	20.80 mg/L		20.8 mg/L	1	1.0	2.0	104		9/17/18 14:11	N	IV
R1808737-007	Alkalinity, Total as CaCO3 N/A			Water	84.40 mg/L		84.4 mg/L	1	1.0	2.0			9/17/18 14:17	N	IV
RQ1809850-01	Alkalinity, Total as CaCO3 DUP		R1808737-007	Water	86.00 mg/L		86.0 mg/L	1	1.0	2.0	2		9/17/18 14:23	N	IV
R1808840-005	Alkalinity, Total as CaCO3 N/A			Water	26.40 mg/L		26.4 mg/L	1	1.0	2.0			9/17/18 14:27	N	IV
R1808840-006	Alkalinity, Total as CaCO3 N/A			Water	51.20 mg/L		51.2 mg/L	1	1.0	2.0			9/17/18 14:32	N	IV
R1808840-007	Alkalinity, Total as CaCO3 N/A			Water	26.00 mg/L		26.0 mg/L	1	1.0	2.0			9/17/18 14:44	N	IV
R1808840-008	Alkalinity, Total as CaCO3 N/A			Water	30.40 mg/L		30.4 mg/L	1	1.0	2.0			9/17/18 14:48	N	IV
R1808840-009	Alkalinity, Total as CaCO3 N/A			Water	24.40 mg/L		24.4 mg/L	1	1.0	2.0			9/17/18 14:52	N	IV
R1808840-010	Alkalinity, Total as CaCO3 N/A			Water	27.60 mg/L		27.6 mg/L	1	1.0	2.0			9/17/18 14:57	N	IV
R1808840-011	Alkalinity, Total as CaCO3 N/A			Water	53.60 mg/L		53.6 mg/L	1	1.0	2.0			9/17/18 15:02	N	IV
R1808840-012	Alkalinity, Total as CaCO3 N/A			Water	28.40 mg/L		28.4 mg/L	1	1.0	2.0			9/17/18 15:06	N	IV
R1808840-013	Alkalinity, Total as CaCO3 N/A			Water	0.80 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 15:09	N	IV
R1808841-001	Alkalinity, Total as CaCO3 N/A			Water	9.20 mg/L		9.2 mg/L	1	1.0	2.0			9/17/18 15:13	Y	IV
RQ1809850-02	Alkalinity, Total as CaCO3 DUP		R1808841-001	Water	8.40 mg/L		8.4 mg/L	1	1.0	2.0	9		9/17/18 15:16	N	IV
R1808841-002	Alkalinity, Total as CaCO3 N/A			Water	8.40 mg/L		8.4 mg/L	1	1.0	2.0			9/17/18 15:20	N	IV
R1808841-003	Alkalinity, Total as CaCO3 N/A			Water	6.00 mg/L		6.0 mg/L	1	1.0	2.0			9/17/18 15:32	N	IV
R1808841-004	Alkalinity, Total as CaCO3 N/A			Water	2.40 mg/L		2.4 mg/L	1	1.0	2.0			9/17/18 15:36	N	IV
R1808841-005	Alkalinity, Total as CaCO3 N/A			Water	16.00 mg/L		16.0 mg/L	1	1.0	2.0			9/17/18 15:39	N	IV
R1808841-006	Alkalinity, Total as CaCO3 N/A			Water	24.00 mg/L		24.0 mg/L	1	1.0	2.0			9/17/18 15:43	N	IV
R1808841-007	Alkalinity, Total as CaCO3 N/A			Water	0.80 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 15:46	N	IV
R1808651-003	Alkalinity, Total as CaCO3 N/A			Water	96.00 mg/L		96.0 mg/L	1	1.0	2.0			9/17/18 16:12	N	II
R1808651-004	Alkalinity, Total as CaCO3 N/A			Water	378.80 mg/L		379 mg/L	1	1.0	2.0			9/17/18 16:17	N	II
R1808614-001	Alkalinity, Total as CaCO3 N/A			Water	108.40 mg/L		108 mg/L	1	1.0	2.0			9/17/18 16:23	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-Buret-02

Analyst: CWOODS

Analysis Lot:

607102

Method/Testcode: SM 2320 B-1997(2011)/Alkalinity

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC?</u>	<u>Tier</u>
RQ1809851-03	Alkalinity, Total as CaCO3 MB			Water	1.20 mg/L		1.2 mg/L J	1	1.0	2.0			9/17/18 15:29	N	IV
RQ1809851-04	Alkalinity, Total as CaCO3 LCS			Water	21.20 mg/L		21.2 mg/L	1	1.0	2.0	106		9/17/18 16:28	N	IV
R1808614-003	Alkalinity, Total as CaCO3 N/A			Water	117.60 mg/L		118 mg/L	1	1.0	2.0			9/17/18 16:33	N	IV
R1808614-005	Alkalinity, Total as CaCO3 N/A			Water	7.20 mg/L		7.2 mg/L	1	1.0	2.0			9/17/18 16:45	N	IV
RQ1809851-01	Alkalinity, Total as CaCO3 DUP		R1808614-005	Water	7.20 mg/L		7.2 mg/L	1	1.0	2.0	<1		9/17/18 16:49	N	IV
R1808614-007	Alkalinity, Total as CaCO3 N/A			Water	8.80 mg/L		8.8 mg/L	1	1.0	2.0			9/17/18 16:53	Y	IV
RQ1809851-02	Alkalinity, Total as CaCO3 DUP		R1808614-007	Water	8.80 mg/L		8.8 mg/L	1	1.0	2.0	<1		9/17/18 16:56	N	IV
R1808615-001	Alkalinity, Total as CaCO3 N/A			Water	296.80 mg/L		297 mg/L	1	1.0	2.0			9/17/18 17:01	N	II
R1808616-001	Alkalinity, Total as CaCO3 N/A			Water	180.80 mg/L		181 mg/L	1	1.0	2.0			9/17/18 17:07	N	IV
R1808616-002	Alkalinity, Total as CaCO3 N/A			Water	138.80 mg/L		139 mg/L	1	1.0	2.0			9/17/18 17:12	N	IV
R1808568-006	Alkalinity, Total as CaCO3 N/A			Water	60.00 mg/L		60.0 mg/L	1	1.0	2.0			9/17/18 17:17	N	IV
R1808568-007	Alkalinity, Total as CaCO3 N/A			Water	80.80 mg/L		80.8 mg/L	1	1.0	2.0			9/17/18 17:23	N	IV
R1808568-008	Alkalinity, Total as CaCO3 N/A			Water	60.80 mg/L		60.8 mg/L	1	1.0	2.0			9/17/18 17:28	N	IV
R1808568-009	Alkalinity, Total as CaCO3 N/A			Water	0.00 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 17:39	N	IV
R1808568-010	Alkalinity, Total as CaCO3 N/A			Water	100.00 mg/L		100 mg/L	1	1.0	2.0			9/17/18 17:44	N	IV
R1808568-011	Alkalinity, Total as CaCO3 N/A			Water	141.20 mg/L		141 mg/L	1	1.0	2.0			9/17/18 17:51	N	IV
R1808568-012	Alkalinity, Total as CaCO3 N/A			Water	70.80 mg/L		70.8 mg/L	1	1.0	2.0			9/17/18 17:56	N	IV
R1808568-013	Alkalinity, Total as CaCO3 N/A			Water	142.80 mg/L		143 mg/L	1	1.0	2.0			9/17/18 18:02	N	IV
R1808568-014	Alkalinity, Total as CaCO3 N/A			Water	127.20 mg/L		127 mg/L	1	1.0	2.0			9/17/18 18:07	N	IV
R1808568-015	Alkalinity, Total as CaCO3 N/A			Water	131.20 mg/L		131 mg/L	1	1.0	2.0			9/17/18 18:13	N	IV
R1808568-016	Alkalinity, Total as CaCO3 N/A			Water	106.80 mg/L		107 mg/L	1	1.0	2.0			9/17/18 18:19	N	IV
R1808817-004	Alkalinity, Total as CaCO3 N/A			Water	62.40 mg/L		62.4 mg/L	1	1.0	2.0			9/17/18 18:23	N	II
R1808653-001	Alkalinity, Total as CaCO3 N/A			Water	65.60 mg/L		65.6 mg/L	1	1.0	2.0			9/17/18 18:29	N	IV
R1808653-002	Alkalinity, Total as CaCO3 N/A			Water	66.00 mg/L		66.0 mg/L	1	1.0	2.0			9/17/18 18:43	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-Buret-02			Analyst: CWOODS		Analysis Lot: 607103		Method/Testcode: SM 2320 B-1997(2011)/Alkalinity							
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC? Tier
RQ1809852-03	Alkalinity, Total as CaCO3 MB			Water	1.20 mg/L		1.2 mg/L	J	1	1.0	2.0		9/17/18 18:37	N IV
RQ1809852-04	Alkalinity, Total as CaCO3 LCS			Water	20.80 mg/L		20.8 mg/L		1	1.0	2.0	104	9/17/18 18:47	N IV
R1808725-006	Alkalinity, Total as CaCO3 N/A			Water	220.40 mg/L		220 mg/L		1	1.0	2.0		9/17/18 18:53	N IV
RQ1809852-01	Alkalinity, Total as CaCO3 DUP		R1808725-006	Water	223.20 mg/L		223 mg/L		1	1.0	2.0	1	9/17/18 18:58	N IV
R1808725-013	Alkalinity, Total as CaCO3 N/A			Water	210.40 mg/L		210 mg/L		1	1.0	2.0		9/17/18 19:04	N IV
RQ1809852-02	Alkalinity, Total as CaCO3 DUP		R1808725-013	Water	215.20 mg/L		215 mg/L		1	1.0	2.0	2	9/17/18 19:09	N IV
R1808647-001	Alkalinity, Total as CaCO3 N/A			Drinking Water	164.40 mg/L		164 mg/L		1	1.0	2.0		9/17/18 19:15	N II
R1808647-002	Alkalinity, Total as CaCO3 N/A			Drinking Water	36.00 mg/L		36.0 mg/L		1	1.0	2.0		9/17/18 19:19	N II
R1808647-004	Alkalinity, Total as CaCO3 N/A			Drinking Water	166.80 mg/L		167 mg/L		1	1.0	2.0		9/17/18 19:25	N II
R1808669-003	Alkalinity, Total as CaCO3 N/A			Water	122.40 mg/L		122 mg/L		1	1.0	2.0		9/17/18 19:30	N II
R1808669-006	Alkalinity, Total as CaCO3 N/A			Water	82.00 mg/L		82.0 mg/L		1	1.0	2.0		9/17/18 19:44	N II
R1808708-001	Alkalinity, Total as CaCO3 N/A			Water	418.00 mg/L		418 mg/L		1	1.0	2.0		9/17/18 19:50	N II
R1808708-002	Alkalinity, Total as CaCO3 N/A			Water	383.20 mg/L		383 mg/L		1	1.0	2.0		9/17/18 19:55	N II
R1808708-003	Alkalinity, Total as CaCO3 N/A			Water	405.60 mg/L		406 mg/L		1	1.0	2.0		9/17/18 20:01	N II
R1808708-004	Alkalinity, Total as CaCO3 N/A			Water	457.20 mg/L		457 mg/L		1	1.0	2.0		9/17/18 20:07	N II
R1808708-005	Alkalinity, Total as CaCO3 N/A			Water	118.80 mg/L		119 mg/L		1	1.0	2.0		9/17/18 20:13	N II
R1808708-006	Alkalinity, Total as CaCO3 N/A			Water	416.40 mg/L		416 mg/L		1	1.0	2.0		9/17/18 20:18	N II
R1808708-007	Alkalinity, Total as CaCO3 N/A			Water	262.00 mg/L		262 mg/L		1	1.0	2.0		9/17/18 20:24	N II
R1808708-008	Alkalinity, Total as CaCO3 N/A			Water	137.20 mg/L		137 mg/L		1	1.0	2.0		9/17/18 20:30	N II
R1808708-009	Alkalinity, Total as CaCO3 N/A			Water	414.00 mg/L		414 mg/L		1	1.0	2.0		9/17/18 20:35	N II
R1808738-001	Alkalinity, Total as CaCO3 N/A			Water	104.00 mg/L		104 mg/L		1	1.0	2.0		9/17/18 20:50	N IV
R1808738-003	Alkalinity, Total as CaCO3 N/A			Water	43.60 mg/L		43.6 mg/L		1	1.0	2.0		9/17/18 20:55	N IV
R1808738-007	Alkalinity, Total as CaCO3 N/A			Water	30.00 mg/L		30.0 mg/L		1	1.0	2.0		9/17/18 20:59	N IV
R1808738-009	Alkalinity, Total as CaCO3 N/A			Water	54.80 mg/L		54.8 mg/L		1	1.0	2.0		9/17/18 21:04	N IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-Buret-02			Analyst: CWOODS		Analysis Lot: 607104		Method/Testcode: SM 2320 B-1997(2011)/Alkalinity							
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC? Tier
RQ1809853-03	Alkalinity, Total as CaCO3 MB			Water	0.80 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 20:44	N IV
RQ1809853-03	Bicarbonate Alkalinity as CaCO3	MB		Water	0.80 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 20:44:00	N IV
RQ1809853-03	Carbonate Alkalinity as CaCO3	MB		Water	0.00 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 20:44:00	N IV
RQ1809853-04	Alkalinity, Total as CaCO3 LCS			Water	20.80 mg/L		20.8 mg/L	1	1.0	2.0	104		9/17/18 21:09	N IV
R1808738-011	Alkalinity, Total as CaCO3 N/A			Water	66.40 mg/L		66.4 mg/L	1	1.0	2.0			9/17/18 21:14	N IV
RQ1809853-01	Alkalinity, Total as CaCO3 DUP		R1808738-011	Water	66.00 mg/L		66.0 mg/L	1	1.0	2.0	<1		9/17/18 21:19	N IV
R1808738-015	Alkalinity, Total as CaCO3 N/A			Water	66.00 mg/L		66.0 mg/L	1	1.0	2.0			9/17/18 21:24	N IV
RQ1809853-02	Alkalinity, Total as CaCO3 DUP		R1808738-015	Water	66.00 mg/L		66.0 mg/L	1	1.0	2.0	<1		9/17/18 21:29	N IV
R1808738-019	Alkalinity, Total as CaCO3 N/A			Water	18.00 mg/L		18.0 mg/L	1	1.0	2.0			9/17/18 21:33	N IV
R1808738-023	Alkalinity, Total as CaCO3 N/A			Water	17.60 mg/L		17.6 mg/L	1	1.0	2.0			9/17/18 21:45	N IV
R1808738-025	Alkalinity, Total as CaCO3 N/A			Water	2.00 mg/L		2.0 mg/L	1	1.0	2.0			9/17/18 21:48	N IV
R1808695-001	Bicarbonate Alkalinity as CaCO3	N/A		Water	86.00 mg/L		86.0 mg/L	1	1.0	2.0			9/17/18 21:54:00	N II
R1808695-001	Carbonate Alkalinity as CaCO3	N/A		Water	0.00 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 21:54:00	N II
R1808695-002	Bicarbonate Alkalinity as CaCO3	N/A		Water	51.60 mg/L		51.6 mg/L	1	1.0	2.0			9/17/18 21:59:00	N II
R1808695-002	Carbonate Alkalinity as CaCO3	N/A		Water	0.00 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 21:59:00	N II
R1808695-003	Bicarbonate Alkalinity as CaCO3	N/A		Water	0.80 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 22:01:00	N II
R1808695-003	Carbonate Alkalinity as CaCO3	N/A		Water	0.00 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 22:01:00	N II
R1808695-004	Bicarbonate Alkalinity as CaCO3	N/A		Water	1.20 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 22:04:00	N II
R1808695-004	Carbonate Alkalinity as CaCO3	N/A		Water	0.00 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 22:04:00	N II
R1808793-002	Alkalinity, Total as CaCO3 N/A			Water	3.20 mg/L		3.2 mg/L	1	1.0	2.0			9/17/18 22:07	N I
R1808838-011	Alkalinity, Total as CaCO3 N/A			Water	147.20 mg/L		147 mg/L	1	1.0	2.0			9/17/18 22:13	N IV
R1808838-013	Alkalinity, Total as CaCO3 N/A			Water	174.40 mg/L		174 mg/L	1	1.0	2.0			9/17/18 22:18	N IV
R1808736-001	Alkalinity, Total as CaCO3 N/A			Water	77.20 mg/L		77.2 mg/L	1	1.0	2.0			9/17/18 22:23	N IV
R1808736-002	Alkalinity, Total as CaCO3 N/A			Water	14.80 mg/L		14.8 mg/L	1	1.0	2.0			9/17/18 22:36	N IV
R1808736-003	Alkalinity, Total as CaCO3 N/A			Water	27.60 mg/L		27.6 mg/L	1	1.0	2.0			9/17/18 22:40	N IV
R1808736-004	Alkalinity, Total as CaCO3 N/A			Water	24.80 mg/L		24.8 mg/L	1	1.0	2.0			9/17/18 22:45	N IV
R1808736-005	Alkalinity, Total as CaCO3 N/A			Water	44.40 mg/L		44.4 mg/L	1	1.0	2.0			9/17/18 22:49	N IV
R1808736-006	Alkalinity, Total as CaCO3 N/A			Water	44.80 mg/L		44.8 mg/L	1	1.0	2.0			9/17/18 22:54	N IV
R1808736-007	Alkalinity, Total as CaCO3 N/A			Water	11.60 mg/L		11.6 mg/L	1	1.0	2.0			9/17/18 22:58	N IV
R1808736-008	Alkalinity, Total as CaCO3 N/A			Water	26.00 mg/L		26.0 mg/L	1	1.0	2.0			9/17/18 23:02	N IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-Buret-02		Analyst: CWOODS		Analysis Lot:		607105	Method/Testcode: SM 2320 B-1997(2011)/Alkalinity							
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC? Tier
RQ1809854-03	Alkalinity, Total as CaCO3 MB			Water	0.00 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 22:32	N IV
RQ1809854-04	Alkalinity, Total as CaCO3 LCS			Water	20.80 mg/L		20.8 mg/L	1	1.0	2.0	104		9/17/18 23:07	N IV
R1808736-009	Alkalinity, Total as CaCO3 N/A			Water	37.60 mg/L		37.6 mg/L	1	1.0	2.0			9/17/18 23:11	N IV
RQ1809854-01	Alkalinity, Total as CaCO3 DUP		R1808736-009	Water	37.20 mg/L		37.2 mg/L	1	1.0	2.0	1		9/17/18 23:16	N IV
R1808736-010	Alkalinity, Total as CaCO3 N/A			Water	28.00 mg/L		28.0 mg/L	1	1.0	2.0			9/17/18 23:29	N IV
RQ1809854-02	Alkalinity, Total as CaCO3 DUP		R1808736-010	Water	28.00 mg/L		28.0 mg/L	1	1.0	2.0	<1		9/17/18 23:33	N IV
R1808736-011	Alkalinity, Total as CaCO3 N/A			Water	0.40 mg/L		2.0 mg/L U	1	1.0	2.0			9/17/18 23:36	N IV
R1808736-012	Alkalinity, Total as CaCO3 N/A			Water	39.20 mg/L		39.2 mg/L	1	1.0	2.0			9/17/18 23:41	N IV
R1808737-001	Alkalinity, Total as CaCO3 N/A			Water	112.40 mg/L		112 mg/L	1	1.0	2.0			9/17/18 23:47	N IV
R1808737-002	Alkalinity, Total as CaCO3 N/A			Water	90.00 mg/L		90.0 mg/L	1	1.0	2.0			9/17/18 23:52	N IV
R1808737-003	Alkalinity, Total as CaCO3 N/A			Water	110.40 mg/L		110 mg/L	1	1.0	2.0			9/17/18 23:58	N IV
R1808737-004	Alkalinity, Total as CaCO3 N/A			Water	68.80 mg/L		68.8 mg/L	1	1.0	2.0			9/18/18 00:03	N IV
R1808737-005	Alkalinity, Total as CaCO3 N/A			Water	86.00 mg/L		86.0 mg/L	1	1.0	2.0			9/18/18 00:09	N IV
R1808737-006	Alkalinity, Total as CaCO3 N/A			Water	109.20 mg/L		109 mg/L	1	1.0	2.0			9/18/18 00:15	N IV
R1808817-003	Alkalinity, Total as CaCO3 N/A			Water	371.60 mg/L		372 mg/L	1	1.0	2.0			9/18/18 00:29	N II
R1808793-001	Alkalinity, Total as CaCO3 N/A			Water	266.00 mg/L		266 mg/L	1	1.0	2.0			9/18/18 00:35	N I
R1808848-001	Alkalinity, Total as CaCO3 N/A			Water	144.80 mg/L		145 mg/L	1	1.0	2.0			9/18/18 00:40	N II
R1808848-002	Alkalinity, Total as CaCO3 N/A			Water	148.80 mg/L		149 mg/L	1	1.0	2.0			9/18/18 00:46	N II
R1808849-001	Alkalinity, Total as CaCO3 N/A			Water	36.80 mg/L		36.8 mg/L	1	1.0	2.0			9/18/18 00:51	N II
R1808851-001	Alkalinity, Total as CaCO3 N/A			Water	190.00 mg/L		190 mg/L	1	1.0	2.0			9/18/18 00:56	N II
R1808851-002	Alkalinity, Total as CaCO3 N/A			Water	190.00 mg/L		190 mg/L	1	1.0	2.0			9/18/18 01:02	N II
R1808851-003	Alkalinity, Total as CaCO3 N/A			Water	251.20 mg/L		251 mg/L	1	1.0	2.0			9/18/18 01:07	N II
R1808851-004	Alkalinity, Total as CaCO3 N/A			Water	25.20 mg/L		25.2 mg/L	1	1.0	2.0			9/18/18 01:11	N II
R1808851-005	Alkalinity, Total as CaCO3 N/A			Water	121.60 mg/L		122 mg/L	1	1.0	2.0			9/18/18 01:17	N II

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-Buret-02

Analyst: CWOODS

Analysis Lot:

607106

Method/Testcode: SM 2320 B-1997(2011)/Alkalinity

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1809855-05	Alkalinity, Total as CaCO3 MB			Water	0.80 mg/L		2.0 mg/L	U	1	1.0	2.0		9/18/18 01:26	N	II
RQ1809855-04	Alkalinity, Total as CaCO3 LCS			Water	19.60 mg/L		19.6 mg/L	1	1.0	2.0	98		9/18/18 01:30	N	II
R1808851-006	Alkalinity, Total as CaCO3 N/A			Water	226.40 mg/L		226 mg/L	1	1.0	2.0			9/18/18 01:35	N	II
R1808851-007	Alkalinity, Total as CaCO3 N/A			Water	61.60 mg/L		61.6 mg/L	1	1.0	2.0			9/18/18 01:41	N	II
R1808851-008	Alkalinity, Total as CaCO3 N/A			Water	119.20 mg/L		119 mg/L	1	1.0	2.0			9/18/18 01:47	N	II
RQ1809855-01	Alkalinity, Total as CaCO3 DUP		R1808851-008	Water	118.00 mg/L		118 mg/L	1	1.0	2.0			9/18/18 01:53	N	II
R1808851-009	Alkalinity, Total as CaCO3 N/A			Water	163.60 mg/L		164 mg/L	1	1.0	2.0			9/18/18 01:58	Y	II
RQ1809855-02	Alkalinity, Total as CaCO3 DUP		R1808851-009	Water	163.60 mg/L		164 mg/L	1	1.0	2.0	<1		9/18/18 02:04	N	II
R1808851-010	Alkalinity, Total as CaCO3 N/A			Water	86.40 mg/L		86.4 mg/L	1	1.0	2.0			9/18/18 02:09	N	II
R1808851-011	Alkalinity, Total as CaCO3 N/A			Water	369.20 mg/L		369 mg/L	1	1.0	2.0			9/18/18 02:15	N	II
R1808851-012	Alkalinity, Total as CaCO3 N/A			Water	354.80 mg/L		355 mg/L	1	1.0	2.0			9/18/18 02:20	N	II
R1808851-013	Alkalinity, Total as CaCO3 N/A			Water	301.20 mg/L		301 mg/L	1	1.0	2.0			9/18/18 02:33	N	II
R1808851-014	Alkalinity, Total as CaCO3 N/A			Water	268.80 mg/L		269 mg/L	1	1.0	2.0			9/18/18 02:39	N	II
R1808852-001	Alkalinity, Total as CaCO3 N/A			Water	124.00 mg/L		124 mg/L	1	1.0	2.0			9/18/18 02:44	N	IV
R1808899-001	Alkalinity, Total as CaCO3 N/A			Water	552.80 mg/L		553 mg/L	1	1.0	2.0			9/18/18 02:49	N	IV
R1808899-002	Alkalinity, Total as CaCO3 N/A			Water	594.00 mg/L		594 mg/L	1	1.0	2.0			9/18/18 02:55	N	IV
R1808899-003	Alkalinity, Total as CaCO3 N/A			Water	492.40 mg/L		492 mg/L	1	1.0	2.0			9/18/18 03:01	Y	IV
RQ1809855-03	Alkalinity, Total as CaCO3 DUP		R1808899-003	Water	495.20 mg/L		495 mg/L	1	1.0	2.0	<1		9/18/18 03:07	N	IV
R1808871-001	Alkalinity, Total as CaCO3 N/A			Drinking Water	247.20 mg/L		247 mg/L	1	1.0	2.0			9/18/18 03:12	N	II
R1808871-002	Alkalinity, Total as CaCO3 N/A			Drinking Water	301.20 mg/L		301 mg/L	1	1.0	2.0			9/18/18 03:17	N	II
R1808871-003	Alkalinity, Total as CaCO3 N/A			Drinking Water	217.20 mg/L		217 mg/L	1	1.0	2.0			9/18/18 03:23	N	II
R1808871-004	Alkalinity, Total as CaCO3 N/A			Drinking Water	246.40 mg/L		246 mg/L	1	1.0	2.0			9/18/18 03:37	N	II
R1808871-006	Alkalinity, Total as CaCO3 N/A			Drinking Water	127.20 mg/L		127 mg/L	1	1.0	2.0			9/18/18 03:42	N	II
R1808882-001	Alkalinity, Total as CaCO3 N/A			Water	65.60 mg/L		65.6 mg/L	1	1.0	2.0			9/18/18 03:48	N	IV
R1808882-003	Alkalinity, Total as CaCO3 N/A			Water	90.00 mg/L		90.0 mg/L	1	1.0	2.0			9/18/18 03:53	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-Buret-02

Analyst: CWOODS

Analysis Lot:

607108

Method/Testcode: SM 2320 B-1997(2011)/Alkalinity

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC?</u>	<u>Tier</u>
RQ1809856-02	Alkalinity, Total as CaCO ₃ MB			Water	0.40 mg/L		2.0 mg/L U	1	1.0	2.0			9/18/18 03:31	N	IV
RQ1809856-03	Alkalinity, Total as CaCO ₃ LCS			Water	21.20 mg/L		21.2 mg/L	1	1.0	2.0	106		9/18/18 03:57	N	IV
R1808882-005	Alkalinity, Total as CaCO ₃ N/A			Water	54.80 mg/L		54.8 mg/L	1	1.0	2.0			9/18/18 04:03	N	IV
R1808882-007	Alkalinity, Total as CaCO ₃ N/A			Water	40.00 mg/L		40.0 mg/L	1	1.0	2.0			9/18/18 04:07	N	IV
RQ1809856-01	Alkalinity, Total as CaCO ₃ DUP		R1808882-007	Water	40.40 mg/L		40.4 mg/L	1	1.0	2.0	<1		9/18/18 04:12	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.



Alkalinity Analysis Report

Started	Finished	Application	Description	Operator
9/17/2018 11:14 AM	9/17/2018 3:46 PM	WATERS		Operator

MeanSlope	Offsets	Buffer 10 Lot#	Buffer 4 Lot#	CalibrationInfo	CalDateTime
97.8	7.040			pH electrode,pH,(Pt1000),CAL_pH2	2018-09-10 14:27:45
100	1.103			pH electrode,pH,(Pt1000),CAL_pH2	2018-09-17 11:29:17
97.8	7.076			pH electrode,pH,(Pt1000),CAL_pH2	2018-09-17 11:34:50

Rack	Pos	Identiy	pH init	Total Alk. (mg/L)	Carb Alk (mg/L)	Bi/Carb Alk (mg/L)	Dil	vol EP1	B_EP1_pH	Vol EP1	B_EP2_pH	B_Vol_End	C_EP1_Vol	C_EP2_pH	C_Vol_End	Date / Time	
B1	1	pH 7 Check			0.00	0.00	1										9/17/2018 11:28 AM
B1	2	CCV	9.669	45.20	41.60	3.60	1	0.104	4.366	0.122	4.151	0.126					9/17/2018 11:38 AM
B1	3	CCB	4.519	-0.80	0.00	-0.80	1	0	4.354	0	4.114	0.004					9/17/2018 11:44 AM
B1	4	LCS	9.26	19.60	14.40	5.20	1	0.036	4.419	0.066	4.16	0.07					9/17/2018 11:48 AM
B1	5	500mg/L CHECK	10.64	472.40	452.80	19.60	1	-9999					0.632	4.462	1.862		9/17/2018 11:57 AM
B1	6	3000mg/L CHECK	11.133	2,808.00	2,753.60	54.40	1	-9999					6.384	4.499	13.54		9/17/2018 12:05 PM
B1	7	R1808737-008	7.071	83.60	0.00	83.60	1	0	4.434	0.418	4.178	0.428					9/17/2018 12:10 PM
B1	8	R1808737-008D	7.187	82.00	0.00	82.00	1	0	4.452	0.41	4.182	0.42					9/17/2018 12:16 PM
B1	9	R1808737-009	7.314	83.60	0.00	83.60	1	0	4.439	0.418	4.177	0.428					9/17/2018 12:21 PM
B1	10	R1808737-009D	7.345	83.60	0.00	83.60	1	0	4.437	0.418	4.176	0.428					9/17/2018 12:27 PM
B1	11	R1808737-010	6.45	28.80	0.00	28.80	1	0	4.451	0.144	4.172	0.154					9/17/2018 12:31 PM
B1	12	R1808737-011	6.658	24.00	0.00	24.00	1	0	4.404	0.12	4.168	0.128					9/17/2018 12:35 PM
B1	13	R1808737-012	6.457	20.40	0.00	20.40	1	0	4.428	0.102	4.177	0.11					9/17/2018 12:39 PM
B1	14	CCV	9.898	48.80	43.20	5.60	1	0.108	4.388	0.136	4.158	0.142					9/17/2018 12:45 PM
B1	15	CCB	4.749	1.20	0.00	1.20	1	0	4.149	0.006	4.133	0.006					9/17/2018 12:47 PM
B1	16	R1808737-013	7.341	79.60	0.00	79.60	1	0	4.444	0.398	4.177	0.408					9/17/2018 12:53 PM
B1	17	R1808737-014	4.906	0.80	0.00	0.80	1	0	4.272	0.006	4.172	0.008					9/17/2018 12:55 PM
B1	18	R1808869-001	7.623	72.40	0.00	72.40	1	0	4.444	0.362	4.172	0.372					9/17/2018 1:01 PM
B1	19	R1808869-003	7.671	148.00	0.00	148.00	1	0	-9999	-9999	-9999	0.5	0	4.441	0.24		9/17/2018 1:06 PM
B1	20	R1808869-007	7.849	79.20	0.00	79.20	1	0	4.456	0.396	4.185	0.406					9/17/2018 1:12 PM
B1	21	R1808869-011	7.127	48.40	0.00	48.40	1	0	4.449	0.242	4.17	0.252					9/17/2018 1:17 PM
B1	22	R1808869-013	6.82	16.80	0.00	16.80	1	0	4.384	0.09	4.164	0.096					9/17/2018 1:21 PM
B1	23	R1808869-017	6.798	16.40	0.00	16.40	1	0	4.405	0.09	4.158	0.098					9/17/2018 1:25 PM
B1	24	R1808869-018	6.017	12.80	0.00	12.80	1	0	4.395	0.07	4.168	0.076					9/17/2018 1:28 PM
B1	25	R1808869-021	7.469	89.20	0.00	89.20	1	0	4.463	0.446	4.178	0.458					9/17/2018 1:34 PM
B1	26	CCV	9.943	48.40	41.60	6.80	1	0.104	4.43	0.138	4.18	0.144					9/17/2018 1:40 PM
B1	27	CCB	4.744	-1.20	0.00	-1.20	1	0	4.446	0	4.14	0.006					9/17/2018 1:43 PM
B1	28	R1808869-023	7.311	94.40	0.00	94.40	1	0	4.451	0.472	4.174	0.484					9/17/2018 1:48 PM
B1	29	R1808840-001	7.072	54.40	0.00	54.40	1	0	4.454	0.272	4.176	0.282					9/17/2018 1:53 PM
B1	30	R1808840-002	7.169	50.40	0.00	50.40	1	0	4.452	0.252	4.173	0.262					9/17/2018 1:58 PM
B1	31	R1808840-003	6.751	26.00	0.00	26.00	1	0	4.4	0.13	4.181	0.136					9/17/2018 2:02 PM
B1	32	R1808840-004	6.869	28.40	0.00	28.40	1	0	4.408	0.142	4.163	0.15					9/17/2018 2:06 PM
B1	33	LCS	9.433	20.80	12.00	8.80	1	0.03	4.379	0.074	4.145	0.08					9/17/2018 2:11 PM
B1	34	R1808737-007	7.465	84.40	0.00	84.40	1	0	4.423	0.422	4.176	0.432					9/17/2018 2:17 PM
B1	35	R1808737-007D	7.381	86.00	0.00	86.00	1	0	4.437	0.43	4.185	0.44					9/17/2018 2:23 PM
B1	36	R1808840-005	6.777	26.40	0.00	26.40	1	0	4.408	0.132	4.164	0.14					9/17/2018 2:27 PM
B1	37	R1808840-006	6.614	51.20	0.00	51.20	1	0	4.421	0.256	4.185	0.264					9/17/2018 2:32 PM
B1	38	CCV	9.833	48.00	38.40	9.60	1	0.096	4.443	0.144	4.186	0.15					9/17/2018 2:37 PM
B1	39	CCB	4.798	1.20	0.00	1.20	1	0	4.164	0.006	4.144	0.006					9/17/2018 2:40 PM
B1	40	R1808840-007	6.385	26.00	0.00	26.00	1	0	4.458	0.13	4.178	0.138					9/17/2018 2:44 PM
B1	41	R1808840-008	6.532	30.40	0.00	30.40	1	0	4.397	0.152	4.166	0.16					9/17/2018 2:48 PM
B1	42	R1808840-009	6.583	24.40	0.00	24.40	1	0	4.405	0.122	4.165	0.13					9/17/2018 2:52 PM
B1	43	R1808840-010	6.55	27.60	0.00	27.60	1	0	4.416	0.138	4.164	0.145					9/17/2018 2:57 PM
B1	44	R1808840-011	6.655	53.60	0.00	53.60	1	0	4.432	0.268	4.168	0.278					9/17/2018 3:02 PM
B1	45	R1808840-012	6.536	28.40	0.00	28.40	1	0	4.404	0.142	4.164	0.15					9/17/2018 3:06 PM
B1	46	R1808840-013	4.928	0.80	0.00	0.80	1	0	4.251	0.006	4.166	0.008					9/17/2018 3:09 PM
B1	47	R1808841-001	6.004	9.20	0.00	9.20	1	0	4.398	0.052	4.177	0.058					9/17/2018 3:13 PM
B1	48	R1808841-001DI	6.065	8.40	0.00	8.40	1	0	4.442	0.05	4.169	0.058					9/17/2018 3:16 PM
B1	49	R1808841-002	6.039	8.40	0.00	8.40	1	0	4.445	0.05	4.17	0.058					9/17/2018 3:20 PM
B1	50	CCV	9.724	48.40	36.00	12.40	1	0.09	4.412	0.152	4.176	0.158					9/17/2018 3:26 PM
B1	51	CCB	4.758	1.20	0.00	1.20	1	0	4.151	0.006	4.129	0.006					9/17/2018 3:29 PM
B1	52	R1808841-003	5.596	6.00	0.00	6.00	1	0	4.435	0.038	4.174	0.046					9/17/2018 3:32 PM
B1	53	R1808841-004	5.699	2.40	0.00	2.40	1	0	4.451	0.018	4.18	0.024					9/17/2018 3:35 PM
B1	54	R1808841-005	6.27	16.00	0.00	16.00	1	0	4.436	0.088	4.18	0.096					9/17/2018 3:39 PM
B1	55	R1808841-006	6.691	24.00	0.00	24.00	1	0	4.445	0.12	4.169	0.128					9/17/2018 3:43 PM
B1	56	R1808841-007	4.894	0.80	0.00	0.80	1	0	4.253	0.006	4.166	0.008					9/17/2018 3:46 PM
B1	57	R1808817-003		0.00	0.00	1											
B1	58	R1808793-001		0.00	0.00	1											
B1	59	R1808848-001		0.00	0.00	1											
B1	60	LCS		0.00	0.00	1											
B2	1	R1808848-002		0.00	0.00	1											
B2	2	CCV		0.00	0.00	1											
B2	3	CCB		0.00	0.00	1											
B2	4	R1808849-001		0.00	0.00	1											
B2	5	R1808851-001		0.00	0.00	1											

9/17/18 11:30 AM



Alkalinity Analysis Report

Started	Finished	Application	Description	Operator
9/17/2018 4:05 PM	9/18/2018 4:21 AM	WATERS		Operator

MeanSlope	Offsets	Buffer 10 Lot#	Buffer 4 Lot#	CalibrationInfo	CalDateTime
97.8	7.076			pH electrode,pH,(Pt1000),CAL_pH2	2018-09-17 11:34:50

Rack	Pos	Identity	pH init	Total Alk (mg/L)	Carb Alk (mg/L)	Bi/Carb Alk (mg/L)	Dil	vol EP1	B_EP1_pH	Vol EP1	B_EP2_pH	B_Vol_End	C_EP1_Vol	C_EP2_pH	C_Vol_End	Date / Time
B1	1	R1808651-003	7.677	96.00	0.00	96.00	1	0	4.424	0.48	4.175	0.49				9/17/2018 4:12 PM
B1	2	R1808651-004	7.86	378.80	0.00	378.80	1	0	-9999	-9999	-9999	0.5	0	4.467	1.394	9/17/2018 4:17 PM
B1	3	R1808614-001	7.682	108.40	0.00	108.40	1	0	-9999	-9999	-9999	0.5	0	4.391	0.042	9/17/2018 4:23 PM
B1	4	LCS	9.505	21.20	13.60	7.60	1	0.034	4.367	0.072	4.177	0.076				9/17/2018 4:28 PM
B1	5	R1808614-003	7.882	117.60	0.00	117.60	1	0	-9999	-9999	-9999	0.5	0	4.454	0.088	9/17/2018 4:33 PM
B1	6	CCV	9.963	49.20	42.40	6.80	1	0.106	4.403	0.14	4.171	0.146				9/17/2018 4:39 PM
B1	7	CCB	4.878	1.20	0.00	1.20	1	0	4.194	0.006	4.175	0.006				9/17/2018 4:41 PM
B1	8	R1808614-005	6.369	7.20	0.00	7.20	1	0	4.403	0.044	4.168	0.052				9/17/2018 4:45 PM
B1	9	R1808614-005D	6.486	7.20	0.00	7.20	1	0	4.42	0.044	4.178	0.052				9/17/2018 4:49 PM
B1	10	R1808614-007	6.555	8.80	0.00	8.80	1	0	4.448	0.052	4.186	0.06				9/17/2018 4:53 PM
B1	11	R1808614-007D	6.562	8.80	0.00	8.80	1	0	4.421	0.052	4.176	0.06				9/17/2018 4:56 PM
B1	12	R1808615-001	8.003	296.80	0.00	296.80	1	0	-9999	-9999	-9999	0.5	0	4.46	0.984	9/17/2018 5:01 PM
B1	13	R1808616-001	8.024	180.80	0.00	180.80	1	0	-9999	-9999	-9999	0.5	0	4.439	0.404	9/17/2018 5:07 PM
B1	14	R1808616-002	7.891	138.80	0.00	138.80	1	0	-9999	-9999	-9999	0.5	0	4.443	0.194	9/17/2018 5:12 PM
B1	15	R1808568-006	7.316	60.00	0.00	60.00	1	0	4.426	0.3	4.182	0.31				9/17/2018 5:17 PM
B1	16	R1808568-007	7.502	80.80	0.00	80.80	1	0	4.452	0.404	4.172	0.416				9/17/2018 5:23 PM
B1	17	R1808568-008	7.271	60.80	0.00	60.80	1	0	4.437	0.304	4.182	0.314				9/17/2018 5:28 PM
B1	18	CCV	9.873	48.80	40.00	8.80	1	0.1	4.445	0.144	4.161	0.152				9/17/2018 5:33 PM
B1	19	CCB	4.864	0.40	0.00	0.40	1	0	4.305	0.004	4.175	0.006				9/17/2018 5:36 PM
B1	20	R1808568-009	4.726	0.00	0.00	0.00	1	0	4.291	0.004	4.126	0.008				9/17/2018 5:39 PM
B1	21	R1808568-010	8.13	100.00	0.00	100.00	1	0	-9999	-9999	-9999	0.5	0	4.423	0	9/17/2018 5:44 PM
B1	22	R1808568-011	8.656	141.20	15.20	126.00	1	0.038	-9999	-9999	-9999	0.5	0	4.442	0.168	9/17/2018 5:51 PM
B1	23	R1808568-012	8.135	70.80	0.00	70.80	1	0	4.459	0.354	4.183	0.364				9/17/2018 5:56 PM
B1	24	R1808568-013	8.438	142.80	7.20	135.60	1	0.018	-9999	-9999	-9999	0.5	0	4.436	0.196	9/17/2018 6:02 PM
B1	25	R1808568-014	7.888	127.20	0.00	127.20	1	0	-9999	-9999	-9999	0.5	0	4.46	0.136	9/17/2018 6:07 PM
B1	26	R1808568-015	8.16	131.20	0.00	131.20	1	0	-9999	-9999	-9999	0.5	0	4.441	0.156	9/17/2018 6:13 PM
B1	27	R1808568-016	7.952	106.80	0.00	106.80	1	0	-9999	-9999	-9999	0.5	0	4.422	0.034	9/17/2018 6:19 PM
B1	28	R1808817-004	7.65	62.40	0.00	62.40	1	0	4.455	0.312	4.182	0.322				9/17/2018 6:23 PM
B1	29	R1808653-001	8.525	65.60	4.80	60.80	1	0.012	4.428	0.316	4.169	0.326				9/17/2018 6:29 PM
B1	30	CCV	9.819	48.80	36.80	12.00	1	0.092	4.463	0.152	4.172	0.16				9/17/2018 6:34 PM
B1	31	CCB	4.884	1.20	0.00	1.20	1	0	4.212	0.006	4.184	0.006				9/17/2018 6:37 PM
B1	32	R1808653-002	8.619	66.00	7.20	58.80	1	0.018	4.415	0.312	4.17	0.322				9/17/2018 6:43 PM
B1	33	LCS	9.293	20.80	10.40	10.40	1	0.026	4.409	0.078	4.165	0.084				9/17/2018 6:47 PM
B1	34	R1808725-006	7.259	220.40	0.00	220.40	1	0	-9999	-9999	-9999	0.5	0	4.47	0.602	9/17/2018 6:53 PM
B1	35	R1808725-006D	7.308	223.20	0.00	223.20	1	0	-9999	-9999	-9999	0.5	0	4.455	0.616	9/17/2018 6:58 PM
B1	36	R1808725-013	7.44	210.40	0.00	210.40	1	0	-9999	-9999	-9999	0.5	0	4.464	0.552	9/17/2018 7:04 PM
B1	37	R1808725-013D	7.473	215.20	0.00	215.20	1	0	-9999	-9999	-9999	0.5	0	4.452	0.576	9/17/2018 7:09 PM
B1	38	R1808647-001	8.017	164.40	0.00	164.40	1	0	-9999	-9999	-9999	0.5	0	4.434	0.322	9/17/2018 7:15 PM
B1	39	R1808647-002	6.707	36.00	0.00	36.00	1	0	4.45	0.18	4.181	0.188				9/17/2018 7:19 PM
B1	40	R1808647-004	8.092	166.80	0.00	166.80	1	0	-9999	-9999	-9999	0.5	0	4.467	0.334	9/17/2018 7:25 PM
B1	41	R1808669-003	7.25	122.40	0.00	122.40	1	0	-9999	-9999	-9999	0.5	0	4.451	0.112	9/17/2018 7:30 PM
B1	42	CCV	9.816	48.40	33.60	14.80	1	0.084	4.415	0.158	4.185	0.164				9/17/2018 7:36 PM
B1	43	CCB	4.924	0.80	0.00	0.80	1	0	4.258	0.006	4.167	0.008				9/17/2018 7:39 PM
B1	44	R1808669-006	7.231	82.00	0.00	82.00	1	0	4.435	0.41	4.174	0.422				9/17/2018 7:44 PM
B1	45	R1808708-001	7.362	418.00	0.00	418.00	1	0	-9999	-9999	-9999	0.5	0	4.47	1.59	9/17/2018 7:50 PM
B1	46	R1808708-002	7.521	383.20	0.00	383.20	1	0	-9999	-9999	-9999	0.5	0	4.48	1.416	9/17/2018 7:55 PM
B1	47	R1808708-003	7.643	405.60	0.00	405.60	1	0	-9999	-9999	-9999	0.5	0	4.475	1.528	9/17/2018 8:01 PM
B1	48	R1808708-004	7.333	457.20	0.00	457.20	1	0	-9999	-9999	-9999	0.5	0	4.484	1.786	9/17/2018 8:07 PM
B1	49	R1808708-005	8.181	118.80	0.00	118.80	1	0	-9999	-9999	-9999	0.5	0	4.456	0.094	9/17/2018 8:13 PM
B1	50	R1808708-006	7.457	416.40	0.00	416.40	1	0	-9999	-9999	-9999	0.5	0	4.481	1.582	9/17/2018 8:18 PM
B1	51	R1808708-007	7.955	262.00	0.00	262.00	1	0	-9999	-9999	-9999	0.5	0	4.47	0.81	9/17/2018 8:24 PM
B1	52	R1808708-008	8.146	137.20	0.00	137.20	1	0	-9999	-9999	-9999	0.5	0	4.462	0.186	9/17/2018 8:30 PM
B1	53	R1808708-009	7.47	414.00	0.00	414.00	1	0	-9999	-9999	-9999	0.5	0	4.479	1.57	9/17/2018 8:35 PM
B1	54	CCV	9.804	49.20	31.20	18.00	1	0.078	4.452	0.168	4.171	0.176				9/17/2018 8:41 PM
B1	55	CCB	4.889	0.80	0.00	0.80	1	0	4.276	0.006	4.177	0.008				9/17/2018 8:44 PM
B1	56	R1808738-001	7.635	104.00	0.00	104.00	1	0	-9999	-9999	-9999	0.5	0	4.28	0.02	9/17/2018 8:50 PM
B1	57	R1808738-003	7.378	43.60	0.00	43.60	1	0	4.445	0.218	4.168	0.228				9/17/2018 8:55 PM
B1	58	R1808738-007	6.834	30.00	0.00	30.00	1	0	4.476	0.15	4.177	0.16				9/17/2018 8:59 PM
B1	59	R1808738-009	7.393	54.80	0.00	54.80	1	0	4.442	0.274	4.179	0.284				9/17/2018 9:04 PM
B1	60	LCS	9.145	20.80	7.20	13.60	1	0.018	4.442	0.086	4.173	0.092				9/17/2018 9:09 PM
B2	1	R1808738-011	7.665	66.40	0.00	66.40	1	0	4.457	0.332	4.182	0.342				9/17/2018 9:14 PM
B2	2	R1808738-011D	7.713	66.00	0.00	66.00	1	0	4.447	0.33	4.179	0.34				9/17/2018 9:19 PM
B2	3	R1808738-015	7.281	66.00	0.00	66.00	1	0	4.418	0.33	4.171	0.34				9/17/2018 9:24 PM
B2	4	R1808738-015D	7.262													



Rack	Pos	Identify	pH init	Total Alk (mg/L)	Carb Alk (mg/L)	BiCarb Alk (mg/L)	Dif	vol EP1	B_EP1_pH	Vol EP1	B_EP2_pH	B_Vol_End	C_EP1_Vol	C_EP2_pH	C_Vol_End	Date / Time
B2	8	R1808738-023	6.912	17.60	0.00	17.60	1	0	4.395	0.096	4.166	0.104				9/17/2018 9:45 PM
B2	9	R1808738-025	6.013	2.00	0.00	2.00	1	0	4.388	0.016	4.165	0.022				9/17/2018 9:48 PM
B2	10	R1808695-001	7.889	86.00	0.00	86.00	1	0	4.447	0.43	4.165	0.442				9/17/2018 9:54 PM
B2	11	R1808695-002	7.533	51.60	0.00	51.60	1	0	4.427	0.258	4.171	0.266				9/17/2018 9:59 PM
B2	12	R1808695-003	5.127	0.80	0.00	0.80	1	0	4.306	0.006	4.174	0.008				9/17/2018 10:01 PM
B2	13	R1808695-004	4.858	1.20	0.00	1.20	1	0	4.243	0.006	4.185	0.006				9/17/2018 10:04 PM
B2	14	R1808793-002	5.327	3.20	0.00	3.20	1	0	4.455	0.032	4.18	0.048				9/17/2018 10:07 PM
B2	15	R1808838-011	7.844	147.20	0.00	147.20	1	0	-9999	-9999	9.5	0	4.448	0.236		9/17/2018 10:13 PM
B2	16	R1808838-013	7.798	174.40	0.00	174.40	1	0	-9999	-9999	9.5	0	4.455	0.372		9/17/2018 10:18 PM
B2	17	R1808736-001	7.787	77.20	0.00	77.20	1	0	4.441	0.386	4.172	0.398				9/17/2018 10:23 PM
B2	18	CCV	9.679	48.80	28.00	20.80	1	0.07	4.407	0.174	4.179	0.18				9/17/2018 10:29 PM
B2	19	CCB	4.906	0.00	0.00	0.00	1	0	4.351	0.004	4.151	0.008				9/17/2018 10:32 PM
B2	20	R1808736-002	6.781	14.80	0.00	14.80	1	0	4.406	0.08	4.179	0.086				9/17/2018 10:36 PM
B2	21	R1808736-003	7.086	27.60	0.00	27.60	1	0	4.452	0.138	4.18	0.146				9/17/2018 10:40 PM
B2	22	R1808736-004	7.091	24.80	0.00	24.80	1	0	4.409	0.124	4.169	0.132				9/17/2018 10:45 PM
B2	23	R1808736-005	6.826	44.40	0.00	44.40	1	0	4.436	0.222	4.18	0.23				9/17/2018 10:49 PM
B2	24	R1808736-006	6.781	44.80	0.00	44.80	1	0	4.422	0.224	4.176	0.232				9/17/2018 10:54 PM
B2	25	R1808736-007	6.599	11.60	0.00	11.60	1	0	4.442	0.066	4.165	0.074				9/17/2018 10:58 PM
B2	26	R1808736-008	7.126	26.00	0.00	26.00	1	0	4.448	0.13	4.177	0.138				9/17/2018 11:02 PM
B2	27	LCS	9.061	20.80	6.40	14.40	1	0.016	4.437	0.088	4.174	0.094				9/17/2018 11:07 PM
B2	28	R1808736-009	6.974	37.60	0.00	37.60	1	0	4.452	0.188	4.164	0.198				9/17/2018 11:11 PM
B2	29	R1808736-009D	7.025	37.20	0.00	37.20	1	0	4.455	0.186	4.185	0.194				9/17/2018 11:16 PM
B2	30	CCV	9.616	48.00	26.40	21.60	1	0.066	4.467	0.174	4.169	0.182				9/17/2018 11:22 PM
B2	31	CCB	4.925	0.80	0.00	0.80	1	0	4.236	0.006	4.159	0.008				9/17/2018 11:25 PM
B2	32	R1808736-010	6.823	28.00	0.00	28.00	1	0	4.412	0.14	4.167	0.148				9/17/2018 11:29 PM
B2	33	R1808736-010D	6.884	28.00	0.00	28.00	1	0	4.415	0.14	4.168	0.148				9/17/2018 11:33 PM
B2	34	R1808736-011	5.121	0.40	0.00	0.40	1	0	4.329	0.006	4.159	0.01				9/17/2018 11:36 PM
B2	35	R1808736-012	6.9	39.20	0.00	39.20	1	0	4.415	0.196	4.177	0.204				9/17/2018 11:41 PM
B2	36	R1808737-001	7.968	112.40	0.00	112.40	1	0	-9999	-9999	9.5	0	4.456	0.062		9/17/2018 11:47 PM
B2	37	R1808737-002	7.885	90.00	0.00	90.00	1	0	4.465	0.45	4.184	0.462				9/17/2018 11:52 PM
B2	38	R1808737-003	7.918	110.40	0.00	110.40	1	0	-9999	-9999	9.5	0	4.423	0.052		9/17/2018 11:58 PM
B2	39	R1808737-004	7.812	68.80	0.00	68.80	1	0	4.439	0.344	4.178	0.354				9/18/2018 12:03 AM
B2	40	R1808737-005	7.922	86.00	0.00	86.00	1	0	4.457	0.43	4.181	0.442				9/18/2018 12:09 AM
B2	41	R1808737-006	8.034	109.20	0.00	109.20	1	0	-9999	-9999	9.5	0	4.387	0.046		9/18/2018 12:15 AM
B2	42	CCV	9.616	49.20	24.00	25.20	1	0.06	4.394	0.186	4.181	0.192				9/18/2018 12:21 AM
B2	43	CCB	4.943	0.80	0.00	0.80	1	0	4.279	0.006	4.174	0.008				9/18/2018 12:23 AM
B2	44	R1808817-003	8.065	371.60	0.00	371.60	1	0	-9999	-9999	9.5	0	4.475	1.358		9/18/2018 12:29 AM
B2	45	R1808793-001	7.82	266.00	0.00	266.00	1	0	-9999	-9999	9.5	0	4.473	0.83		9/18/2018 12:35 AM
B2	46	R1808848-001	7.986	144.80	0.00	144.80	1	0	-9999	-9999	9.5	0	4.451	0.224		9/18/2018 12:40 AM
B2	47	R1808848-002	7.921	148.80	0.00	148.80	1	0	-9999	-9999	9.5	0	4.459	0.244		9/18/2018 12:46 AM
B2	48	R1808849-001	7.296	36.80	0.00	36.80	1	0	4.418	0.184	4.189	0.192				9/18/2018 12:51 AM
B2	49	R1808851-001	7.516	190.00	0.00	190.00	1	0	-9999	-9999	9.5	0	4.46	0.45		9/18/2018 12:56 AM
B2	50	R1808851-002	7.519	190.00	0.00	190.00	1	0	-9999	-9999	9.5	0	4.469	0.45		9/18/2018 1:02 AM
B2	51	R1808851-003	7.916	251.20	0.00	251.20	1	0	-9999	-9999	9.5	0	4.456	0.756		9/18/2018 1:07 AM
B2	52	R1808851-004	6.251	25.20	0.00	25.20	1	0	4.43	0.126	4.178	0.134				9/18/2018 1:11 AM
B2	53	R1808851-005	7.151	121.60	0.00	121.60	1	0	-9999	-9999	9.5	0	4.453	0.108		9/18/2018 1:17 AM
B2	54	CCV	9.551	49.20	22.40	26.80	1	0.056	4.413	0.19	4.164	0.198				9/18/2018 1:23 AM
B2	55	CCB	4.983	0.80	0.00	0.80	1	0	4.292	0.006	4.182	0.008				9/18/2018 1:26 AM
B2	56	LCS	8.701	19.60	3.20	16.40	1	0.008	4.411	0.096	4.162	0.102				9/18/2018 1:30 AM
B2	57	R1808851-006	7.817	226.40	0.00	226.40	1	0	-9999	-9999	9.5	0	4.464	0.632		9/18/2018 1:35 AM
B2	58	R1808851-007	7.522	61.60	0.00	61.60	1	0	4.445	0.308	4.174	0.318				9/18/2018 1:41 AM
B2	59	R1808851-008	8.005	119.20	0.00	119.20	1	0	-9999	-9999	9.5	0	4.442	0.096		9/18/2018 1:47 AM
B2	60	R1808851-008D	8.034	118.00	0.00	118.00	1	0	-9999	-9999	9.5	0	4.45	0.09		9/18/2018 1:53 AM
B3	1	R1808851-009	7.292	163.60	0.00	163.60	1	0	-9999	-9999	9.5	0	4.466	0.318		9/18/2018 1:58 AM
B3	2	R1808851-009D	7.315	163.60	0.00	163.60	1	0	-9999	-9999	9.5	0	4.448	0.318		9/18/2018 2:04 AM
B3	3	R1808851-010	6.827	86.40	0.00	86.40	1	0	4.443	0.432	4.188	0.442				9/18/2018 2:09 AM
B3	4	R1808851-011	7.956	369.20	0.00	369.20	1	0	-9999	-9999	9.5	0	4.468	1.346		9/18/2018 2:15 AM
B3	5	R1808851-012	7.888	354.80	0.00	354.80	1	0	-9999	-9999	9.5	0	4.469	1.274		9/18/2018 2:20 AM
B3	6	CCV	9.515	50.00	20.00	30.00	1	0.05	4.436	0.2	4.17	0.208				9/18/2018 2:25 AM
B3	7	CCB	4.879	0.40	0.00	0.40	1	0	4.302	0.006	4.16	0.01				9/18/2018 2:28 AM
B3	8	R1808851-013	7.99	301.20	0.00	301.20	1	0	-9999	-9999	9.5	0	4.476	1.006		9/18/2018 2:33 AM
B3	9	R1808851-014	7.922	268.80	0.00	268.80	1	0	-9999	-9999	9.5	0	4.466	0.844		9/18/2018 2:39 AM
B3	10	R1808852-001	8.087	124.00	0.00	124.00	1	0	-9999	-9999	9.5	0	4.454	0.12		9/18/2018 2:44 AM
B3	11	R1808899-001	7.457	552.80	0.00	552.80	1	0	-9999	-9999	9.5	0	4.475	2.264		9/18/2018 2:49 AM
B3	12	R1808899-002	7.238	594.00	0.00	594.00	1	0	-9999	-9999	9.5	0	4.479	2.47		9/18/2018 2:55 AM
B3	13	R1808899-003	7.133	492.40	0.00	492.40	1	0	-9999	-9999	9.5	0	4.484	1.962		9/18/2018 3:01 AM
B3	14	R1808899-003D	7.126	495.20	0.00	495.20	1	0	-9999	-9999	9.5	0	4.486	1.976		9/18/2018 3:07 AM
B3	15	R1808871-001	8.022	247.20	0.00	247.20	1	0	-9999	-9999	9.5	0	4.452	0.736		9/18/2018 3:12 AM
B3	16															

ALS Environmental
1565 Jefferson Rd., Rochester, NY 14623

General Chemistry Analytical Run Cover Sheet

Analyst: CWoods

Date: 9/17/18

Analysis: Alkalinity Instrument: SKALAR R-Buret-02 and R-pH-08

STOCK SOLN'S	Log # Prep/Exp. Dates	Reagent	weight (g)	Final Vol. (mLs)	Conc. (mg/L)
Reference Stock	SEE BELOW	Na2CO3 WC126110E Exp: 11/18/2018	5.3	1000	5000 (A)
Working Ref Stock	SEE BELOW	Prep: 10 mL of 5000 mg/L (A) diluted to 1000 mL w/DI TV=50 mg/L			
LCS	SEE BELOW	Na2CO3 64390 Exp: 11/18/2018	1.0589	1000	1000

QUALITY CONTROL		Vol. (mLs)	Conc. (mg/L)	Final Vol. (mLs)	TV
Water LCS		20	1000	1000	20mg/L
Soil LCS		2	1000	100	2000mg/L
ICV/CCV		10	5000	1000	5000mg/L

REAGENTS	Log Book #, Exp. Dates	Comments
Purchased Titrant	0.100 N H2SO4	190435, Exp 02/08/20
pH 4 Buffer	191004	Exp 4/30/20
pH 7 Buffer	191064	Exp 5/31/20
pH 10 Buffer	191063	Exp 3/31/20

COMMENTS:

25 mL of sample is used by the instrument during titration

1000 mg/L Std Sol'n: 190968 (Exp 11/18/18)

50 mg/L Ref Sol'n: 190967 (Exp 11/18/18)

5000mg/L Sol'n: 190966 (Exp 11/18/18)

Analytical Results Summary

Instrument Name: R-IC-09			Analyst: AMOSES		Analysis Lot: 607262		Method/Testcode: ASTM D6919-09/Ammonia									
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier	
RQ1809912-05	Ammonia as Nitrogen, undistilled	CCV		Water	1.00 ppm	10 mL	1.00 ppm	1					9/18/18 06:32:00	N	II	
RQ1809912-01	Ammonia as Nitrogen, undistilled	MB		Water	0.00 ppm	10 mL	0.0050 mg/L	U 1	0.0008	0.0050			9/18/18 06:48:00	N	II	
RQ1809912-08	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U 1	0.0008	0.0050			9/18/18 06:48:00	N	II	
RQ1809912-02	Ammonia as Nitrogen, undistilled	LCS		Water	0.50 ppm	10 mL	0.503 mg/L	1	0.0008	0.0050	101		9/18/18 07:04:00	N	II	
R1808673-002	Ammonia as Nitrogen, undistilled	N/A		Water	0.00 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 07:36:00	N	II	
R1808696-001	Ammonia as Nitrogen, undistilled	N/A		Water	0.00 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 07:52:00	N	II	
R1808697-001	Ammonia as Nitrogen, undistilled	N/A		Water	37.94 ppm	10 mL	37.9 mg/L	30	0.03	0.15			9/18/18 08:08:00	N	II	
R1808697-002	Ammonia as Nitrogen, undistilled	N/A		Water	0.01 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 08:24:00	N	II	
R1808702-001	Ammonia as Nitrogen, undistilled	N/A		Water	7.44 ppm	10 mL	7.44 mg/L	30	0.03	0.15			9/18/18 08:40:00	N	II	
R1808702-002	Ammonia as Nitrogen, undistilled	N/A		Water	0.25 ppm	10 mL	0.254 mg/L	10	0.008	0.050			9/18/18 08:56:00	N	II	
RQ1809912-03	Ammonia as Nitrogen, undistilled	MS	R1808702-002	Water	5.46 ppm	10 mL	5.46 mg/L	10	0.008	0.050	104		9/18/18 09:12:00	N	II	
RQ1809912-04	Ammonia as Nitrogen, undistilled	DMS	R1808702-002	Water	5.49 ppm	10 mL	5.49 mg/L	10	0.008	0.050	105	<1	9/18/18 09:28:00	N	II	
RQ1809912-06	Ammonia as Nitrogen, undistilled	CCV		Water	1.01 ppm	10 mL	1.01 ppm	1					9/18/18 09:44:00	N	II	
RQ1809912-09	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U 1	0.0008	0.0050			9/18/18 10:01:00	N	II	
R1808701-001	Ammonia as Nitrogen, undistilled	N/A		Water	1.79 ppm	10 mL	1.79 mg/L	10	0.008	0.050			9/18/18 10:17:00	N	I	
R1808701-002	Ammonia as Nitrogen, undistilled	N/A		Water	0.26 ppm	10 mL	0.256 mg/L	10	0.008	0.050			9/18/18 10:33:00	N	I	
R1808701-005	Ammonia as Nitrogen, undistilled	N/A		Water	1.26 ppm	10 mL	1.26 mg/L	10	0.008	0.050			9/18/18 10:49:00	N	I	
R1808701-006	Ammonia as Nitrogen, undistilled	N/A		Water	0.20 ppm	10 mL	0.196 mg/L	10	0.008	0.050			9/18/18 11:05:00	N	I	
R1808701-007	Ammonia as Nitrogen, undistilled	N/A		Water	0.03 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 11:21:00	N	I	
R1808706-001	Ammonia as Nitrogen, undistilled	N/A		Water	6.16 ppm	10 mL	6.16 mg/L	10	0.008	0.050			9/18/18 11:37:00	N	II	
R1808706-002	Ammonia as Nitrogen, undistilled	N/A		Water	8.55 ppm	10 mL	8.55 mg/L	10	0.008	0.050			9/18/18 11:53:00	N	II	
RQ1809912-07	Ammonia as Nitrogen, undistilled	CCV		Water	0.91 ppm	10 mL	0.909 ppm	1					9/18/18 13:43:00	N	II	
RQ1809912-10	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U 1	0.0008	0.0050			9/18/18 14:00:00	N	II	

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-IC-09			Analyst: AMOSES		Analysis Lot:		607265	Method/Testcode: ASTM D6919-09/Ammonia							
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1809914-07	Ammonia as Nitrogen, undistilled	CCV		Water	0.91 ppm	10 mL	0.909 ppm	1					9/18/18 13:43:00	N	I
RQ1809914-01	Ammonia as Nitrogen, undistilled	MB		Water	0.00 ppm	10 mL	0.0050 mg/L	U 1	0.0008	0.0050			9/18/18 14:00:00	N	IV
RQ1809914-10	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U 1	0.0008	0.0050			9/18/18 14:00:00	N	I
R1808653-001	Ammonia as Nitrogen, undistilled	N/A		Water	0.01 ppm	10 mL	0.0100 mg/L	1	0.0008	0.0050			9/18/18 14:32:00	N	IV
RQ1809914-02	Ammonia as Nitrogen, undistilled	LCS		Water	0.55 ppm	10 mL	0.549 mg/L	1	0.0008	0.0050	110		9/18/18 14:48:00	N	IV
R1808653-003	Ammonia as Nitrogen, undistilled	N/A		Water	5.43 ppm	10 mL	5.43 mg/L	1	0.0008	0.0050			9/18/18 15:04:00	N	IV
R1808647-002	Ammonia as Nitrogen, undistilled	N/A		Drinking Water	0.00 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 15:20:00	N	II
R1808647-004	Ammonia as Nitrogen, undistilled	N/A		Drinking Water	0.05 ppm	10 mL	0.049 mg/L	J 10	0.008	0.050			9/18/18 15:36:00	N	II
R1808708-001	Ammonia as Nitrogen, undistilled	N/A		Water	0.00 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 15:52:00	N	II
R1808708-002	Ammonia as Nitrogen, undistilled	N/A		Water	0.00 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 16:08:00	N	II
RQ1809914-03	Ammonia as Nitrogen, undistilled	MS	R1808708-002	Water	5.16 ppm	10 mL	5.16 mg/L	10	0.008	0.050	103		9/18/18 16:24:00	N	II
RQ1809914-04	Ammonia as Nitrogen, undistilled	DMS	R1808708-002	Water	5.19 ppm	10 mL	5.19 mg/L	10	0.008	0.050	104	<1	9/18/18 16:40:00	N	II
RQ1809914-08	Ammonia as Nitrogen, undistilled	CCV		Water	1.09 ppm	10 mL	1.09 ppm	1					9/18/18 16:56:00	N	I
RQ1809914-11	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U 1	0.0008	0.0050			9/18/18 17:12:00	N	I
R1808708-003	Ammonia as Nitrogen, undistilled	N/A		Water	0.02 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 17:28:00	N	II
R1808708-004	Ammonia as Nitrogen, undistilled	N/A		Water	0.00 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 17:44:00	N	II
R1808708-005	Ammonia as Nitrogen, undistilled	N/A		Water	0.00 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 18:00:00	N	II
R1808708-006	Ammonia as Nitrogen, undistilled	N/A		Water	0.00 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 18:16:00	N	II
R1808708-007	Ammonia as Nitrogen, undistilled	N/A		Water	0.00 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 18:32:00	N	II
R1808708-008	Ammonia as Nitrogen, undistilled	N/A		Water	0.04 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 18:48:00	N	II
R1808708-009	Ammonia as Nitrogen, undistilled	N/A		Water	0.00 ppm	10 mL	0.050 mg/L	U 10	0.008	0.050			9/18/18 19:04:00	N	II
R1808730-004	Ammonia as Nitrogen, undistilled	N/A		Water	3.75 ppm	10 mL	3.75 mg/L	10	0.008	0.050			9/18/18 19:20:00	N	I
RQ1809914-05	Ammonia as Nitrogen, undistilled	MS	R1808730-004	Water	9.21 ppm	10 mL	9.21 mg/L	10	0.008	0.050	109		9/18/18 19:37:00	N	I

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-IC-09		Analyst: AMOSES		Analysis Lot:		607265	Method/Testcode: ASTM D6919-09/Ammonia								
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1809914-06	Ammonia as Nitrogen, undistilled	DMS	R1808730-004	Water	9.18 ppm	10 mL	9.18 mg/L	10	0.008	0.050	109	<1	9/18/18 19:53:00	N	I
RQ1809914-09	Ammonia as Nitrogen, undistilled	CCV		Water	1.04 ppm	10 mL	1.04 ppm	1					9/18/18 20:09:00	N	I
RQ1809914-12	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U	1	0.0008	0.0050		9/18/18 20:25:00	N	I

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-IC-09

Analyst: AMOSES

Analysis Lot:

607266

Method/Testcode: ASTM D6919-09/Ammonia

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC? Tier
RQ1809915-07	Ammonia as Nitrogen, undistilled	CCV		Water	1.04 ppm	10 mL	1.04 ppm	1					9/18/18 20:09:00	N I
RQ1809915-01	Ammonia as Nitrogen, undistilled	MB		Water	0.00 ppm	10 mL	0.0050 mg/L	U 1	0.0008	0.0050			9/18/18 20:25:00	N II
RQ1809915-10	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U 1	0.0008	0.0050			9/18/18 20:25:00	N I
RQ1809915-02	Ammonia as Nitrogen, undistilled	LCS		Water	0.53 ppm	10 mL	0.529 mg/L	1	0.0008	0.0050	106		9/18/18 20:41:00	N II
R1808719-001	Ammonia as Nitrogen, undistilled	N/A		Water	0.21 ppm	10 mL	0.206 mg/L	10	0.008	0.050			9/18/18 20:57:00	N II
R1808719-002	Ammonia as Nitrogen, undistilled	N/A		Water	466.87 ppm	10 mL	467 mg/L	500	0.4	2.5			9/18/18 21:13:00	N II
R1808711-001	Ammonia as Nitrogen, undistilled	N/A		Water	8.26 ppm	10 mL	8.26 mg/L	100	0.08	0.50			9/18/18 21:29:00	N IV
R1808732-001	Ammonia as Nitrogen, undistilled	N/A		Water	22.97 ppm	10 mL	23.0 mg/L	30	0.03	0.15			9/18/18 21:45:00	N I
R1808732-002	Ammonia as Nitrogen, undistilled	N/A		Water	7.51 ppm	10 mL	7.51 mg/L	10	0.008	0.050			9/18/18 22:01:00	N I
R1808732-003	Ammonia as Nitrogen, undistilled	N/A		Water	23.91 ppm	10 mL	23.9 mg/L	30	0.03	0.15			9/18/18 22:17:00	N I
R1808732-004	Ammonia as Nitrogen, undistilled	N/A		Water	7.44 ppm	10 mL	7.44 mg/L	10	0.008	0.050			9/18/18 22:33:00	N I
RQ1809915-03	Ammonia as Nitrogen, undistilled	MS	R1808732-004	Water	12.69 ppm	10 mL	12.7 mg/L	10	0.008	0.050	105		9/18/18 22:49:00	N I
RQ1809915-04	Ammonia as Nitrogen, undistilled	DMS	R1808732-004	Water	13.03 ppm	10 mL	13.0 mg/L	10	0.008	0.050	112*	3	9/18/18 23:05:00	N I
RQ1809915-08	Ammonia as Nitrogen, undistilled	CCV		Water	1.09 ppm	10 mL	1.09 ppm	1					9/18/18 23:21:00	N I
RQ1809915-11	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U 1	0.0008	0.0050			9/18/18 23:37:00	N I
R1808738-001	Ammonia as Nitrogen, undistilled	N/A		Water	0.50 ppm	10 mL	0.500 mg/L	1	0.0008	0.0050			9/18/18 23:53:00	N IV
R1808738-003	Ammonia as Nitrogen, undistilled	N/A		Water	0.15 ppm	10 mL	0.147 mg/L	1	0.0008	0.0050			9/19/18 00:09:00	N IV
R1808738-005	Ammonia as Nitrogen, undistilled	N/A		Water	0.16 ppm	10 mL	0.165 mg/L	1	0.0008	0.0050			9/19/18 00:25:00	N IV
R1808738-007	Ammonia as Nitrogen, undistilled	N/A		Water	0.01 ppm	10 mL	0.0053 mg/L	1	0.0008	0.0050			9/19/18 00:41:00	N IV
R1808738-009	Ammonia as Nitrogen, undistilled	N/A		Water	0.07 ppm	10 mL	0.0676 mg/L	1	0.0008	0.0050			9/19/18 00:57:00	N IV
R1808738-011	Ammonia as Nitrogen, undistilled	N/A		Water	0.05 ppm	10 mL	0.0461 mg/L	1	0.0008	0.0050			9/19/18 01:14:00	N IV
R1808732-005	Ammonia as Nitrogen, undistilled	N/A		Water	23.10 ppm	10 mL	23.1 mg/L	30	0.03	0.15			9/19/18 01:30:00	N I
R1808732-006	Ammonia as Nitrogen, undistilled	N/A		Water	4.00 ppm	10 mL	4.00 mg/L	10	0.008	0.050			9/19/18 01:46:00	N I

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-IC-09 Analyst: AMOSES Analysis Lot: 607266 Method/Testcode: ASTM D6919-09/Ammonia

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC? Tier</u>
RQ1809915-05	Ammonia as Nitrogen, undistilled	MS	R1808732-006	Water	9.22 ppm	10 mL	9.22 mg/L	10	0.008	0.050	104	<1	9/19/18 02:02:00	N 1
RQ1809915-06	Ammonia as Nitrogen, undistilled	DMS	R1808732-006	Water	9.21 ppm	10 mL	9.21 mg/L	10	0.008	0.050	104	<1	9/19/18 02:18:00	N 1
RQ1809915-09	Ammonia as Nitrogen, undistilled	CCV		Water	1.06 ppm	10 mL	1.06 ppm	1					9/19/18 02:34:00	N 1
RQ1809915-12	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U	0.0008	0.0050			9/19/18 02:50:00	N 1

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-IC-09			Analyst: AMOSES		Analysis Lot:		607269	Method/Testcode: ASTM D6919-09/Ammonia							
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1809917-07	Ammonia as Nitrogen, undistilled	CCV		Water	1.06 ppm	10 mL	1.06 ppm	1					9/19/18 02:34:00	N	I
RQ1809917-01	Ammonia as Nitrogen, undistilled	MB		Water	0.00 ppm	10 mL	0.0050 mg/L	U	1	0.0008	0.0050		9/19/18 02:50:00	N	IV
RQ1809917-10	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U	1	0.0008	0.0050		9/19/18 02:50:00	N	I
RQ1809917-02	Ammonia as Nitrogen, undistilled	LCS		Water	0.50 ppm	10 mL	0.500 mg/L	1	0.0008	0.0050	100		9/19/18 03:06:00	N	IV
R1808738-013	Ammonia as Nitrogen, undistilled	N/A		Water	1.54 ppm	10 mL	1.54 mg/L	1	0.0008	0.0050			9/19/18 03:22:00	N	IV
R1808738-015	Ammonia as Nitrogen, undistilled	N/A		Water	0.00 ppm	10 mL	0.0050 mg/L	U	1	0.0008	0.0050		9/19/18 03:38:00	N	IV
R1808738-017	Ammonia as Nitrogen, undistilled	N/A		Water	0.06 ppm	10 mL	0.0592 mg/L	1	0.0008	0.0050			9/19/18 03:54:00	N	IV
R1808738-019	Ammonia as Nitrogen, undistilled	N/A		Water	0.03 ppm	10 mL	0.0290 mg/L	1	0.0008	0.0050			9/19/18 04:10:00	N	IV
R1808738-021	Ammonia as Nitrogen, undistilled	N/A		Water	0.14 ppm	10 mL	0.144 mg/L	1	0.0008	0.0050			9/19/18 04:26:00	N	IV
R1808741-001	Ammonia as Nitrogen, undistilled	N/A		Water	15.31 ppm	10 mL	15.3 mg/L	30	0.03	0.15			9/19/18 04:42:00	N	II
R1808741-002	Ammonia as Nitrogen, undistilled	N/A		Water	2.22 ppm	10 mL	2.22 mg/L	10	0.008	0.050			9/19/18 04:58:00	N	II
RQ1809917-03	Ammonia as Nitrogen, undistilled	MS	R1808741-002	Water	7.54 ppm	10 mL	7.54 mg/L	10	0.008	0.050	106		9/19/18 05:14:00	N	II
RQ1809917-04	Ammonia as Nitrogen, undistilled	DMS	R1808741-002	Water	7.55 ppm	10 mL	7.55 mg/L	10	0.008	0.050	106	<1	9/19/18 05:30:00	N	II
RQ1809917-08	Ammonia as Nitrogen, undistilled	CCV		Water	1.08 ppm	10 mL	1.08 ppm	1					9/19/18 05:46:00	N	I
RQ1809917-11	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U	1	0.0008	0.0050		9/19/18 06:02:00	N	I
R1808653-002	Ammonia as Nitrogen, undistilled	N/A		Water	0.01 ppm	10 mL	0.0073 mg/L	1	0.0008	0.0050			9/19/18 06:18:00	N	IV
R1808738-023	Ammonia as Nitrogen, undistilled	N/A		Water	0.01 ppm	10 mL	0.0058 mg/L	1	0.0008	0.0050			9/19/18 06:34:00	N	IV
R1808738-025	Ammonia as Nitrogen, undistilled	N/A		Water	0.01 ppm	10 mL	0.0057 mg/L	1	0.0008	0.0050			9/19/18 06:51:00	N	IV
R1808781-001	Ammonia as Nitrogen, undistilled	N/A		Water	13.65 ppm	10 mL	13.6 mg/L	30	0.03	0.15			9/19/18 07:07:00	N	I
R1808781-002	Ammonia as Nitrogen, undistilled	N/A		Water	9.44 ppm	10 mL	9.44 mg/L	10	0.008	0.050			9/19/18 07:23:00	N	I
R1808781-003	Ammonia as Nitrogen, undistilled	N/A		Water	1.68 ppm	10 mL	1.68 mg/L	10	0.008	0.050			9/19/18 07:39:00	N	I
R1808781-004	Ammonia as Nitrogen, undistilled	N/A		Water	1.51 ppm	10 mL	1.51 mg/L	10	0.008	0.050			9/19/18 07:55:00	N	I
R1808794-002	Ammonia as Nitrogen, undistilled	N/A		Water	0.03 ppm	10 mL	0.050 mg/L	U	10	0.008	0.050		9/19/18 08:11:00	N	I

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-IC-09

Analyst: AMOSES

Analysis Lot:

607269

Method/Testcode: ASTM D6919-09/Ammonia

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC?</u>	<u>Tier</u>
RQ1809917-05	Ammonia as Nitrogen, undistilled	MS	R1808794-002	Water	5.22 ppm	10 mL	5.22 mg/L	10	0.008	0.050	104	<1	9/19/18 08:27:00	N	I
RQ1809917-06	Ammonia as Nitrogen, undistilled	DMS	R1808794-002	Water	5.17 ppm	10 mL	5.17 mg/L	10	0.008	0.050	103	<1	9/19/18 08:43:00	N	I
RQ1809917-09	Ammonia as Nitrogen, undistilled	CCV		Water	1.09 ppm	10 mL	1.09 ppm	1					9/19/18 08:59:00	N	I
RQ1809917-12	Ammonia as Nitrogen, undistilled	CCB		Water	0.00 ppm	10 mL	0.0050 mg/L	U	0.0008	0.0050			9/19/18 09:15:00	N	I

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9/18/18 ICL#9 A.Mosby/FM

Packets: Up, Down

Injection Number	Injection Name	Type	Level	Processing Method	Inject Time	Dilution	Comment
1	STANDARD 1	Calibration Standard	01	9-051418	05/18/18 09:34	1.0	ASTM D6919-09 Ammonia
2	STANDARD 2	Calibration Standard	02	9-051418	05/18/18 10:04	1.0	ASTM D6919-09 Ammonia
3	STANDARD 3	Calibration Standard	03	9-051418	05/18/18 10:34	1.0	ASTM D6919-09 Ammonia
4	STANDARD 4	Calibration Standard	04	9-051418	05/18/18 10:49	1.0	ASTM D6919-09 Ammonia
5	STANDARD 5	Calibration Standard	05	9-051418	05/18/18 11:03	1.0	ASTM D6919-09 Ammonia
6	STANDARD 6	Calibration Standard	06	9-051418	05/18/18 11:18	1.0	ASTM D6919-09 Ammonia
7	STANDARD 7	Calibration Standard	07	9-051418	05/18/18 11:32	1.0	ASTM D6919-09 Ammonia
8	STANDARD 8	Calibration Standard	08	9-051418	05/18/18 11:47	1.0	ASTM D6919-09 Ammonia
9	STANDARD 9	Calibration Standard	09	9-051418	05/18/18 12:02	1.0	ASTM D6919-09 Ammonia
10	STANDARD 10	Calibration Standard	10	9-051418	05/18/18 12:16	1.0	ASTM D6919-09 Ammonia
11	CCV	Unknown		9-051418	09/18/18 06:32	1.0	ASTM D6919-09 Ammonia
12	CCB	Unknown		9-051418	09/18/18 06:48	1.0	ASTM D6919-09 Ammonia
13	LCS (607262)	Unknown		9-051418	09/18/18 07:04	1.0	ASTM D6919-09 Ammonia
14	R1808669-007 DNR (str.)	Unknown		9-051418	09/18/18 07:20	10.0	ASTM D6919-09 Ammonia
15	R1808673-002	Unknown		9-051418	09/18/18 07:36	10.0	ASTM D6919-09 Ammonia
16	R1808696-001	Unknown		9-051418	09/18/18 07:52	10.0	ASTM D6919-09 Ammonia
17	R1808697-001	Unknown		9-051418	09/18/18 08:08	30.0	ASTM D6919-09 Ammonia
18	R1808697-002	Unknown		9-051418	09/18/18 08:24	10.0	ASTM D6919-09 Ammonia
19	R1808702-001	Unknown		9-051418	09/18/18 08:40	30.0	ASTM D6919-09 Ammonia
20	R1808702-002	Unknown		9-051418	09/18/18 08:56	10.0	ASTM D6919-09 Ammonia
21	R1808702-002 MS	Unknown		9-051418	09/18/18 09:12	10.0	ASTM D6919-09 Ammonia
22	R1808702-002 MSD	Unknown		9-051418	09/18/18 09:28	10.0	ASTM D6919-09 Ammonia
23	CCV	Unknown		9-051418	09/18/18 09:44	1.0	ASTM D6919-09 Ammonia
24	CCB	Unknown		9-051418	09/18/18 10:01	1.0	ASTM D6919-09 Ammonia
25	R1808701-001	Unknown		9-051418	09/18/18 10:17	10.0	ASTM D6919-09 Ammonia
26	R1808701-002	Unknown		9-051418	09/18/18 10:33	10.0	ASTM D6919-09 Ammonia
27	R1808701-005	Unknown		9-051418	09/18/18 10:49	10.0	ASTM D6919-09 Ammonia
28	R1808701-006	Unknown		9-051418	09/18/18 11:05	10.0	ASTM D6919-09 Ammonia
29	R1808701-007	Unknown		9-051418	09/18/18 11:21	10.0	ASTM D6919-09 Ammonia
30	R1808706-001	Unknown		9-051418	09/18/18 11:37	10.0	ASTM D6919-09 Ammonia
31	R1808706-002	Unknown		9-051418	09/18/18 11:53	10.0	ASTM D6919-09 Ammonia
32	R1808703-001 DNR (1/30)	Unknown		9-051418	09/18/18 12:09	10.0	ASTM D6919-09 Ammonia
33	R1808703-001 MS	Unknown		9-051418	09/18/18 12:25	10.0	ASTM D6919-09 Ammonia
34	R1808703-001 MSD	Unknown		9-051418	09/18/18 12:41	10.0	ASTM D6919-09 Ammonia
35	CCV Prepped wrong	Unknown		9-051418	09/18/18 12:58	1.0	ASTM D6919-09 Ammonia

36	CCB	Unknown	9-051418	09/18/18 13:14	1.0	ASTM D6919-09 Ammonia
37	CCV	Unknown	9-051418	09/18/18 13:43	1.0	ASTM D6919-09 Ammonia
38	CCB	Unknown	9-051418	09/18/18 14:00	1.0	ASTM D6919-09 Ammonia
39	LCS <i>Prepped wrong</i>	Unknown	9-051418	09/18/18 14:16	1.0	ASTM D6919-09 Ammonia
40	R1808653-001	Unknown	9-051418	09/18/18 14:32	1.0	ASTM D6919-09 Ammonia LL
41	LCS <i>(607265)</i>	Unknown	9-051418	09/18/18 14:48	1.0	ASTM D6919-09 Ammonia
42	R1808653-003	Unknown	9-051418	09/18/18 15:04	1.0	ASTM D6919-09 Ammonia LL
43	R1808647-002	Unknown	9-051418	09/18/18 15:20	10.0	ASTM D6919-09 Ammonia
44	R1808647-004	Unknown	9-051418	09/18/18 15:36	10.0	ASTM D6919-09 Ammonia
45	R1808708-001	Unknown	9-051418	09/18/18 15:52	10.0	ASTM D6919-09 Ammonia
46	R1808708-002	Unknown	9-051418	09/18/18 16:08	10.0	ASTM D6919-09 Ammonia
47	R1808708-002 MS	Unknown	9-051418	09/18/18 16:24	10.0	ASTM D6919-09 Ammonia
48	R1808708-002 MSD	Unknown	9-051418	09/18/18 16:40	10.0	ASTM D6919-09 Ammonia
49	CCV	Unknown	9-051418	09/18/18 16:56	1.0	ASTM D6919-09 Ammonia
50	CCB	Unknown	9-051418	09/18/18 17:12	1.0	ASTM D6919-09 Ammonia
51	R1808708-003	Unknown	9-051418	09/18/18 17:28	10.0	ASTM D6919-09 Ammonia
52	R1808708-004	Unknown	9-051418	09/18/18 17:44	10.0	ASTM D6919-09 Ammonia
53	R1808708-005	Unknown	9-051418	09/18/18 18:00	10.0	ASTM D6919-09 Ammonia
54	R1808708-006	Unknown	9-051418	09/18/18 18:16	10.0	ASTM D6919-09 Ammonia
55	R1808708-007	Unknown	9-051418	09/18/18 18:32	10.0	ASTM D6919-09 Ammonia
56	R1808708-008	Unknown	9-051418	09/18/18 18:48	10.0	ASTM D6919-09 Ammonia
57	R1808708-009	Unknown	9-051418	09/18/18 19:04	10.0	ASTM D6919-09 Ammonia
58	R1808730-004	Unknown	9-051418	09/18/18 19:20	10.0	ASTM D6919-09 Ammonia
59	R1808730-004 MS	Unknown	9-051418	09/18/18 19:37	10.0	ASTM D6919-09 Ammonia
60	R1808730-004 MSD	Unknown	9-051418	09/18/18 19:53	10.0	ASTM D6919-09 Ammonia
61	CCV	Unknown	9-051418	09/18/18 20:09	1.0	ASTM D6919-09 Ammonia
62	CCB	Unknown	9-051418	09/18/18 20:25	1.0	ASTM D6919-09 Ammonia
63	LCS <i>(607266)</i>	Unknown	9-051418	09/18/18 20:41	1.0	ASTM D6919-09 Ammonia
64	R1808719-001	Unknown	9-051418	09/18/18 20:57	10.0	ASTM D6919-09 Ammonia
65	R1808719-002	Unknown	9-051418	09/18/18 21:13	500.0	ASTM D6919-09 Ammonia
66	R1808711-001	Unknown	9-051418	09/18/18 21:29	100.0	ASTM D6919-09 Ammonia
67	R1808732-001	Unknown	9-051418	09/18/18 21:45	30.0	ASTM D6919-09 Ammonia
68	R1808732-002	Unknown	9-051418	09/18/18 22:01	10.0	ASTM D6919-09 Ammonia
69	R1808732-003	Unknown	9-051418	09/18/18 22:17	30.0	ASTM D6919-09 Ammonia
70	R1808732-004	Unknown	9-051418	09/18/18 22:33	10.0	ASTM D6919-09 Ammonia
71	R1808732-004 MS	Unknown	9-051418	09/18/18 22:49	10.0	ASTM D6919-09 Ammonia
72	R1808732-004 MSD	Unknown	9-051418	09/18/18 23:05	10.0	ASTM D6919-09 Ammonia
73	CCV	Unknown	9-051418	09/18/18 23:21	1.0	ASTM D6919-09 Ammonia
74	CCB	Unknown	9-051418	09/18/18 23:37	1.0	ASTM D6919-09 Ammonia

75	R1808738-001	Unknown	9-051418	09/18/18 23:53	1.0	ASTM D6919-09 Ammonia LL
76	R1808738-003	Unknown	9-051418	09/19/18 00:09	1.0	ASTM D6919-09 Ammonia LL
77	R1808738-005	Unknown	9-051418	09/19/18 00:25	1.0	ASTM D6919-09 Ammonia LL
78	R1808738-007	Unknown	9-051418	09/19/18 00:41	1.0	ASTM D6919-09 Ammonia LL
79	R1808738-009	Unknown	9-051418	09/19/18 00:57	1.0	ASTM D6919-09 Ammonia LL
80	R1808738-011	Unknown	9-051418	09/19/18 01:14	1.0	ASTM D6919-09 Ammonia LL
81	R1808732-005	Unknown	9-051418	09/19/18 01:30	30.0	ASTM D6919-09 Ammonia
82	R1808732-006	Unknown	9-051418	09/19/18 01:46	10.0	ASTM D6919-09 Ammonia
83	R1808732-006 MS	Unknown	9-051418	09/19/18 02:02	10.0	ASTM D6919-09 Ammonia
84	R1808732-006 MSD	Unknown	9-051418	09/19/18 02:18	10.0	ASTM D6919-09 Ammonia
85	CCV	Unknown	9-051418	09/19/18 02:34	1.0	ASTM D6919-09 Ammonia
86	CCB	Unknown	9-051418	09/19/18 02:50	1.0	ASTM D6919-09 Ammonia
87	LCS (607269)	Unknown	9-051418	09/19/18 03:06	1.0	ASTM D6919-09 Ammonia
88	R1808738-013	Unknown	9-051418	09/19/18 03:22	1.0	ASTM D6919-09 Ammonia LL
89	R1808738-015	Unknown	9-051418	09/19/18 03:38	1.0	ASTM D6919-09 Ammonia LL
90	R1808738-017	Unknown	9-051418	09/19/18 03:54	1.0	ASTM D6919-09 Ammonia LL
91	R1808738-019	Unknown	9-051418	09/19/18 04:10	1.0	ASTM D6919-09 Ammonia LL
92	R1808738-021	Unknown	9-051418	09/19/18 04:26	1.0	ASTM D6919-09 Ammonia LL
93	R1808741-001	Unknown	9-051418	09/19/18 04:42	30.0	ASTM D6919-09 Ammonia
94	R1808741-002	Unknown	9-051418	09/19/18 04:58	10.0	ASTM D6919-09 Ammonia
95	R1808741-002 MS	Unknown	9-051418	09/19/18 05:14	10.0	ASTM D6919-09 Ammonia
96	R1808741-002 MSD	Unknown	9-051418	09/19/18 05:30	10.0	ASTM D6919-09 Ammonia
97	CCV	Unknown	9-051418	09/19/18 05:46	1.0	ASTM D6919-09 Ammonia
98	CCB	Unknown	9-051418	09/19/18 06:02	1.0	ASTM D6919-09 Ammonia
99	R1808653-002	Unknown	9-051418	09/19/18 06:18	1.0	ASTM D6919-09 Ammonia LL
100	R1808738-023	Unknown	9-051418	09/19/18 06:34	1.0	ASTM D6919-09 Ammonia LL
101	R1808738-025	Unknown	9-051418	09/19/18 06:51	1.0	ASTM D6919-09 Ammonia LL
102	R1808781-001	Unknown	9-051418	09/19/18 07:07	30.0	ASTM D6919-09 Ammonia
103	R1808781-002	Unknown	9-051418	09/19/18 07:23	10.0	ASTM D6919-09 Ammonia
104	R1808781-003	Unknown	9-051418	09/19/18 07:39	10.0	ASTM D6919-09 Ammonia
105	R1808781-004	Unknown	9-051418	09/19/18 07:55	10.0	ASTM D6919-09 Ammonia
106	R1808794-002	Unknown	9-051418	09/19/18 08:11	10.0	ASTM D6919-09 Ammonia
107	R1808794-002 MS	Unknown	9-051418	09/19/18 08:27	10.0	ASTM D6919-09 Ammonia
108	R1808794-002 MSD	Unknown	9-051418	09/19/18 08:43	10.0	ASTM D6919-09 Ammonia
109	CCV	Unknown	9-051418	09/19/18 08:59	1.0	ASTM D6919-09 Ammonia
110	CCB	Unknown	9-051418	09/19/18 09:15	1.0	ASTM D6919-09 Ammonia

Sample Dilutions

Final Volume: 4-6mL - IC#5, 6, 7, 8, 9

Analyst: A. MOSES/FN
Instrument: #9

Date 9/18/18
Analysis NaH₂

Common Dilutions

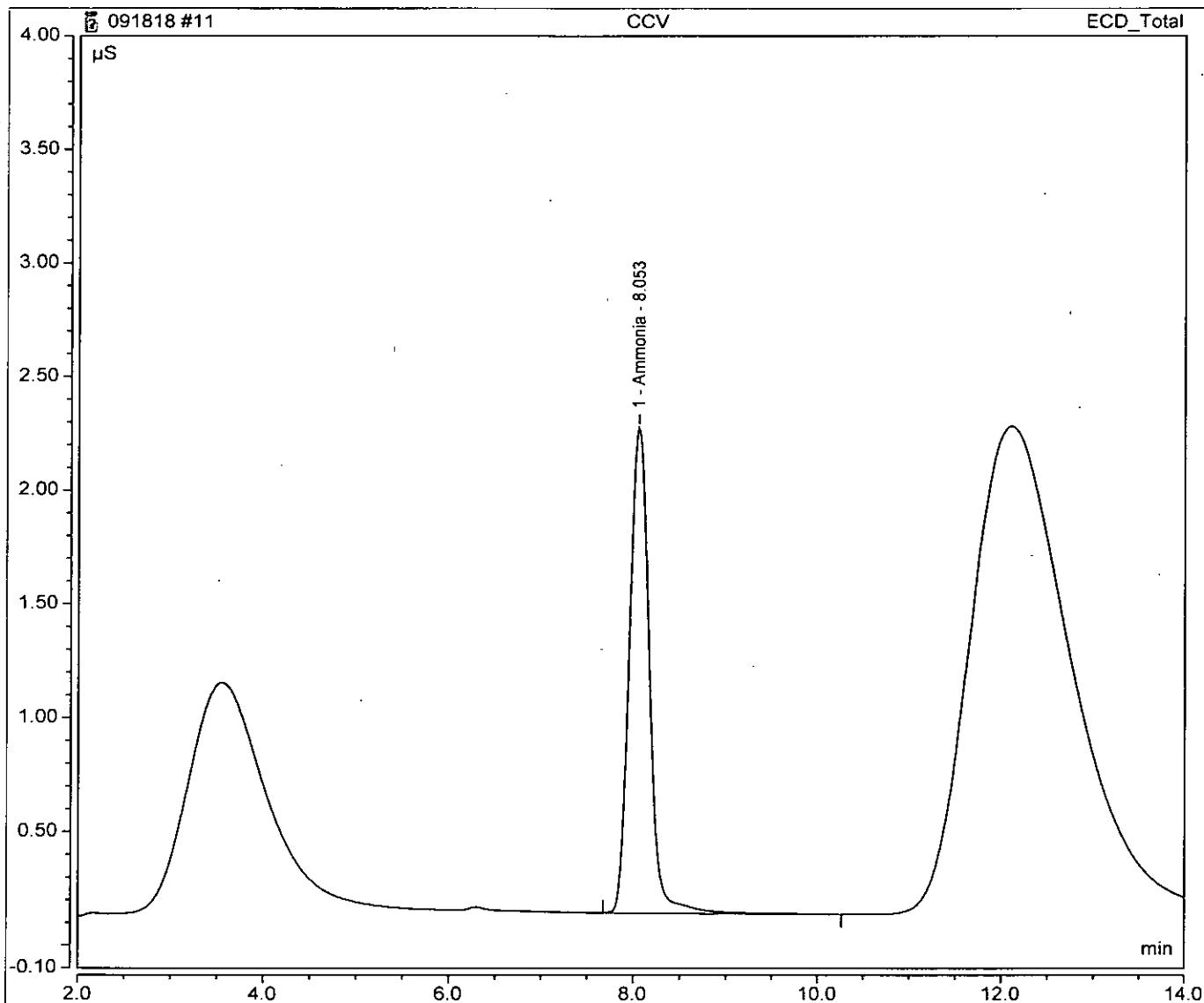
Common Dilutions																
Dilution	Matrix of Diluent	1st Dilution			2nd Dilution			3rd Dilution			4th Dilution			5th Dilution		
		mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor
1/2	DI	3	3	1/2												
1/3	DI	2	4	1/3												
1/4	DI	1	3	1/4												
1/5	DI	1	4	1/5												
1/10	DI	0.5	4.5	1/10												
1/20	DI	1	1	1/2	0.5	4.5	1/20									
1/30	DI	2	4	1/3	0.5	4.5	1/30									
1/40	DI	1	3	1/4	0.5	4.5	1/40									
1/50	DI	1	4	1/5	0.5	4.5	1/50									
1/100	DI	0.5	4.5	1/10	0.5	4.5	1/100									
1/200	DI	1	1	1/2	0.5	4.5	1/20	0.5	4.5	1/200						
1/300	DI	2	4	1/3	0.5	4.5	1/30	0.5	4.5	1/300						
1/400	DI	1	3	1/4	0.5	4.5	1/40	0.5	4.5	1/400						
1/500	DI	1	4	1/5	0.5	4.5	1/50	0.5	4.5	1/500						
1/1000	DI	0.5	4.5	1/10	0.5	4.5	1/100	0.5	4.5	1/1000						
1/2000	DI	1	1	1/2	0.5	4.5	1/20	0.5	4.5	1/200	0.5	4.5	1/2000			
1/3000	DI	2	4	1/3	0.5	4.5	1/30	0.5	4.5	1/300	0.5	4.5	1/3000			
1/4000	DI	1	3	1/4	0.5	4.5	1/40	0.5	4.5	1/400	0.5	4.5	1/4000			
1/10000	DI	0.5	4.5	1/10	0.5	4.5	1/100	0.5	4.5	1/1000	0.5	4.5	1/10000			
1/20000	DI	1	1	1/2	0.5	4.5	1/20	0.5	4.5	1/200	0.5	4.5	1/20000	0.5	4.5	1/20000
1/40000	DI	1	3	1/4	0.5	4.5	1/40	0.5	4.5	1/400	0.5	4.5	1/40000	0.5	4.5	1/40000
1/100000	DI	0.5	4.5	1/10	0.5	4.5	1/100	0.5	4.5	1/1000	0.5	4.5	1/100000	0.5	4.5	1/100000

Special Dilutions

Peak Integration Report

Sample Name:	CCV	Inj. No.:	11
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 06:32	Comments:	ASTM D6919-09 Ammonia

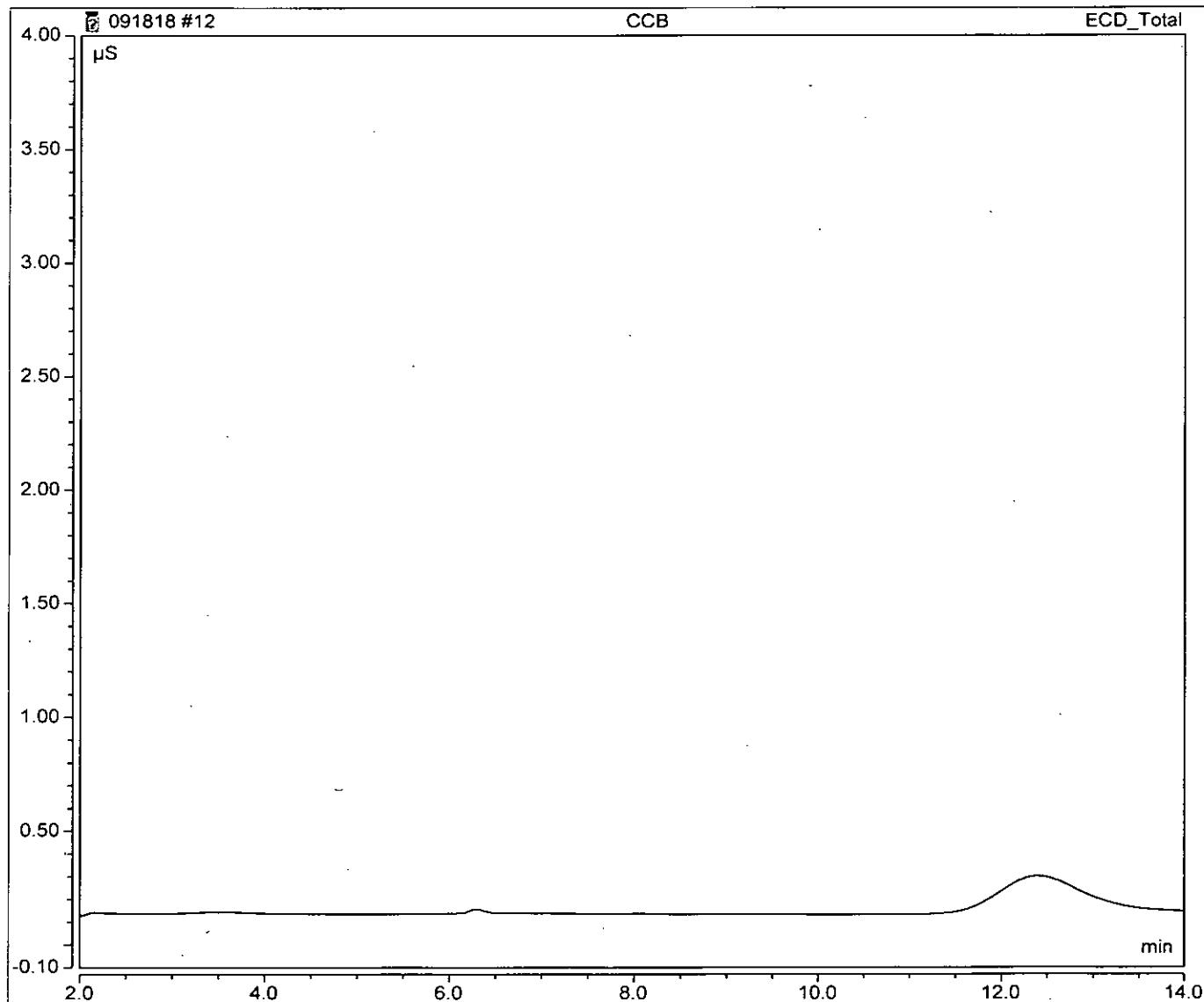
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.532	2.135	1.00471
TOTAL:				0.53	2.13	1.00



Peak Integration Report

Sample Name:	CCB	Inj. No.:	12
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 06:48	Comments:	ASTM D6919-09 Ammonia

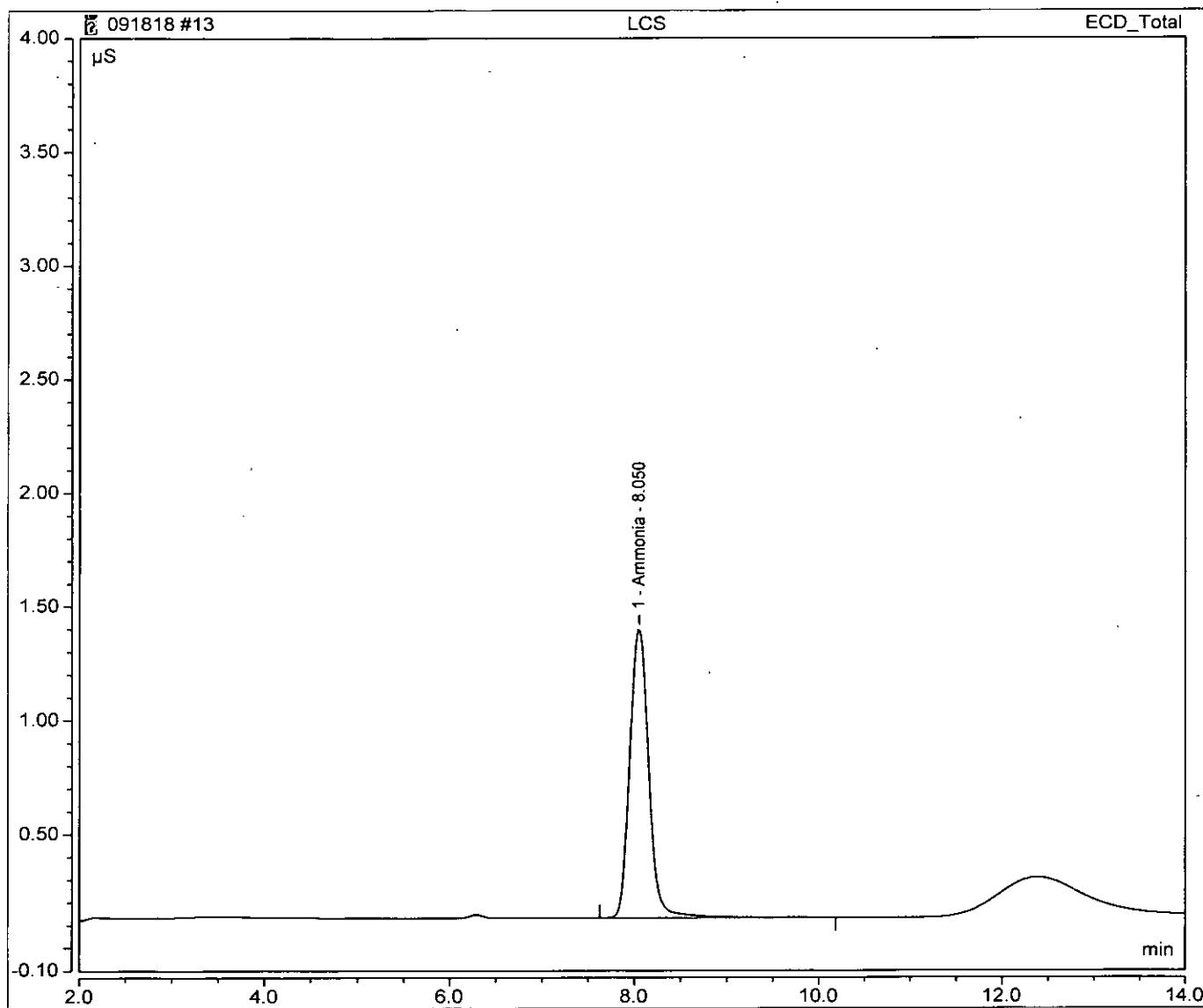
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	LCS	.Inj. No.:	13
File ID:	Instrument Data\IC9\Data\2018\09\September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 07:04	Comments:	ASTM D6919-09 Ammonia

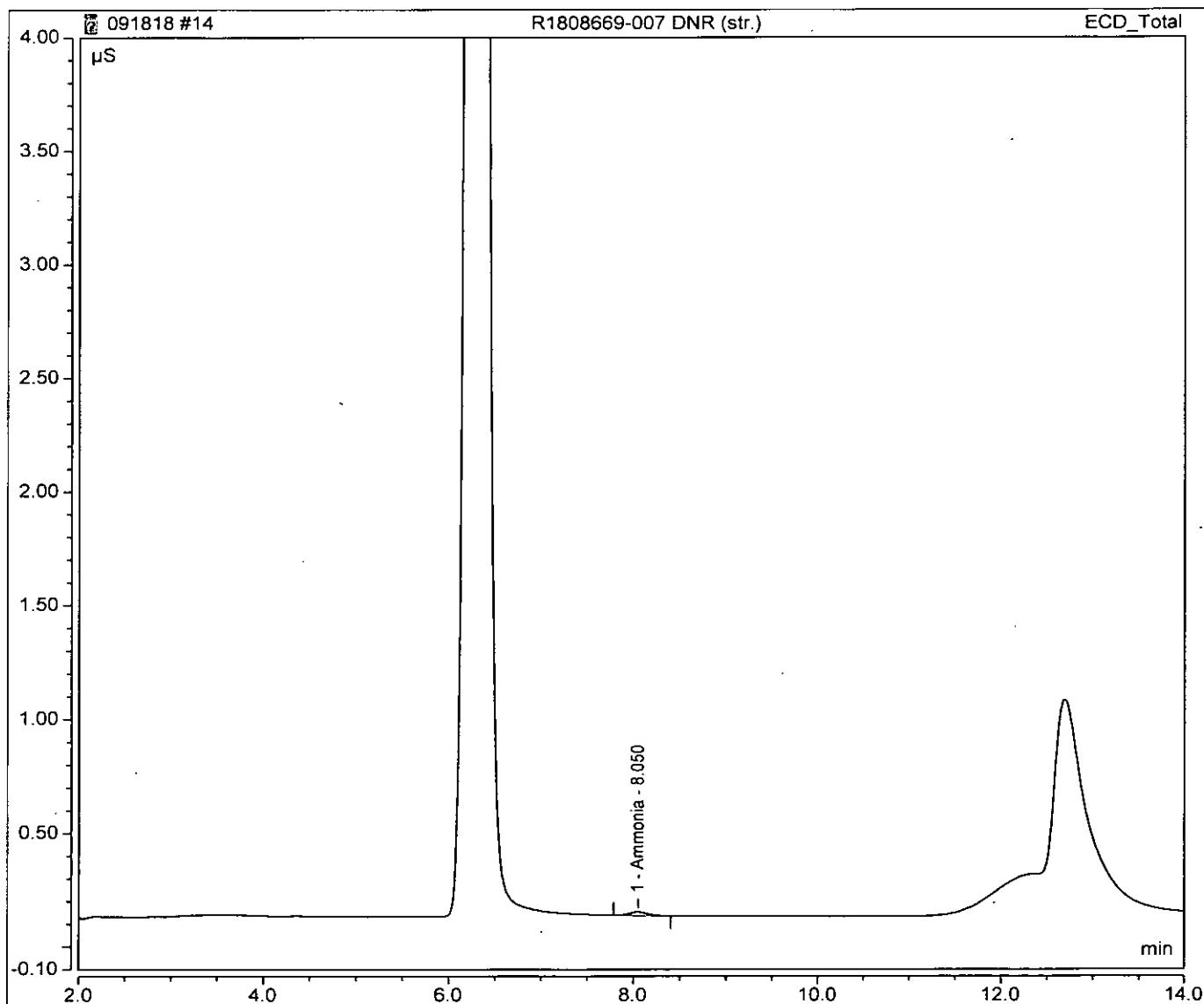
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.302	1.272	0.50277
TOTAL:				0.30	1.27	0.50



Peak Integration Report

<u>Sample Name:</u>	R1808669-007 DNR (str.)	<u>Inj. No.:</u>	14
<u>File ID:</u>	<u>Instrument Data\IC9\Data\2018\09September2018</u>		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	10.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	18-Sep-2018 / 07:20	<u>Comments:</u>	ASTM D6919-09 Ammonia

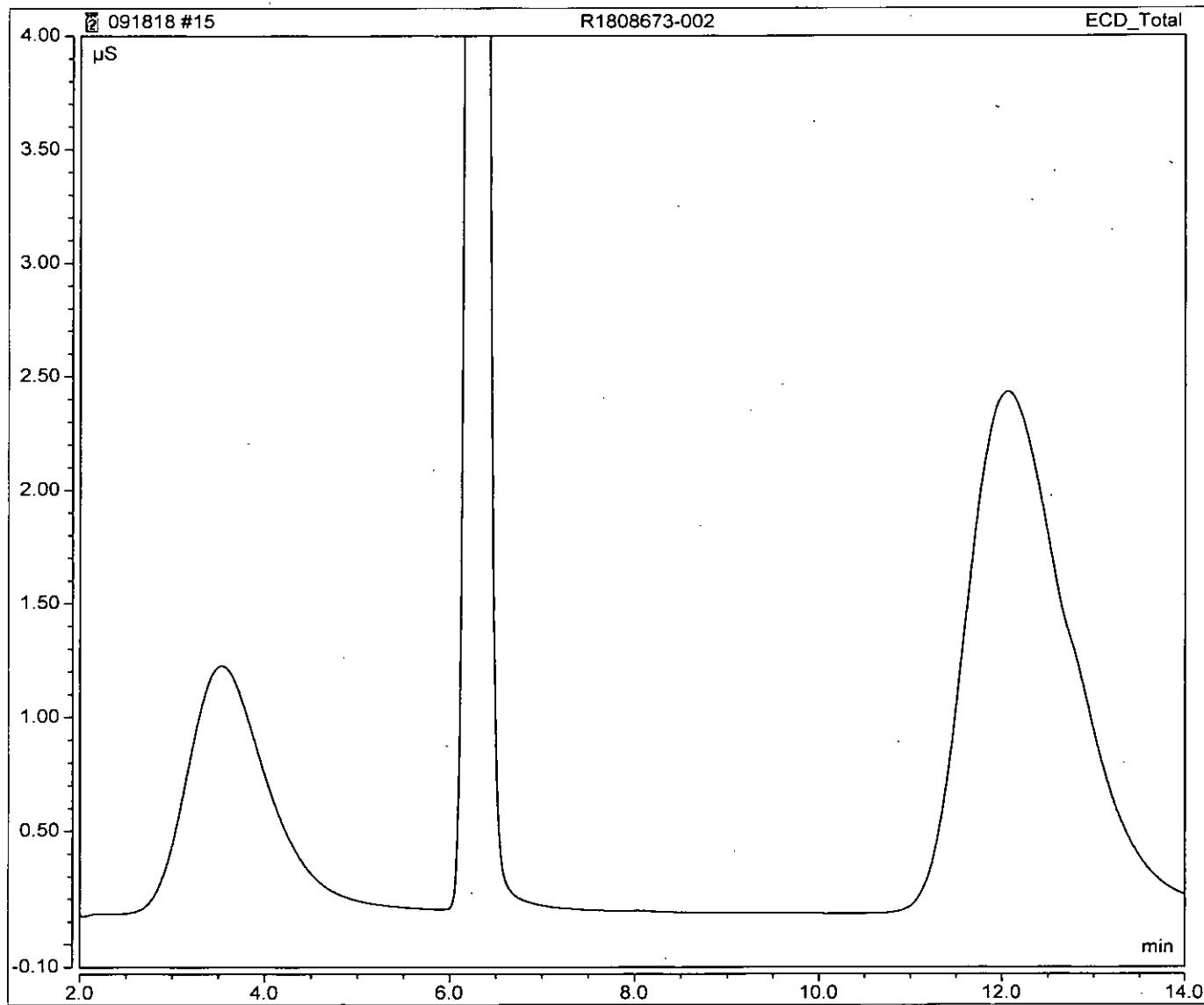
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^{\star}\text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.003	0.016	0.02903
TOTAL:				0.00	0.02	0.03



Peak Integration Report

<u>Sample Name:</u>	R1808673-002	<u>Inj. No.:</u>	15
<u>File ID:</u>	<u>Instrument Data\IC9\Data\2018\09September2018</u>		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	10.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	18-Sep-2018 / 07:36	<u>Comments:</u>	ASTM D6919-09 Ammonia

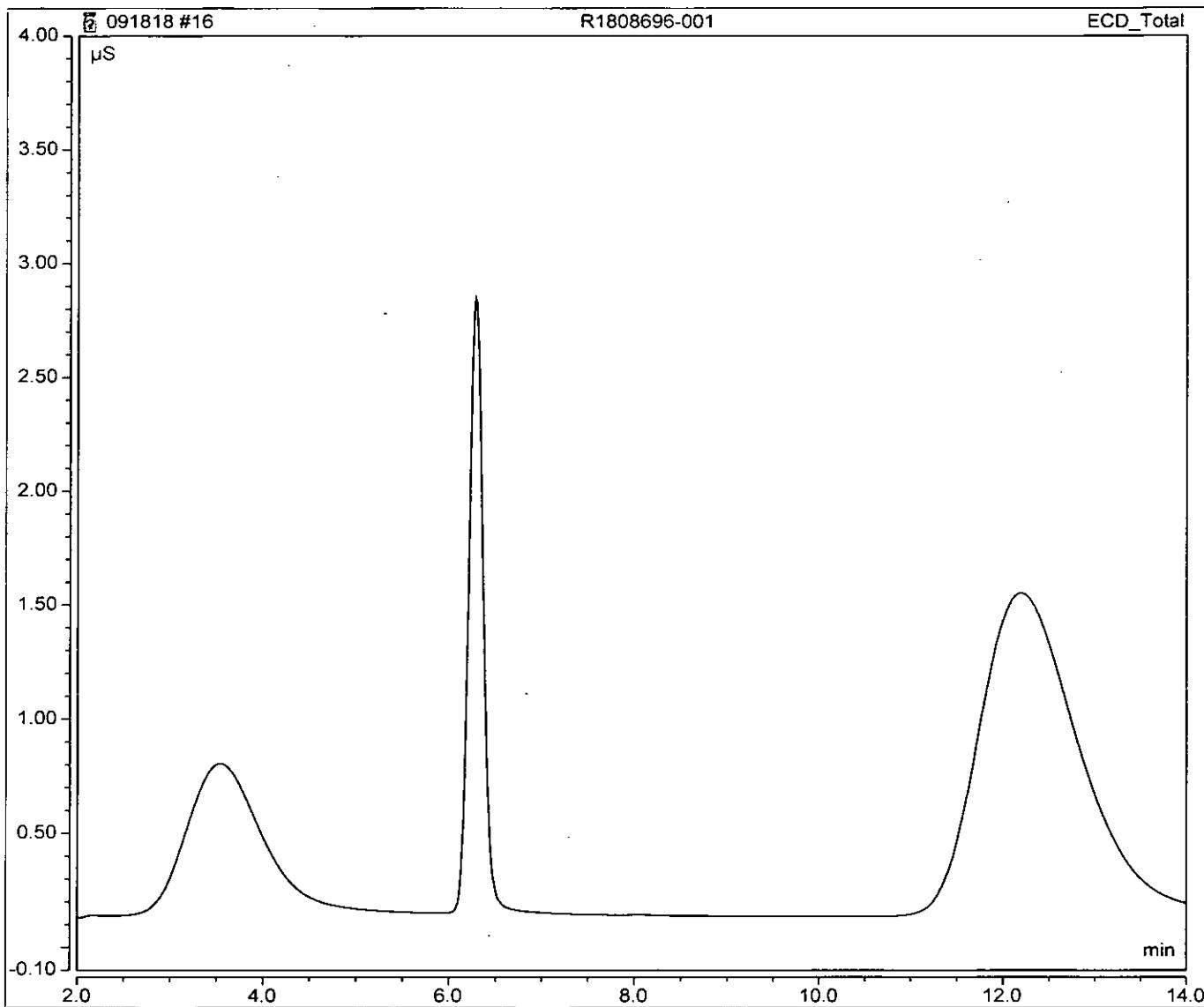
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808696-001	Inj. No.:	16
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 07:52	Comments:	ASTM D6919-09 Ammonia

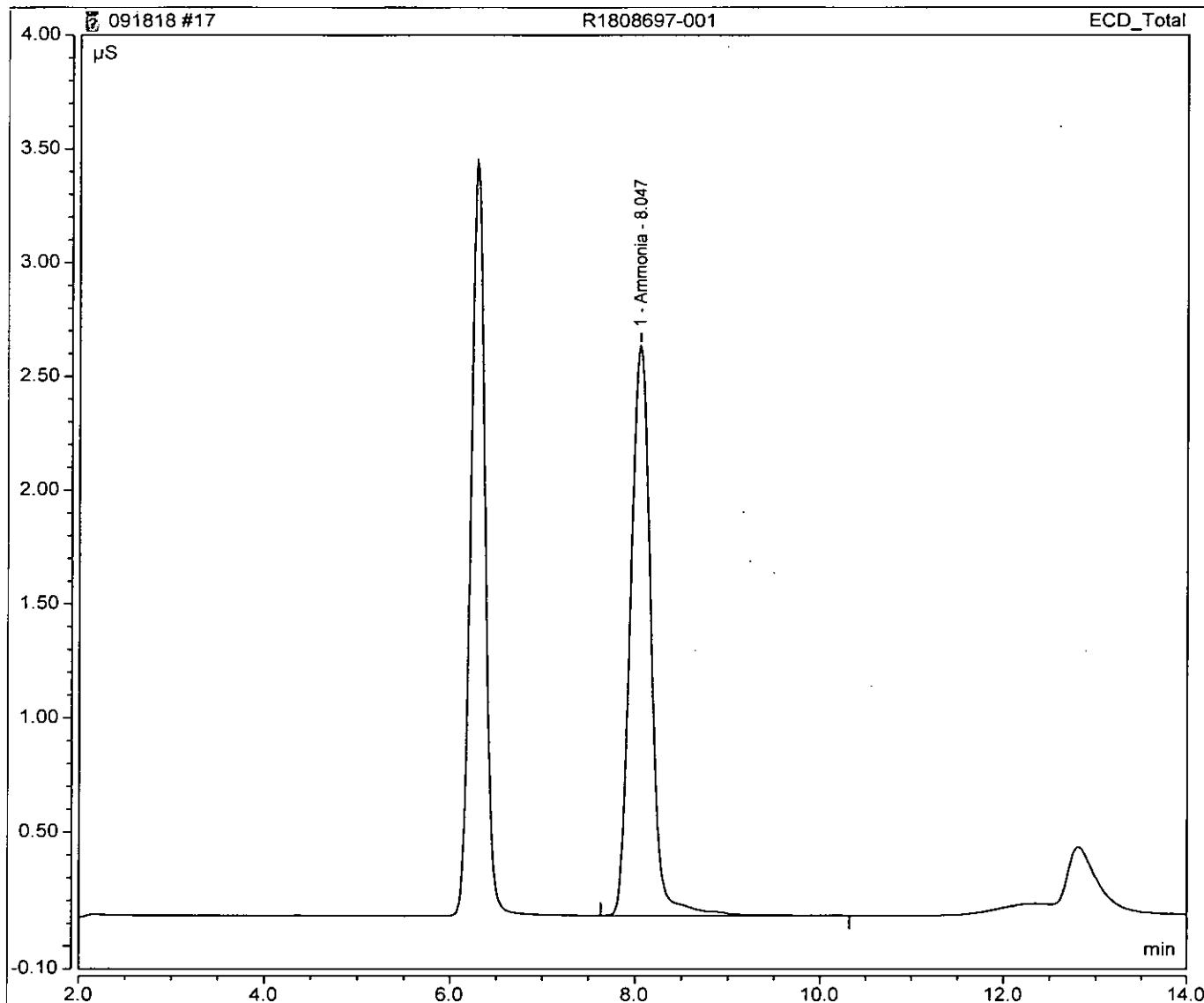
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808697-001	Inj. No.:	17
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	30.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 08:08	Comments:	ASTM D6919-09 Ammonia

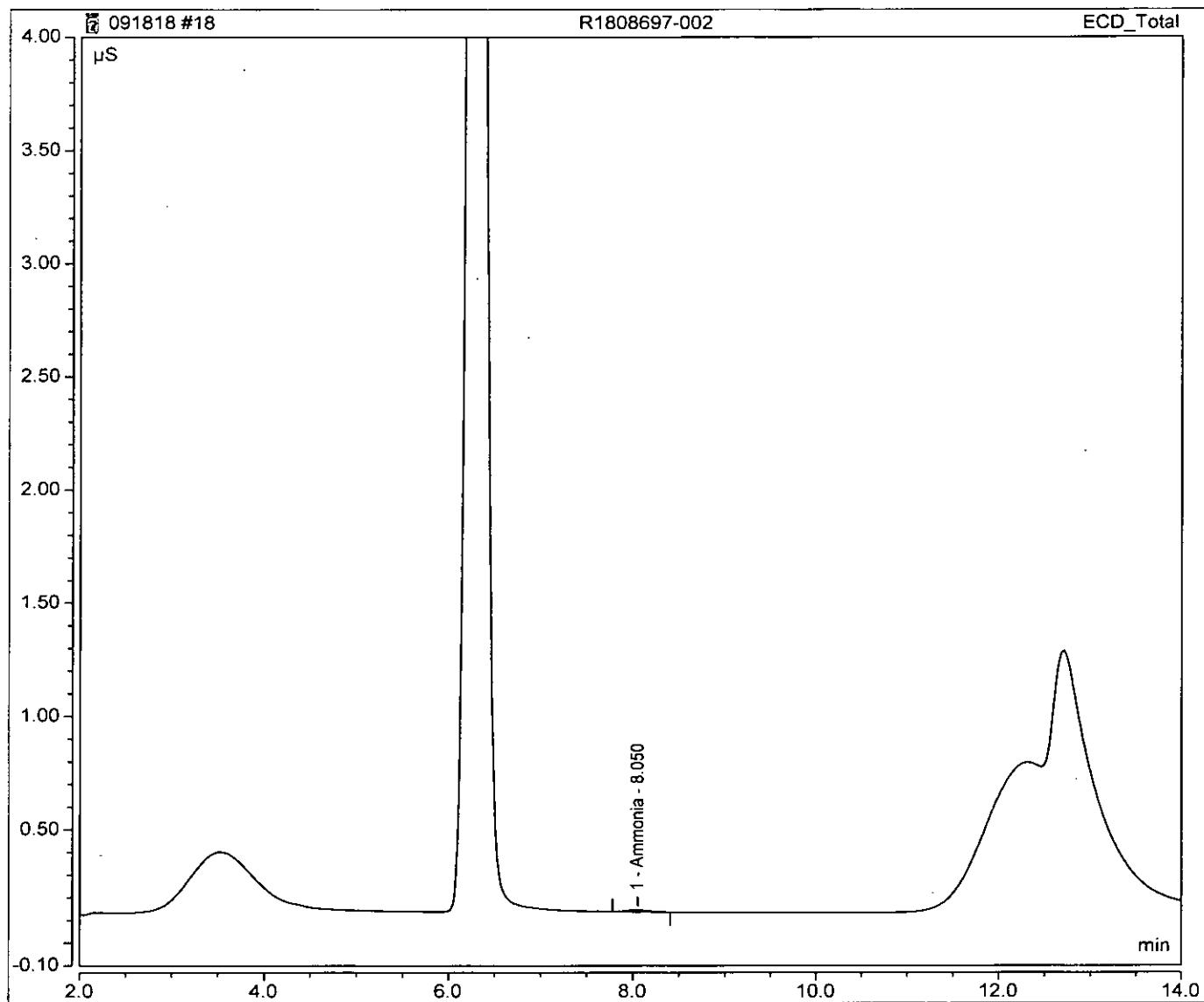
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.636	2.501	37.93708
TOTAL:				0.64	2.50	37.94



Peak Integration Report

Sample Name:	R1808697-002	Inj. No.:	18
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 08:24	Comments:	ASTM D6919-09 Ammonia

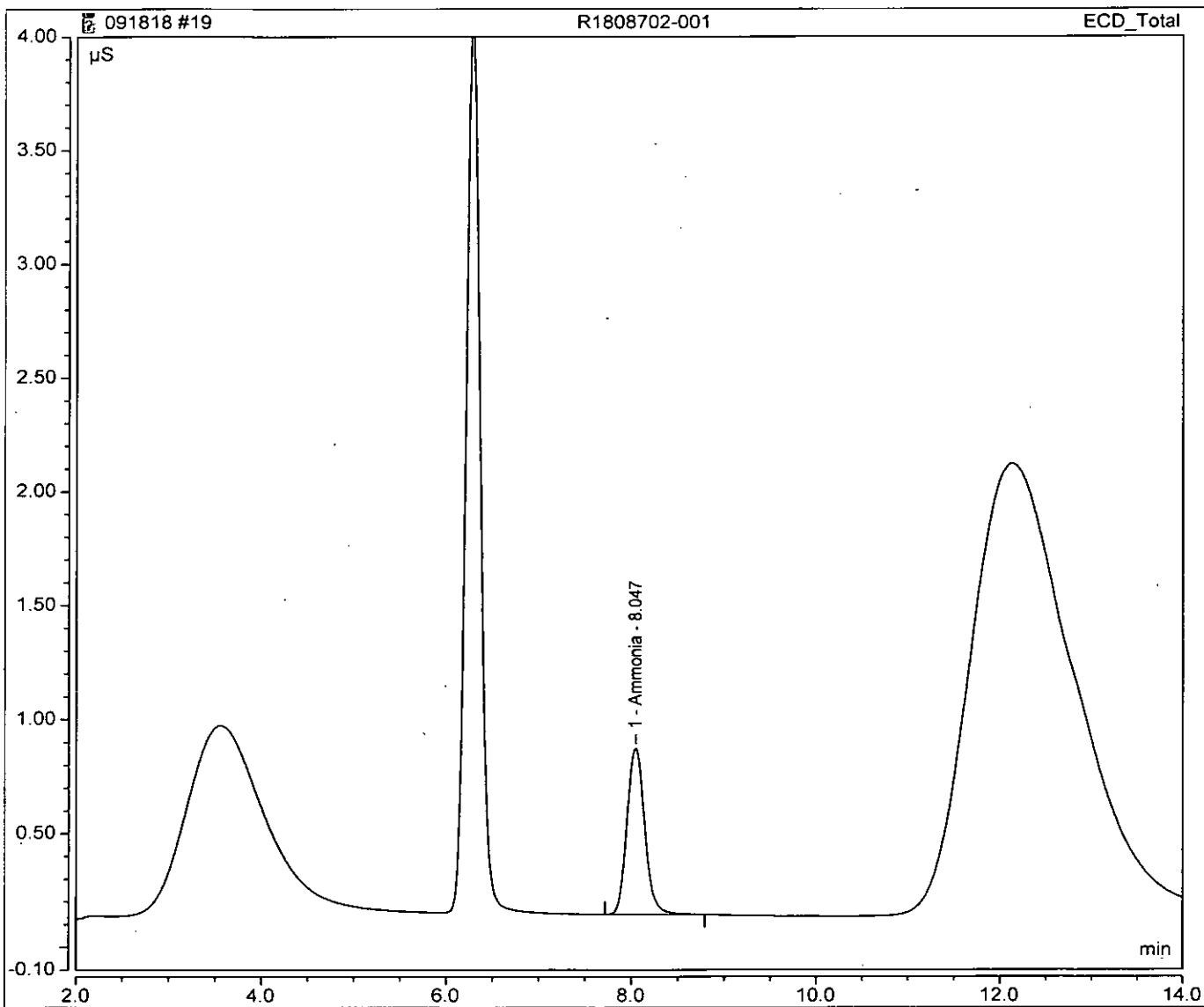
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.002	0.009	0.00963
TOTAL:				0.00	0.01	0.01



Peak Integration Report

<u>Sample Name:</u>	R1808702-001	<u>Inj. No.:</u>	19
<u>File ID:</u>	<u>Instrument Data\IC9\Data\2018\09September2018</u>		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	30.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	18-Sep-2018 / 08:40	<u>Comments:</u>	ASTM D6919-09 Ammonia

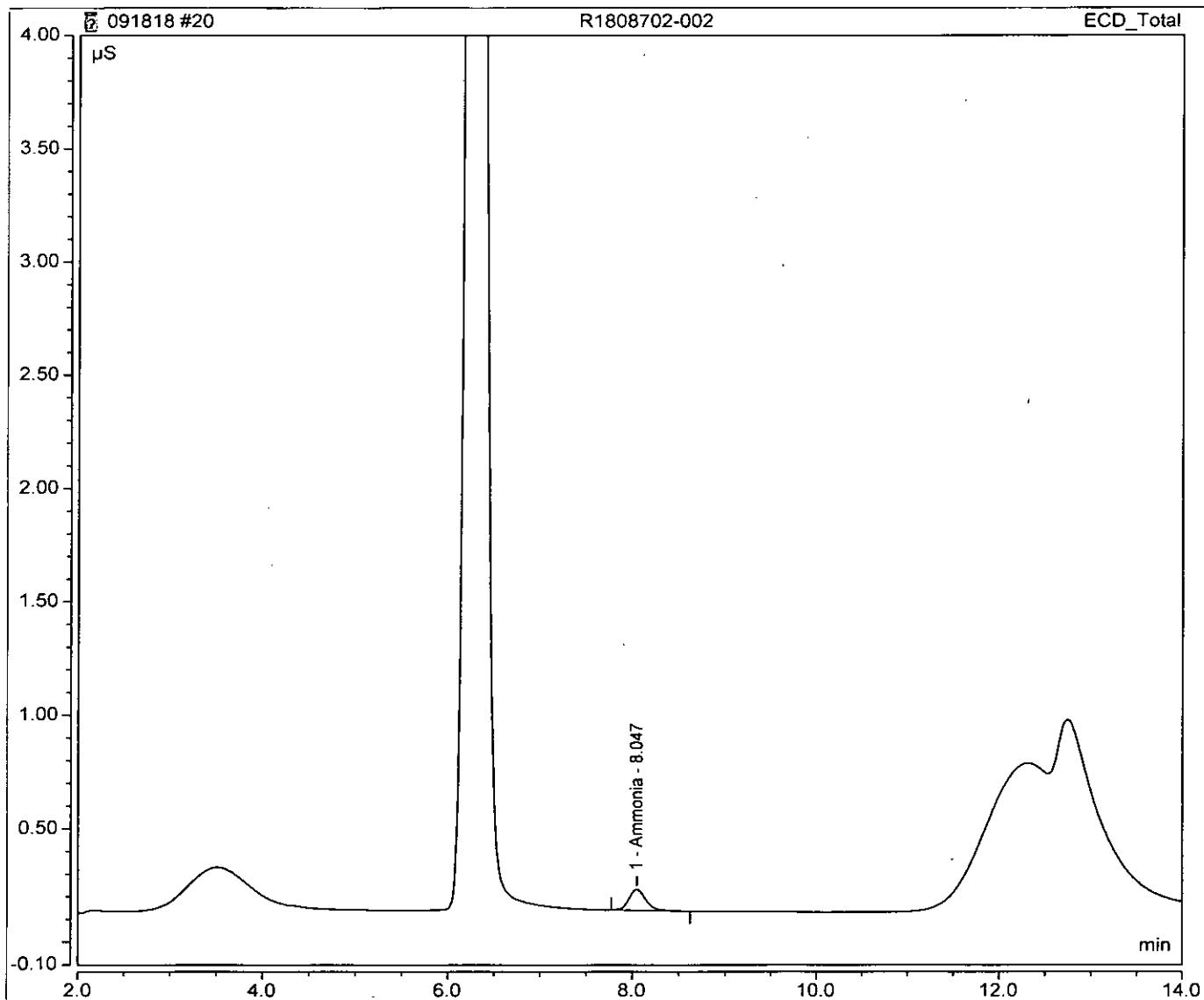
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.163	0.733	7.44090
TOTAL:				0.16	0.73	7.44



Peak Integration Report

Sample Name:	R1808702-002	Inj. No.:	20
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 08:56	Comments:	ASTM D6919-09 Ammonia

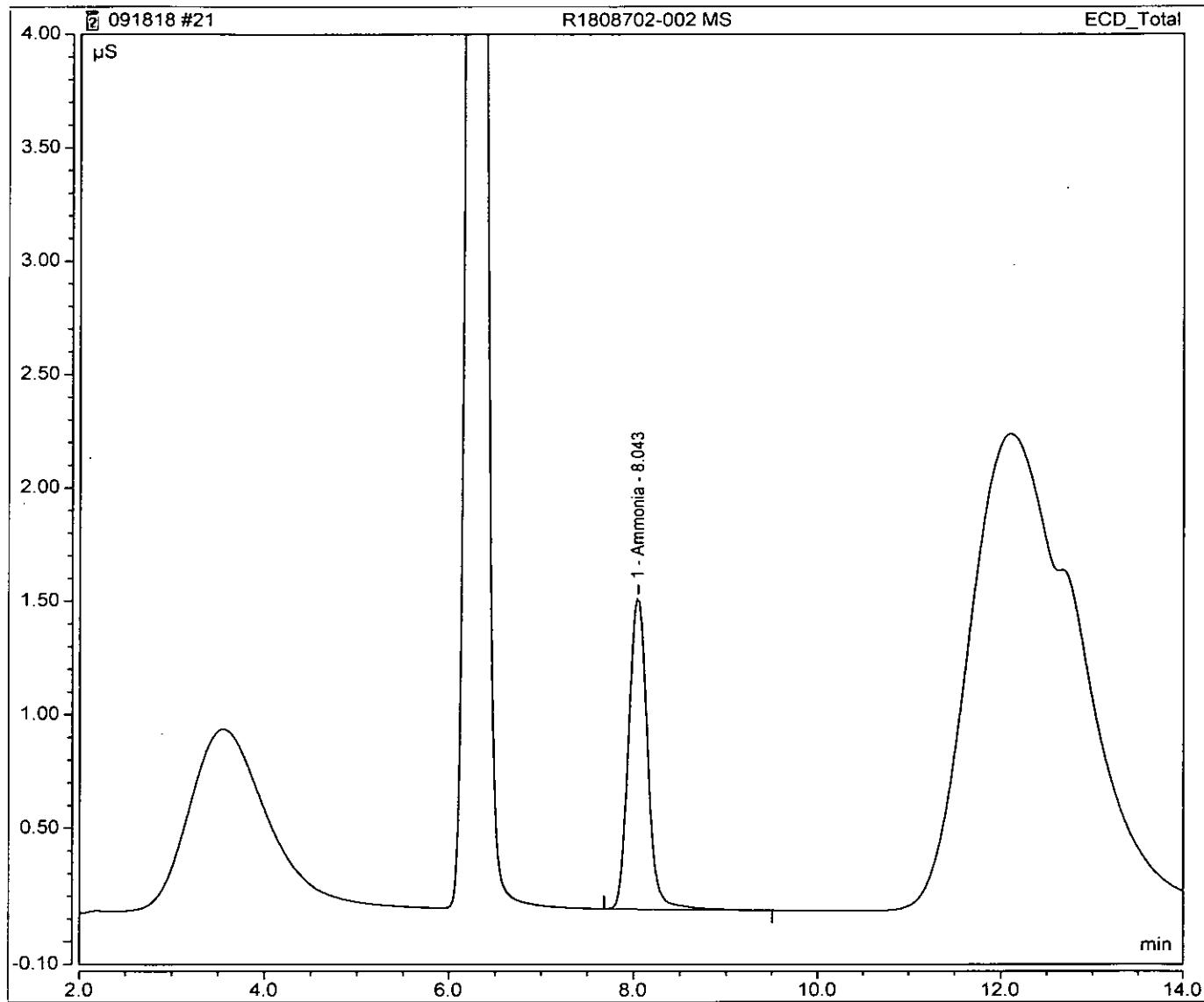
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.019	0.093	0.25419
TOTAL:				0.02	0.09	0.25



Peak Integration Report

Sample Name:	R1808702-002 MS	Inj. No.:	21
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 09:12	Comments:	ASTM D6919-09 Ammonia

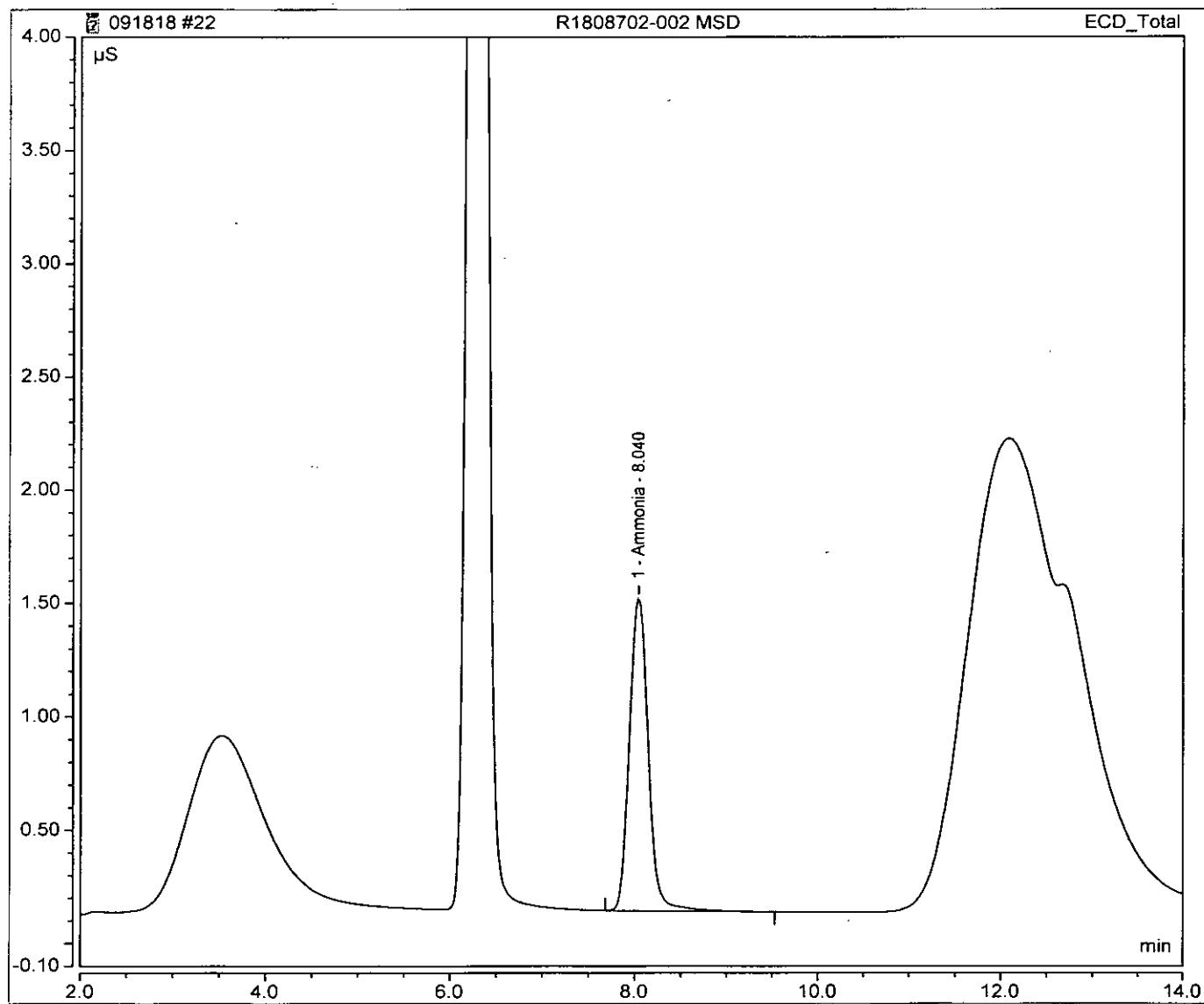
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.324	1.371	5.46318
TOTAL:				0.32	1.37	5.46



Peak Integration Report

Sample Name:	R1808702-002 MSD	Inj. No.:	22
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 09:28	Comments:	ASTM D6919-09 Ammonia

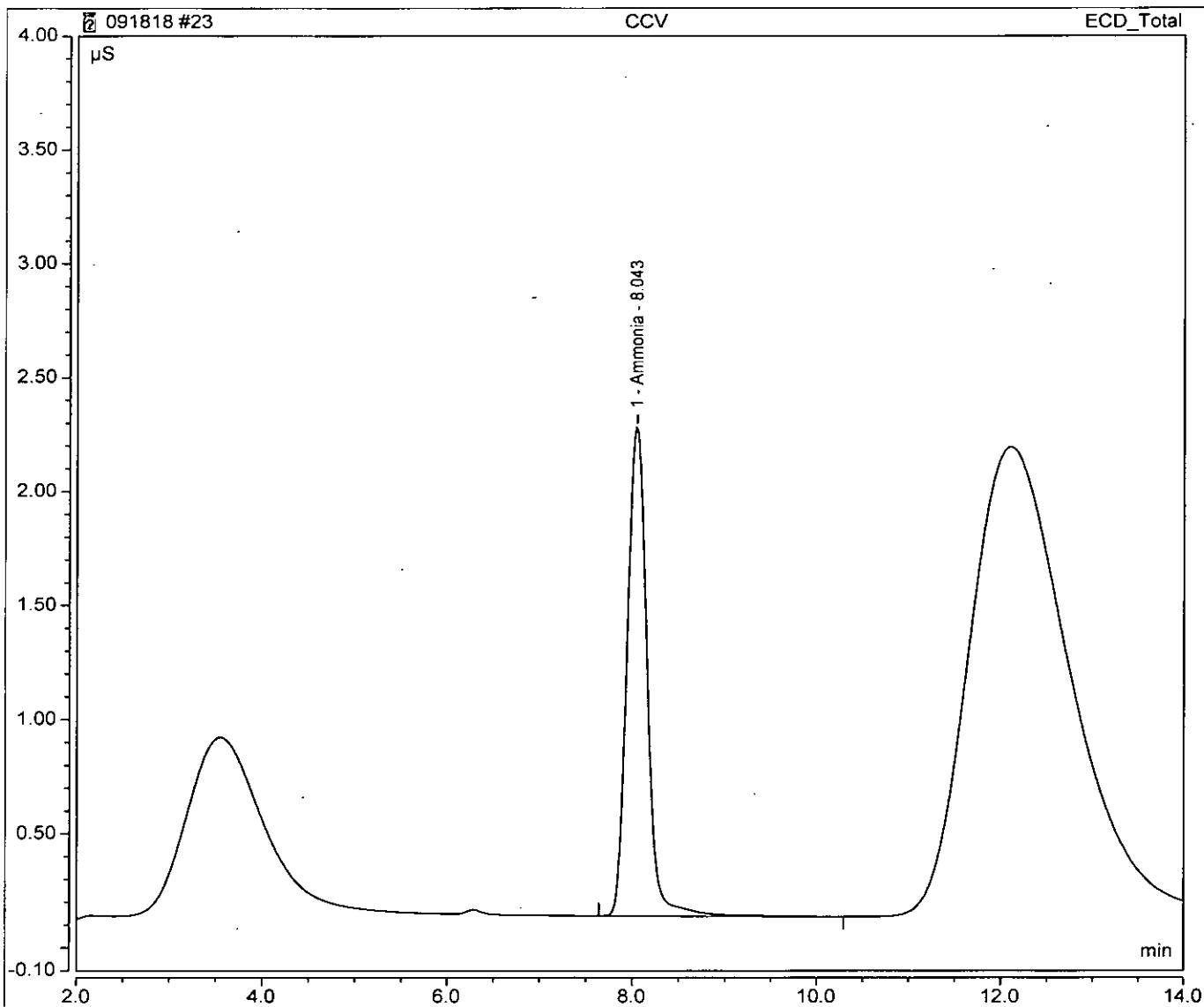
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.326	1.378	5.49087
TOTAL:				0.33	1.38	5.49



Peak Integration Report

Sample Name:	CCV	Inj. No.:	23
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 09:44	Comments:	ASTM D6919-09 Ammonia

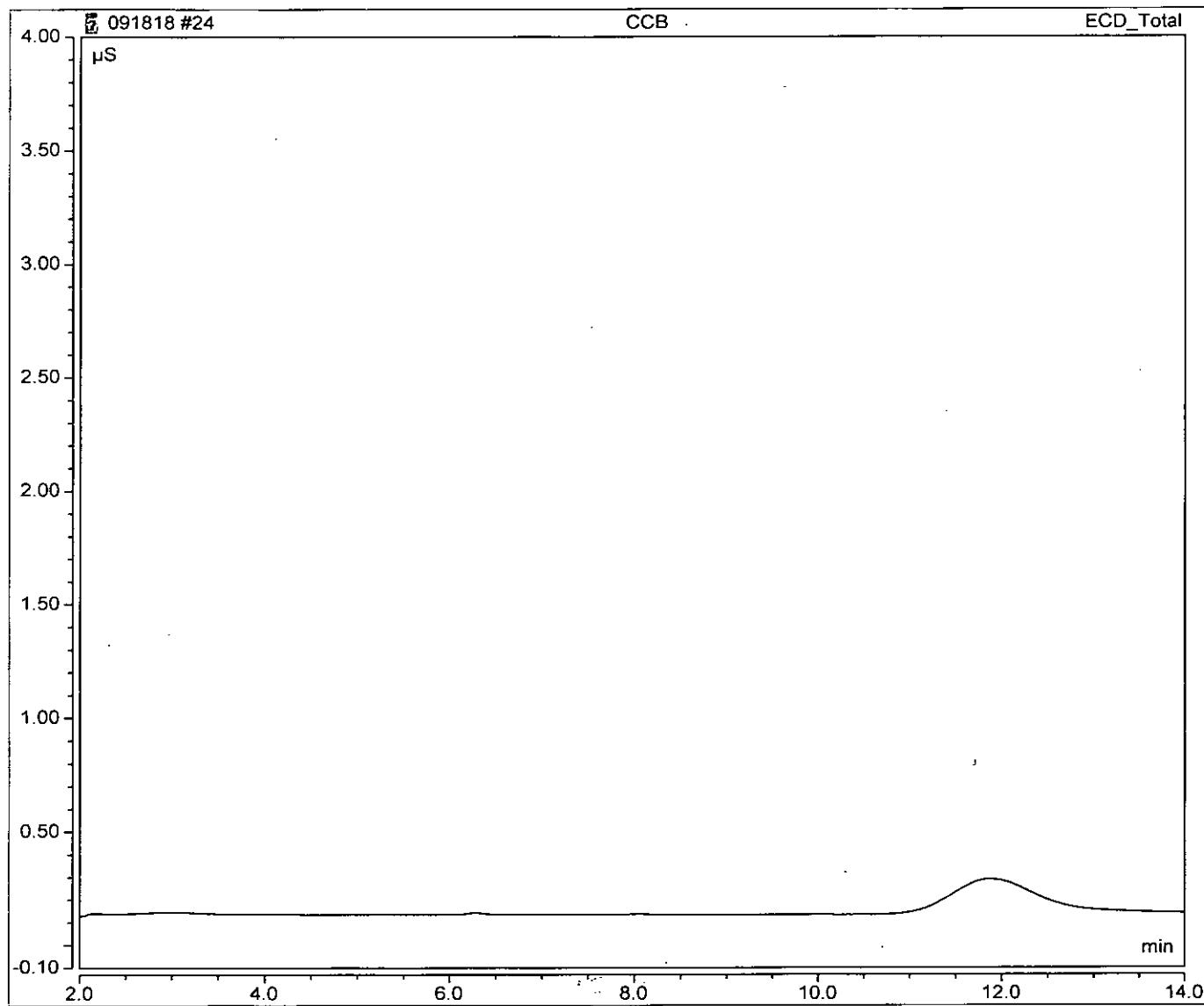
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.535	2.143	1.01109
TOTAL:				0.54	2.14	1.01



Peak Integration Report

Sample Name:	CCB	Inj. No.:	24
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 10:01	Comments:	ASTM D6919-09 Ammonia

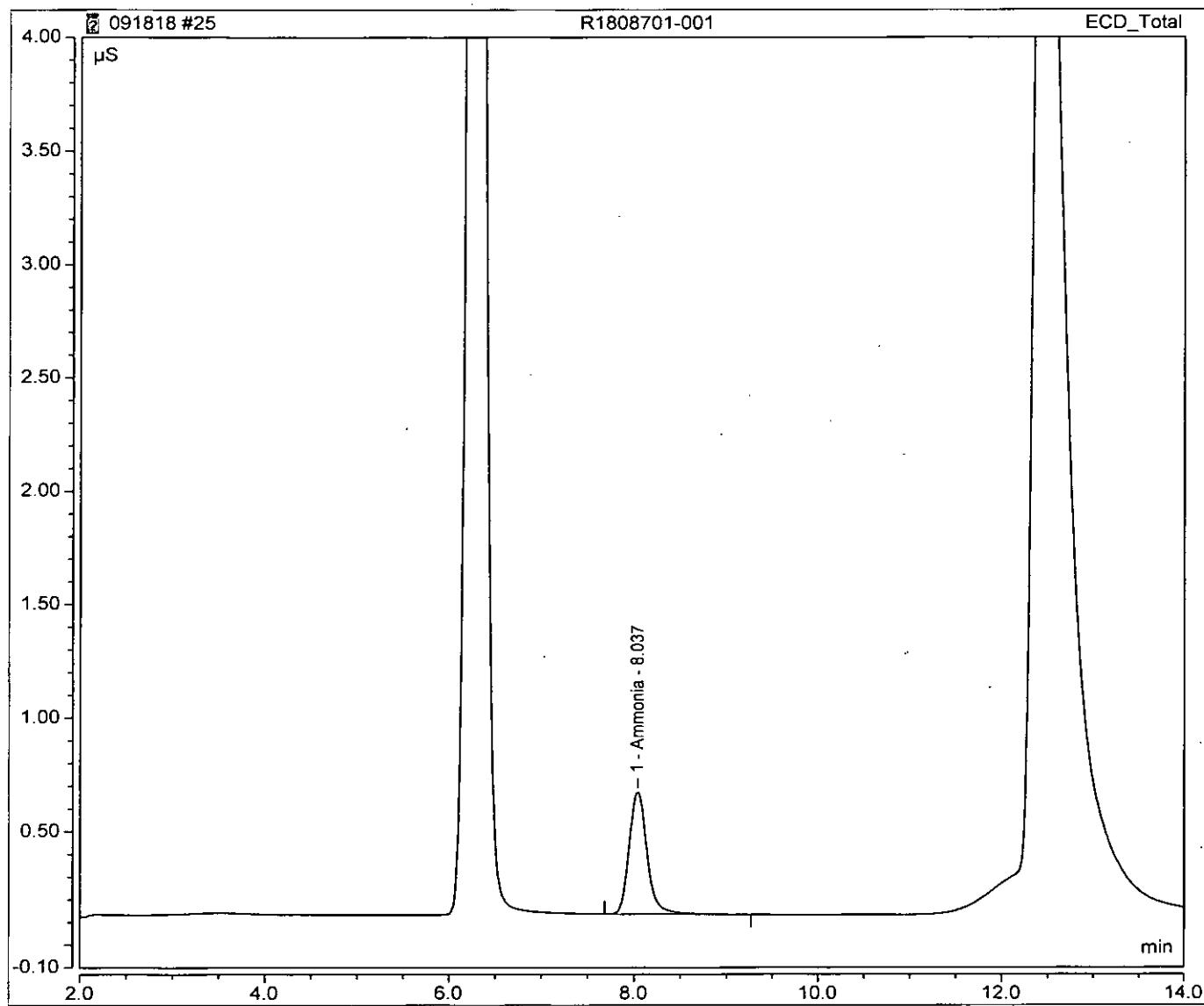
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808701-001	Inj. No.:	25
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 10:17	Comments:	ASTM D6919-09 Ammonia

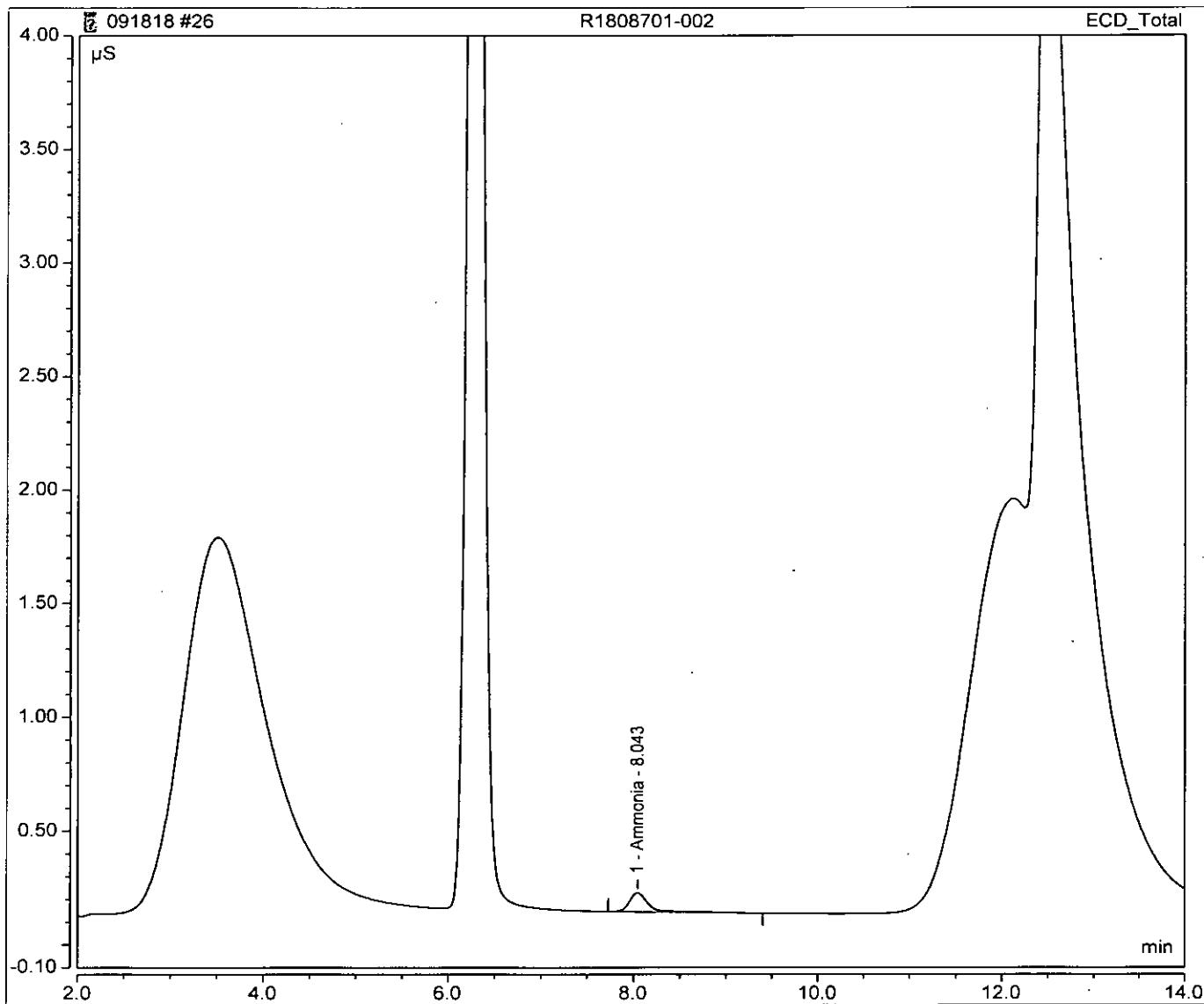
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^{\star}\text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.121	0.540	1.79177
TOTAL:				0.12	0.54	1.79



Peak Integration Report

Sample Name:	R1808701-002	Inj. No.:	26
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 10:33	Comments:	ASTM D6919-09 Ammonia

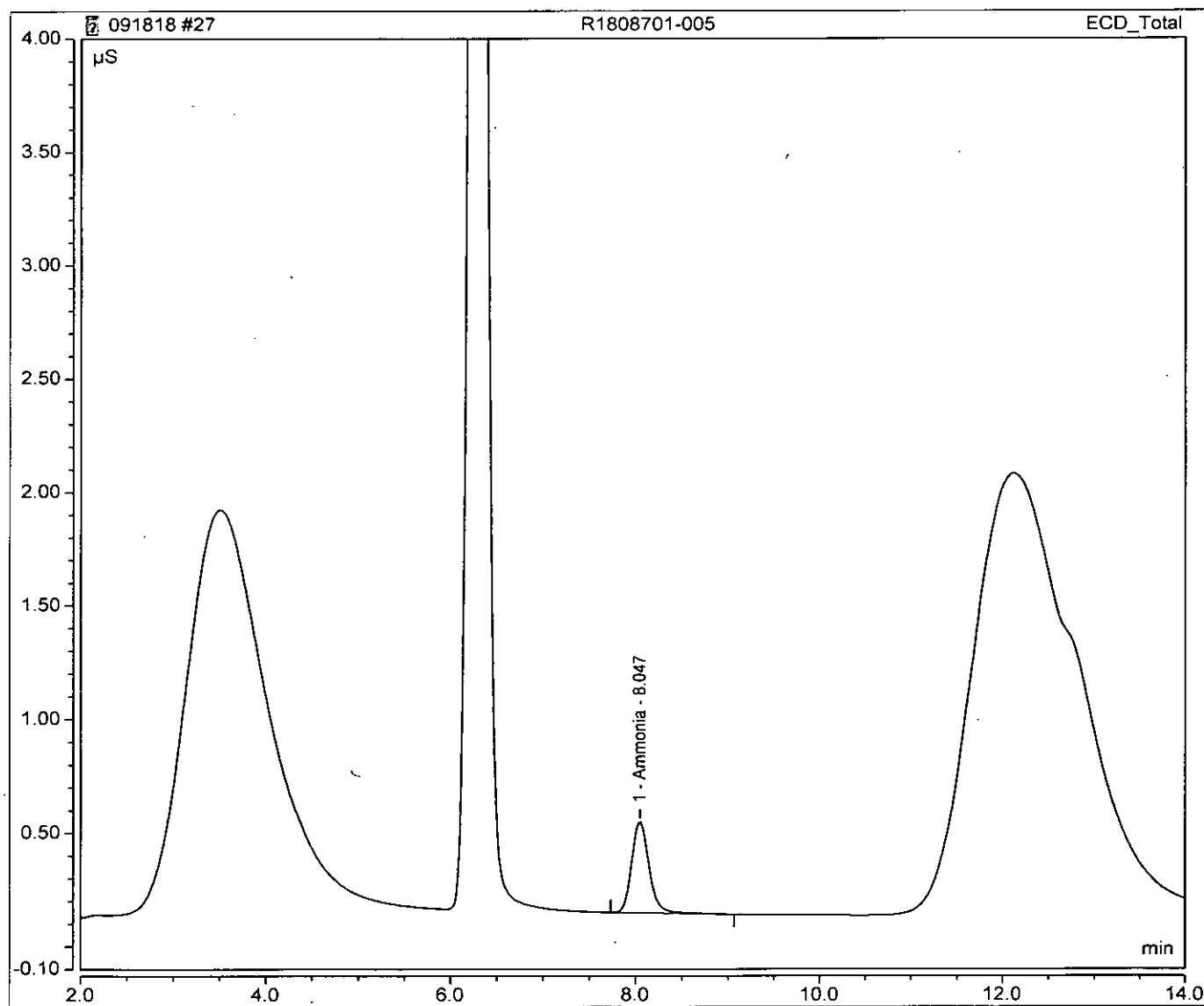
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.020	0.084	0.25620
TOTAL:				0.02	0.08	0.26



Peak Integration Report

Sample Name:	R1808701-005	Inj. No.:	27
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 10:49	Comments:	ASTM D6919-09 Ammonia

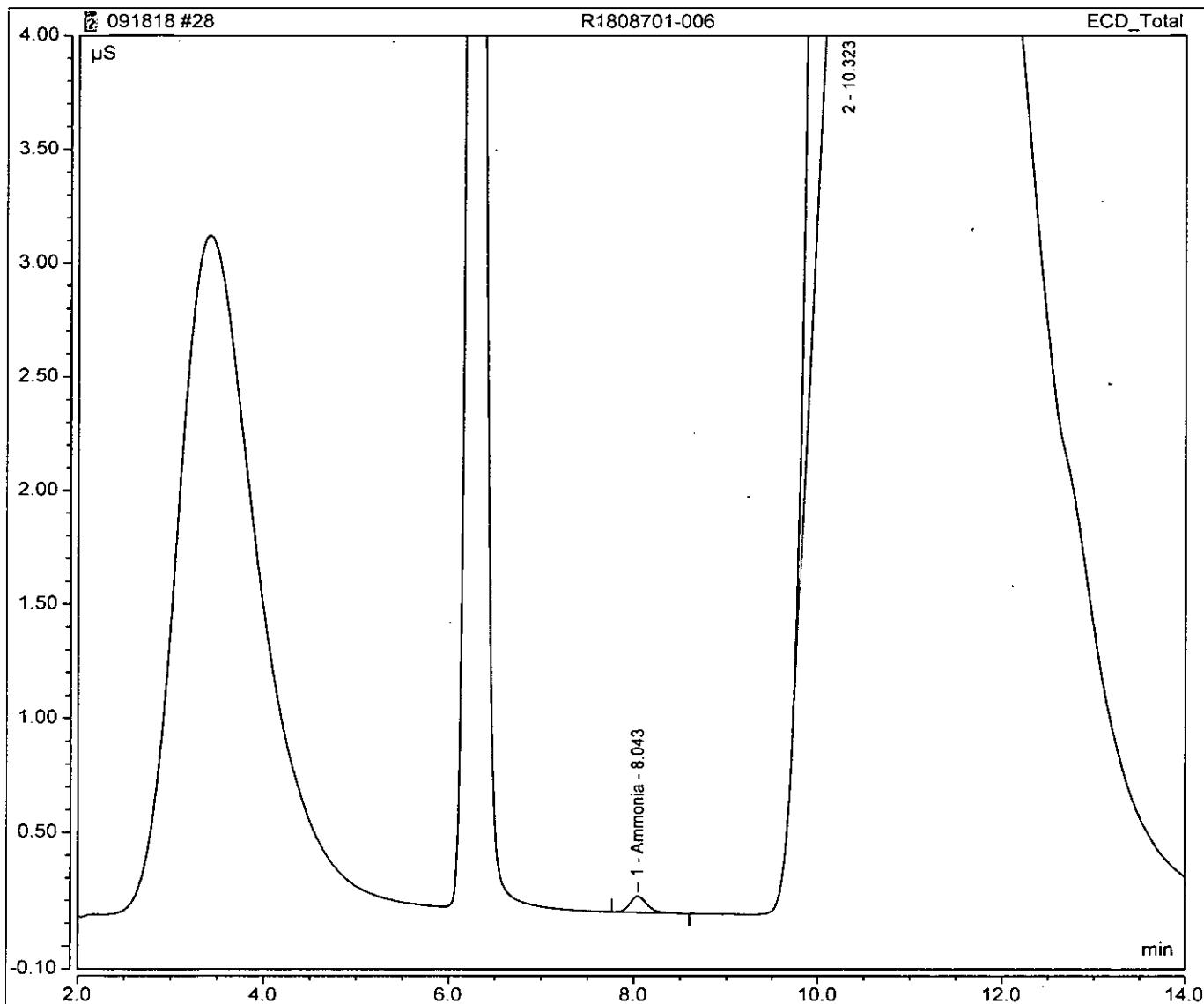
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.087	0.401	1.25933
TOTAL:				0.09	0.40	1.26



Peak Integration Report

Sample Name:	R1808701-006	Inj. No.:	28
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 11:05	Comments:	ASTM D6919-09 Ammonia

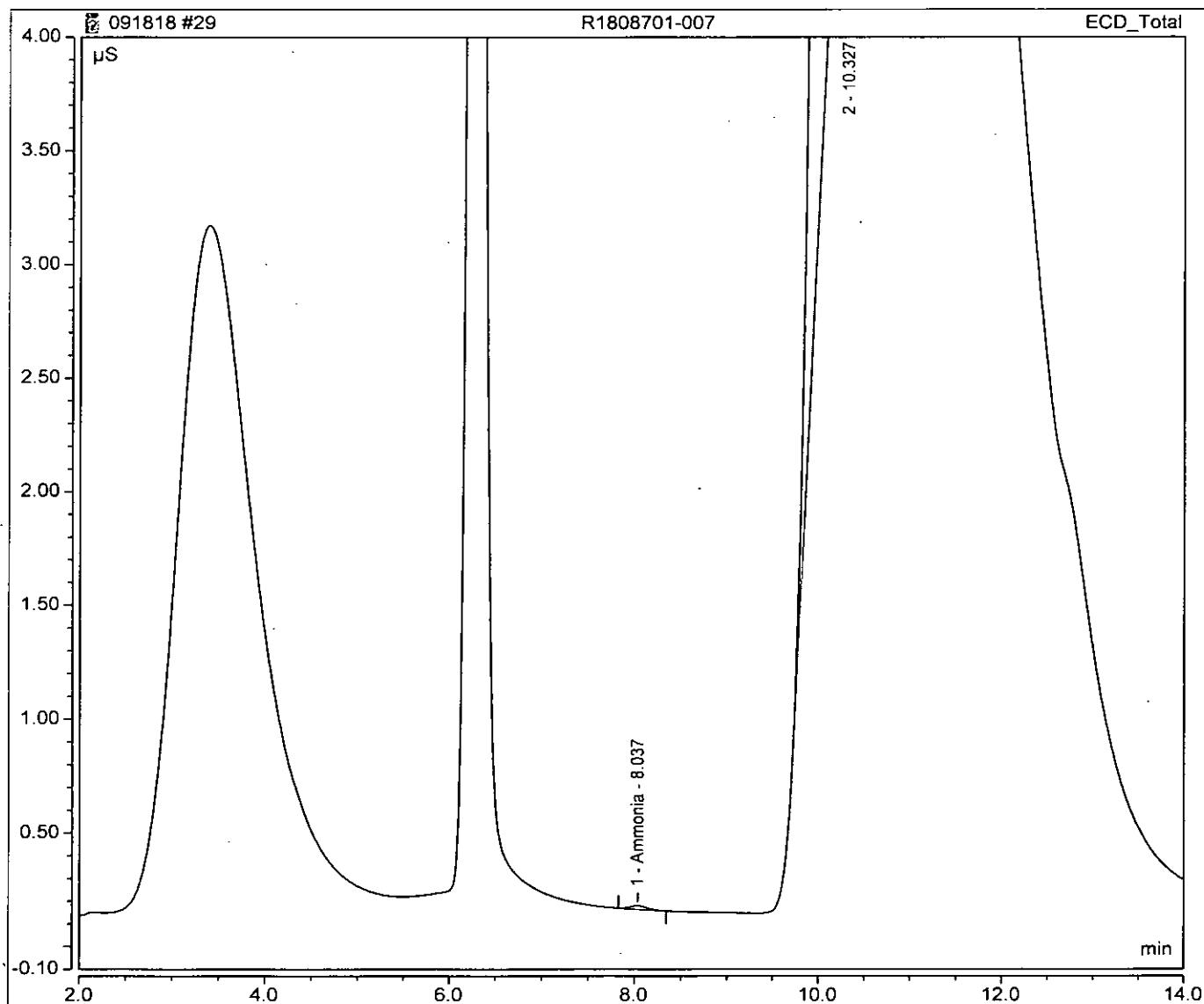
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.015	0.073	0.19607
TOTAL:				0.02	0.07	0.20



Peak Integration Report

Sample Name:	R1808701-007	Inj. No.:	29
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 11:21	Comments:	ASTM D6919-09 Ammonia

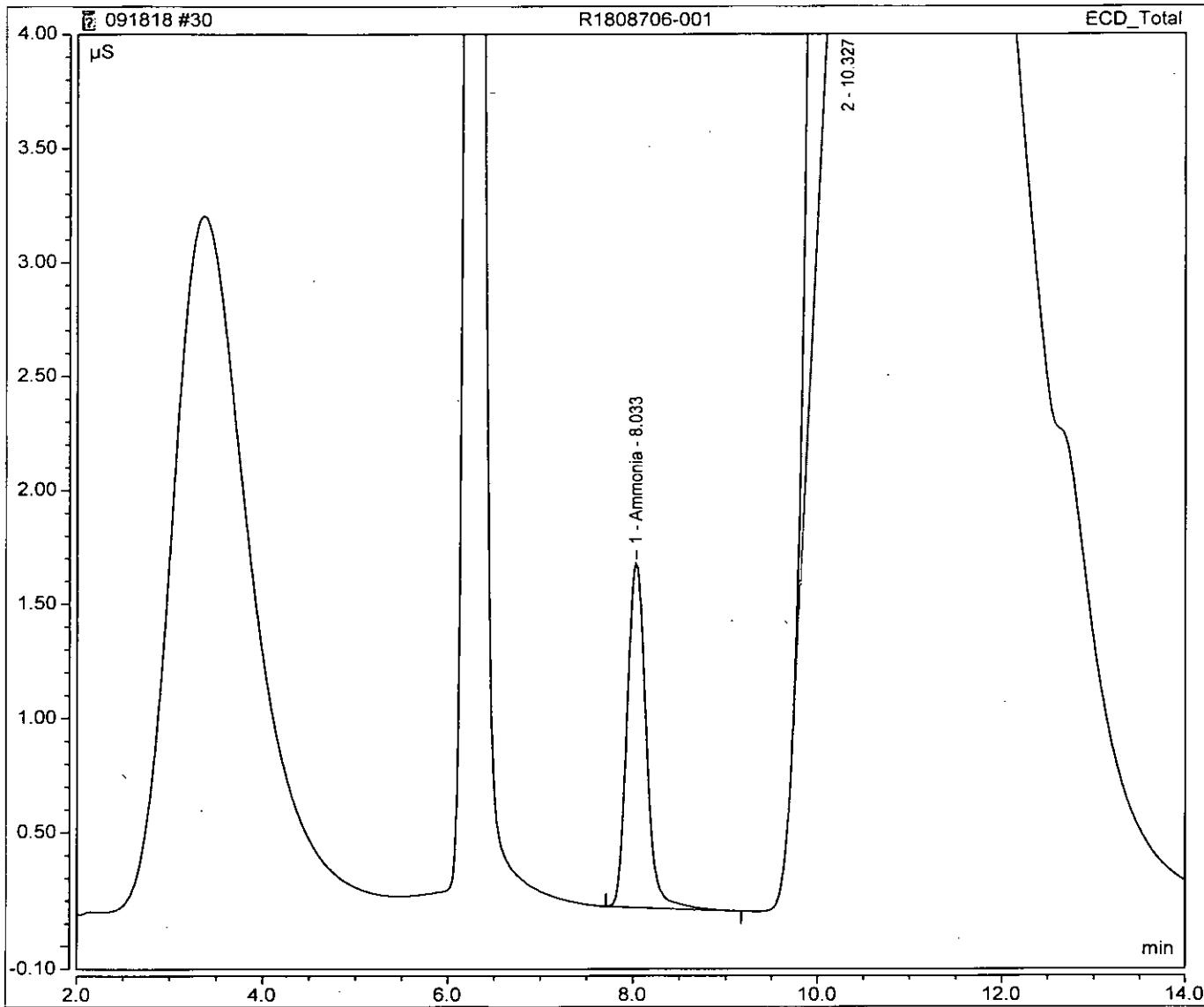
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.003	0.016	0.02669
TOTAL:				0.00	0.02	0.03



Peak Integration Report

Sample Name:	R1808706-001	Inj. No.:	30
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 11:37	Comments:	ASTM D6919-09 Ammonia

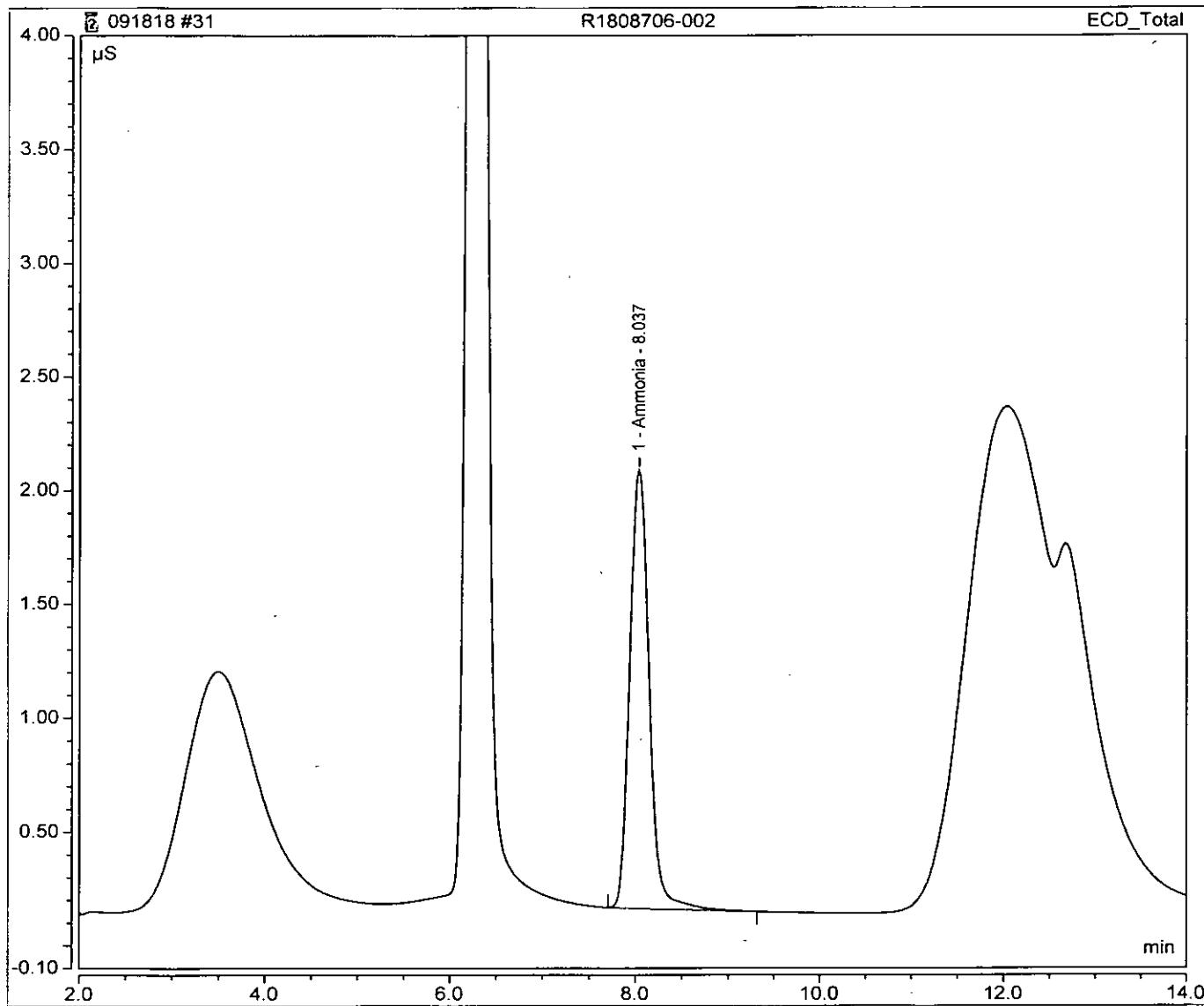
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.03	Ammonia	BMB	0.359	1.509	6.15945
TOTAL:				0.36	1.51	6.16



Peak Integration Report

Sample Name:	R1808706-002	Inj. No.:	31
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 11:53	Comments:	ASTM D6919-09 Ammonia

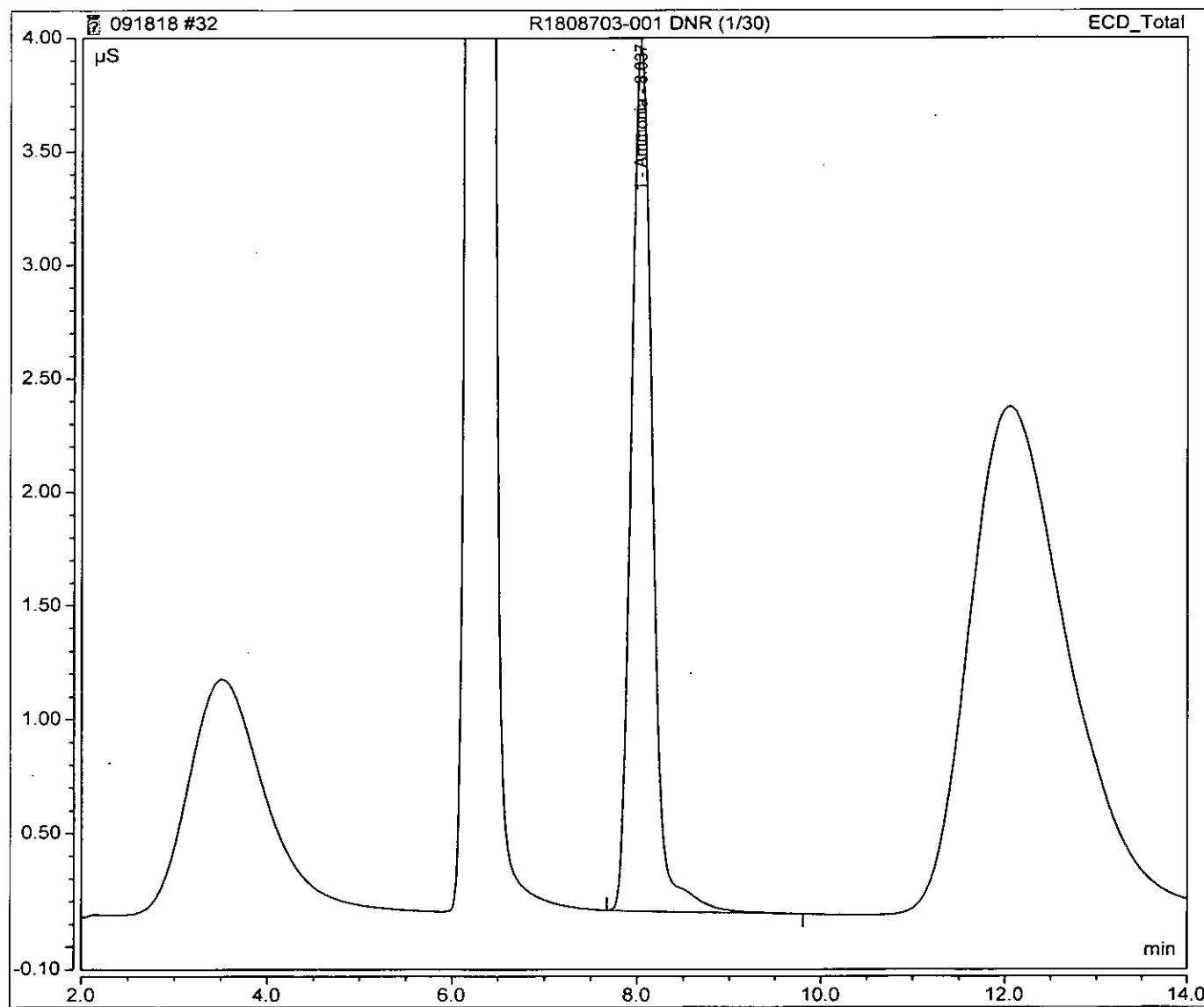
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.469	1.924	8.55398
TOTAL:				0.47	1.92	8.55



Peak Integration Report

Sample Name:	R1808703-001 DNR (1/30)	Inj. No.:	32
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 12:09	Comments:	ASTM D6919-09 Ammonia

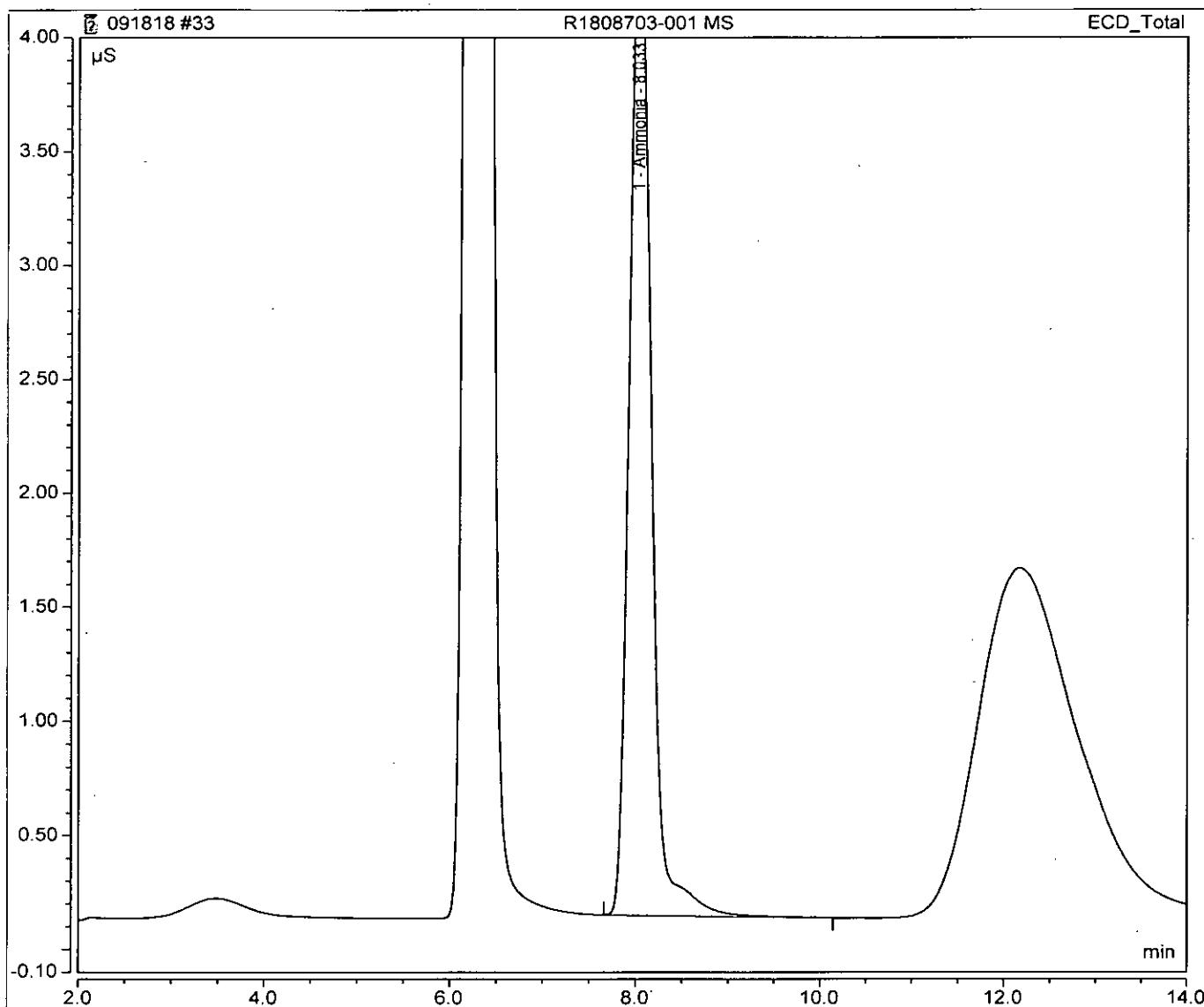
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	1.015	3.805	23.91853
TOTAL:				1.02	3.81	23.92



Peak Integration Report

Sample Name:	R1808703-001 MS	Inj. No.:	33
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 12:25	Comments:	ASTM D6919-09 Ammonia

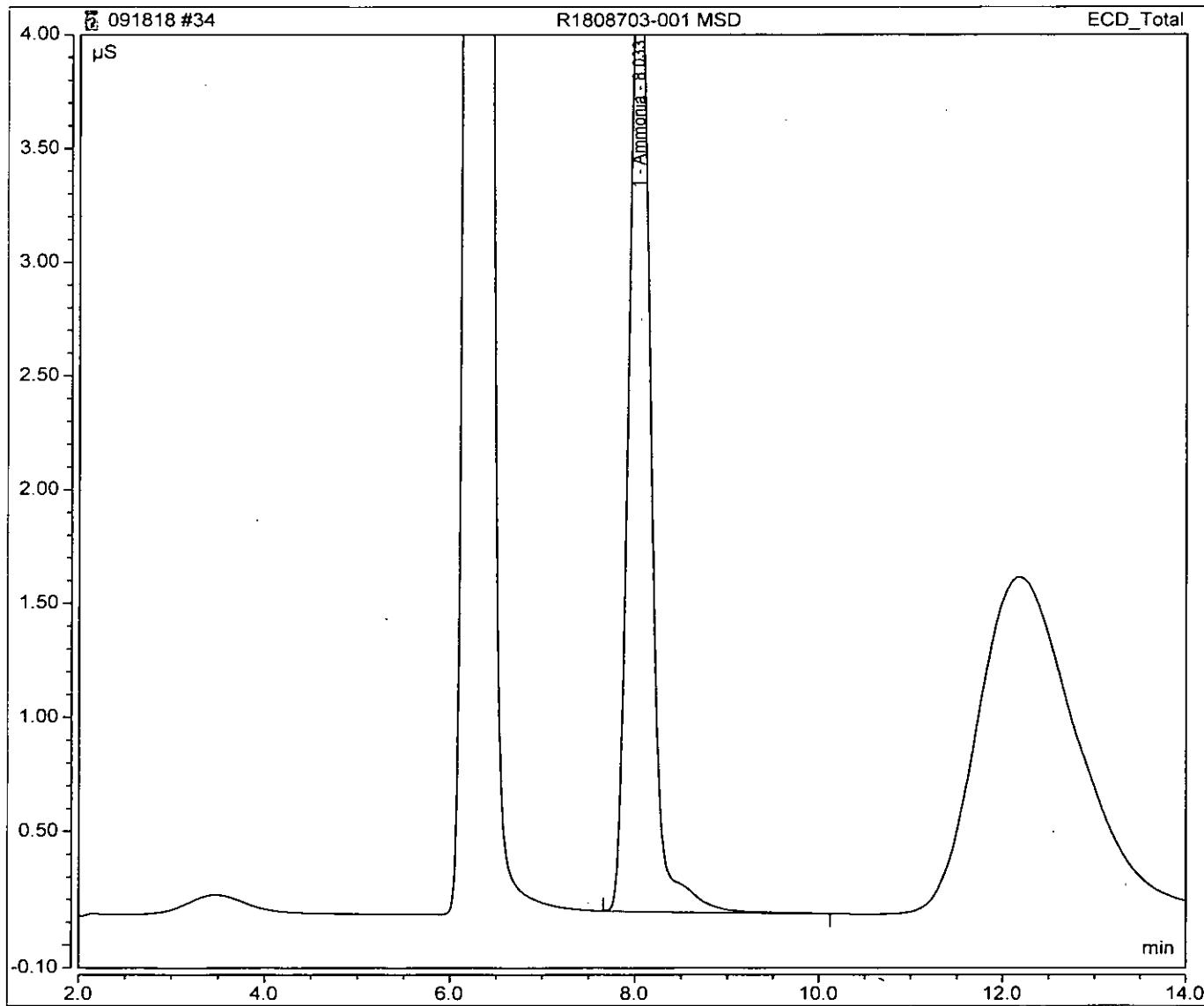
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.03	Ammonia	BMB	1.185	4.337	29.85516
TOTAL:				1.18	4.34	29.86



Peak Integration Report

<u>Sample Name:</u>	R1808703-001 MSD	<u>Inj. No.:</u>	34
<u>File ID:</u>	Instrument Data\IC9\Data\2018\09September2018		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	10.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	18-Sep-2018 / 12:41	<u>Comments:</u>	ASTM D6919-09 Ammonia

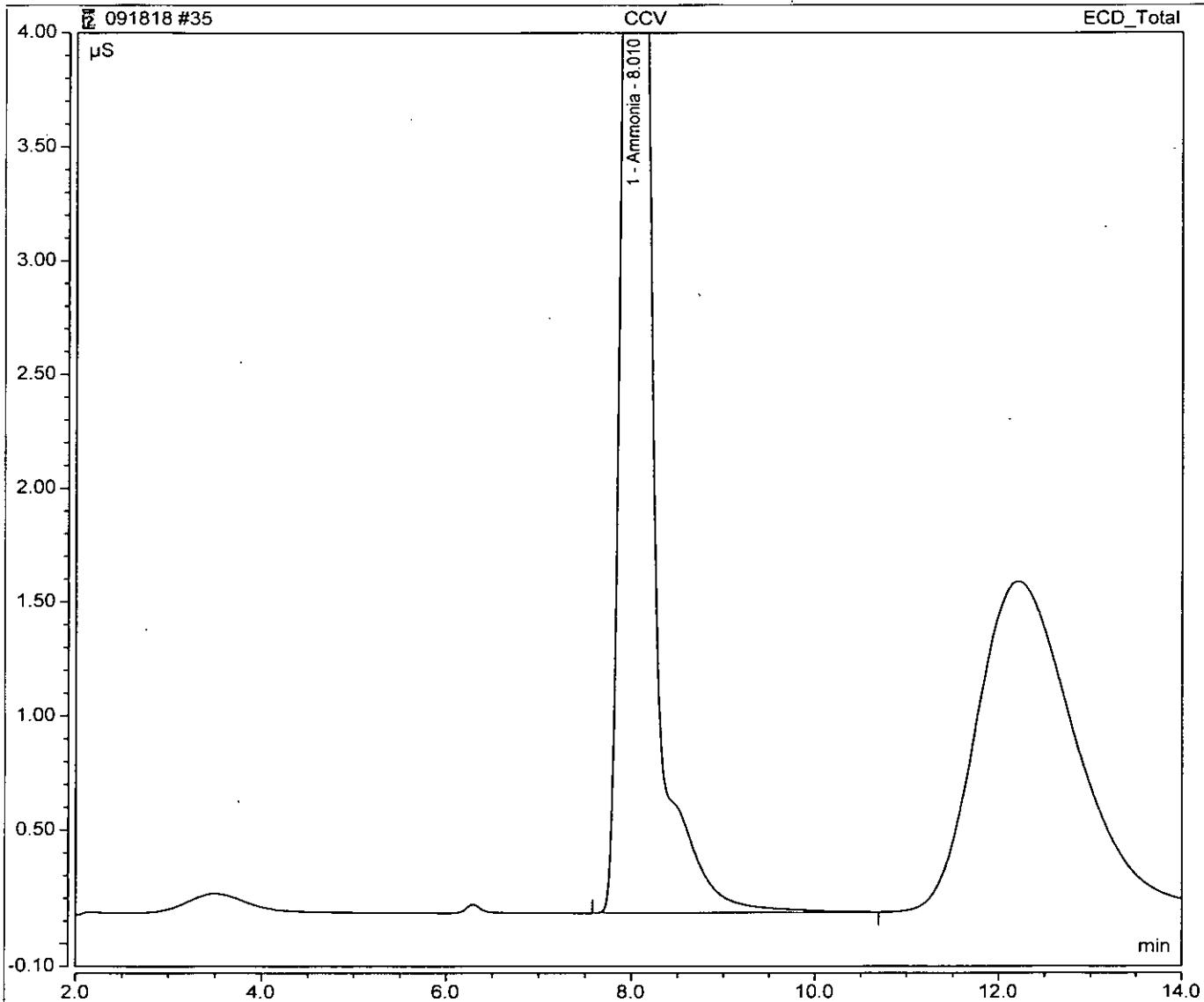
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.03	Ammonia	BMB	1.178	4.311	29.60053
TOTAL:				1.18	4.31	29.60



Peak Integration Report

Sample Name:	CCV	Inj. No.:	35
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 12:58	Comments:	ASTM D6919-09 Ammonia

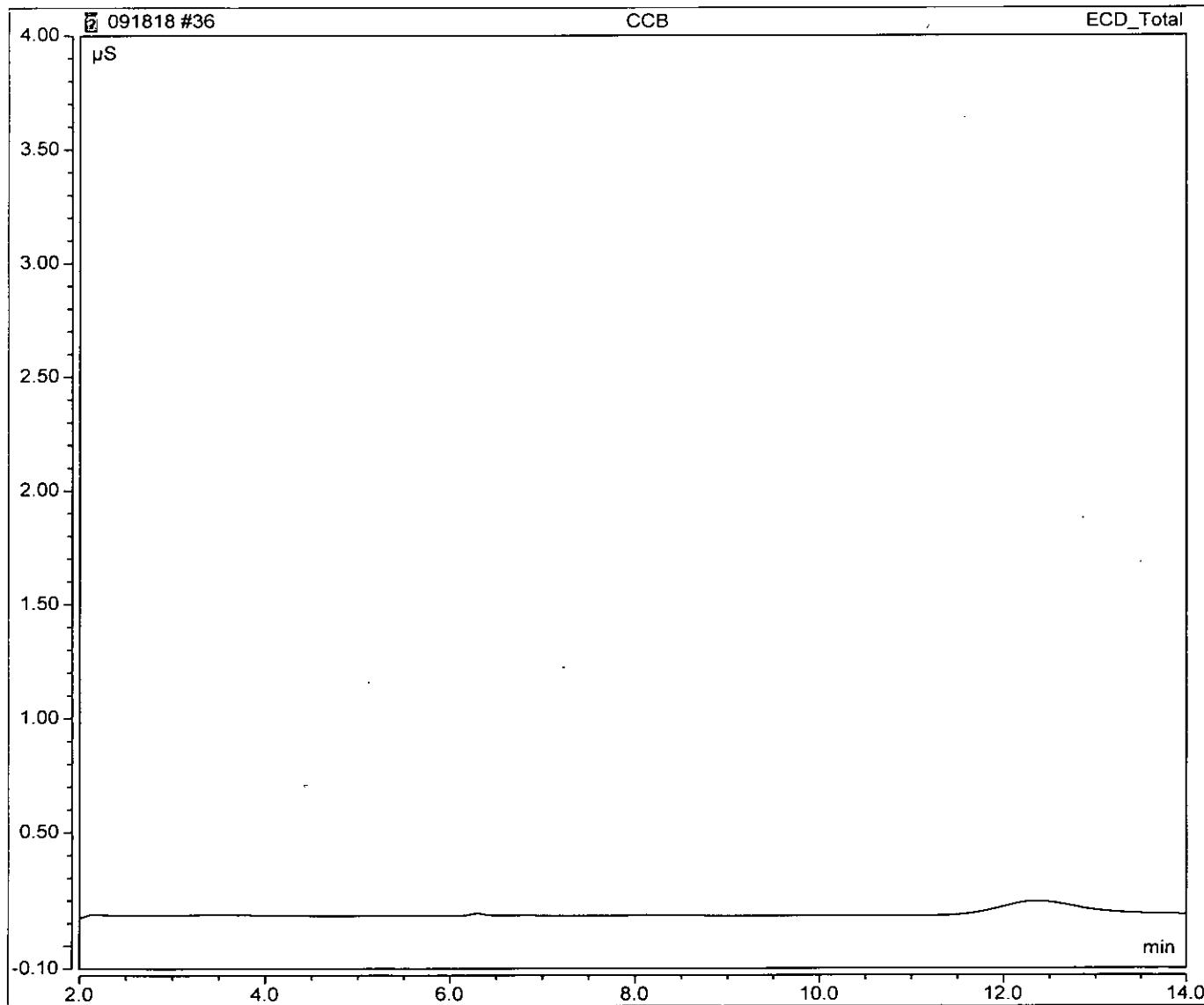
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.01	Ammonia	BMB	2.645	8.515	10.40134
TOTAL:				2.64	8.52	10.40



Peak Integration Report

<u>Sample Name:</u>	CCB	<u>Inj. No.:</u>	36
<u>File ID:</u>	<u>Instrument Data\IC9\Data\2018\09September2018</u>		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	1.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	18-Sep-2018 / 13:14	<u>Comments:</u>	ASTM D6919-09 Ammonia

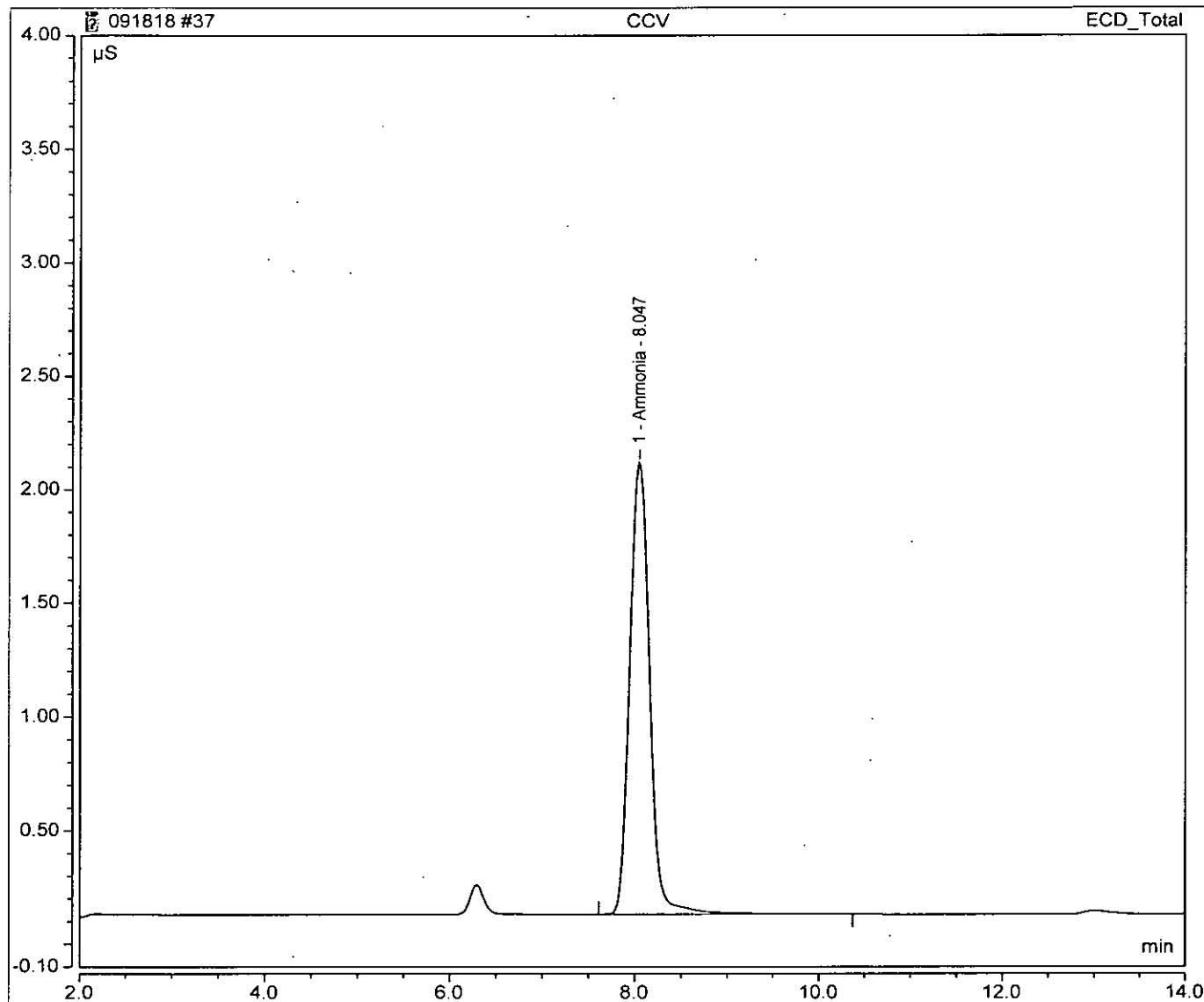
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

<u>Sample Name:</u>	CCV	<u>Inj. No.:</u>	37
<u>File ID:</u>	Instrument Data\IC9\Data\2018\09September2018		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	1.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	18-Sep-2018 / 13:43	<u>Comments:</u>	ASTM D6919-09 Ammonia

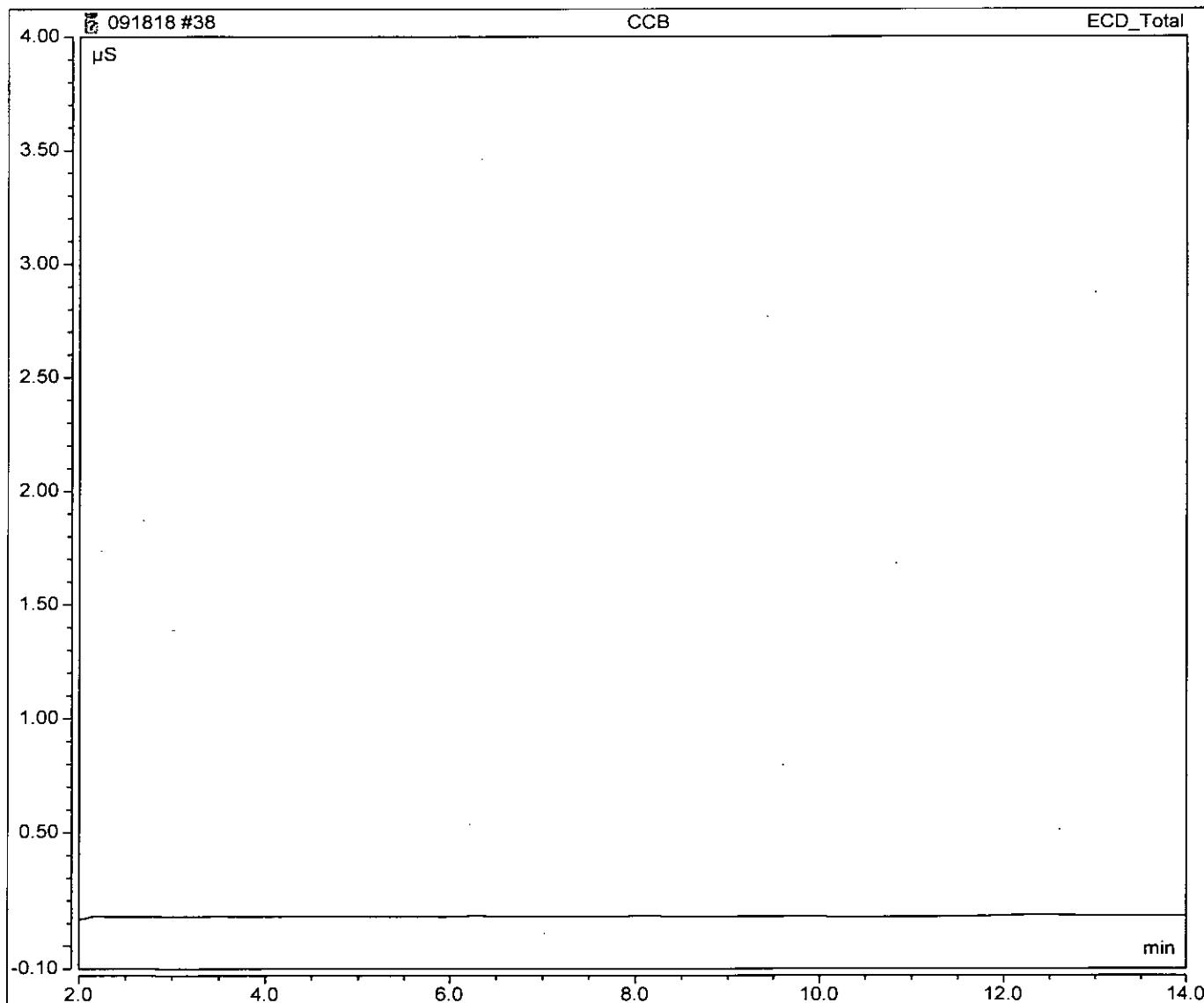
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^{\star}\text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.492	1.987	0.90936
TOTAL:				0.49	1.99	0.91



Peak Integration Report

Sample Name:	CCB	Inj. No.:	38
File ID:	Instrument Data\IC9\Data\2018\09\September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 14:00	Comments:	ASTM D6919-09 Ammonia

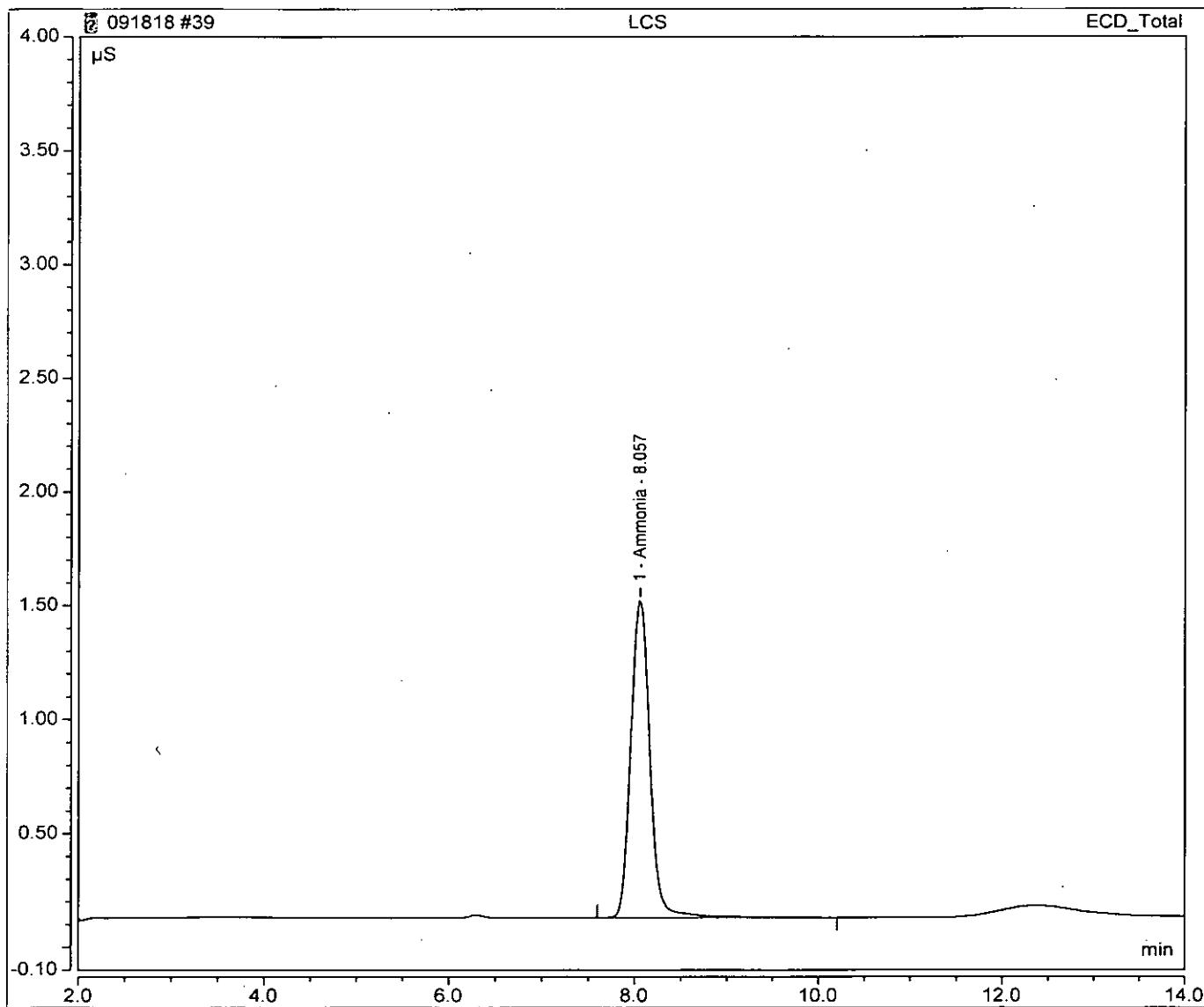
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	LCS	Inj. No.:	39
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 14:16	Comments:	ASTM D6919-09 Ammonia

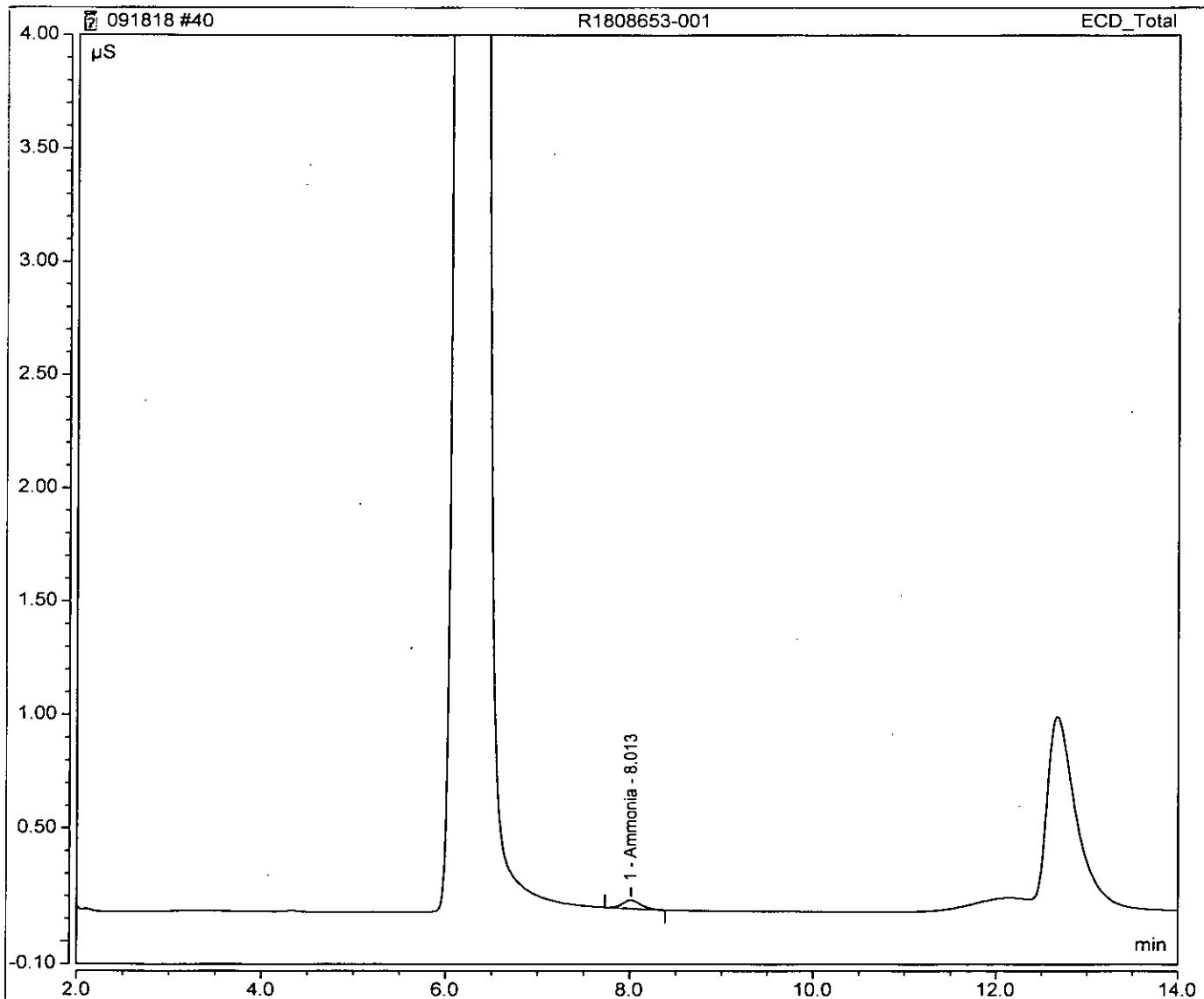
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.06	Ammonia	BMB	0.334	1.391	0.56549
TOTAL:				0.33	1.39	0.57



Peak Integration Report

Sample Name:	R1808653-001	Inj. No.:	40
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 14:32	Comments:	ASTM D6919-09 Ammonia LL

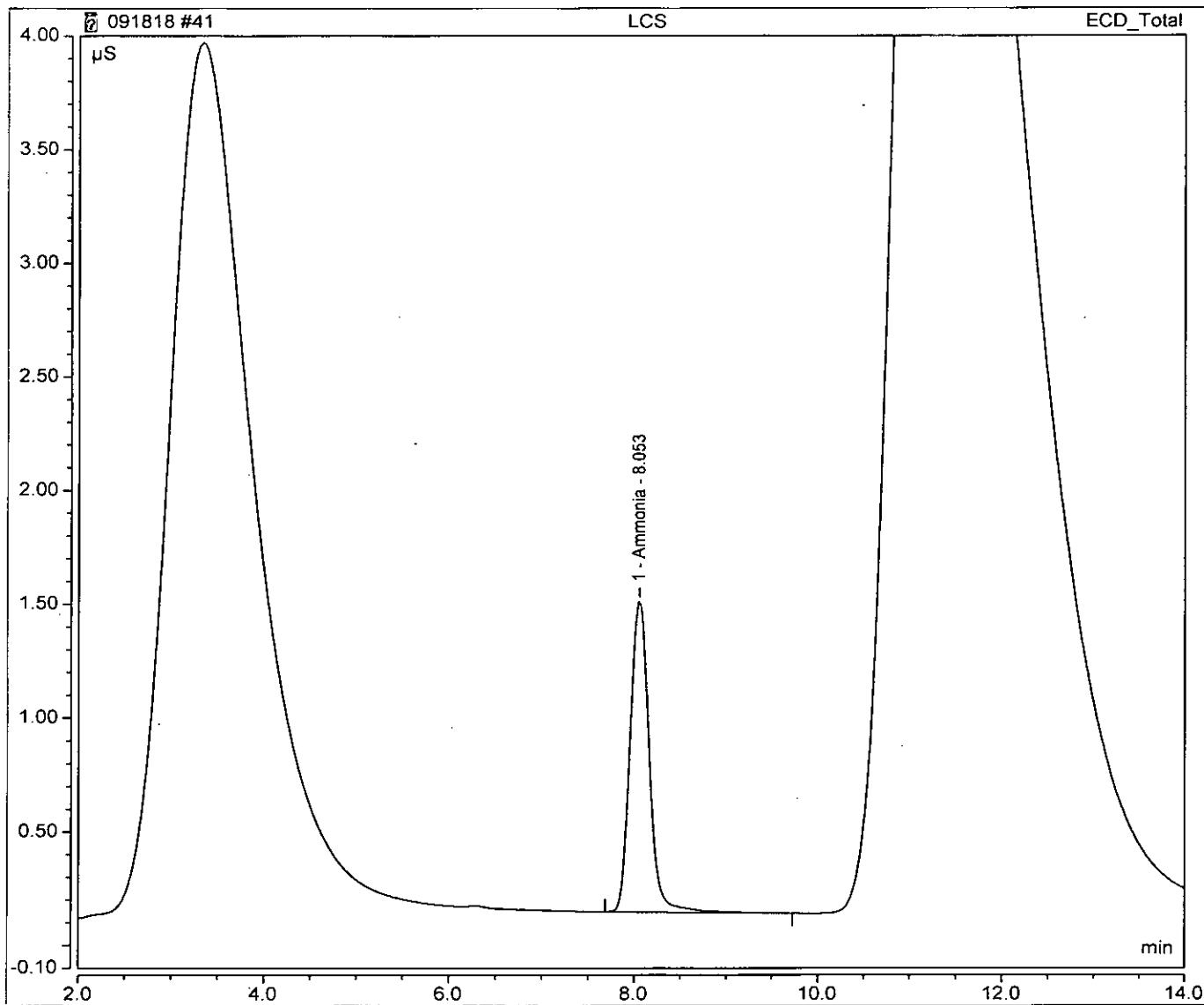
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.01	Ammonia	BMB	0.008	0.037	0.01001
TOTAL:				0.01	0.04	0.01



Peak Integration Report

Sample Name:	LCS	Inj. No.:	41
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 14:48	Comments:	ASTM D6919-09 Ammonia

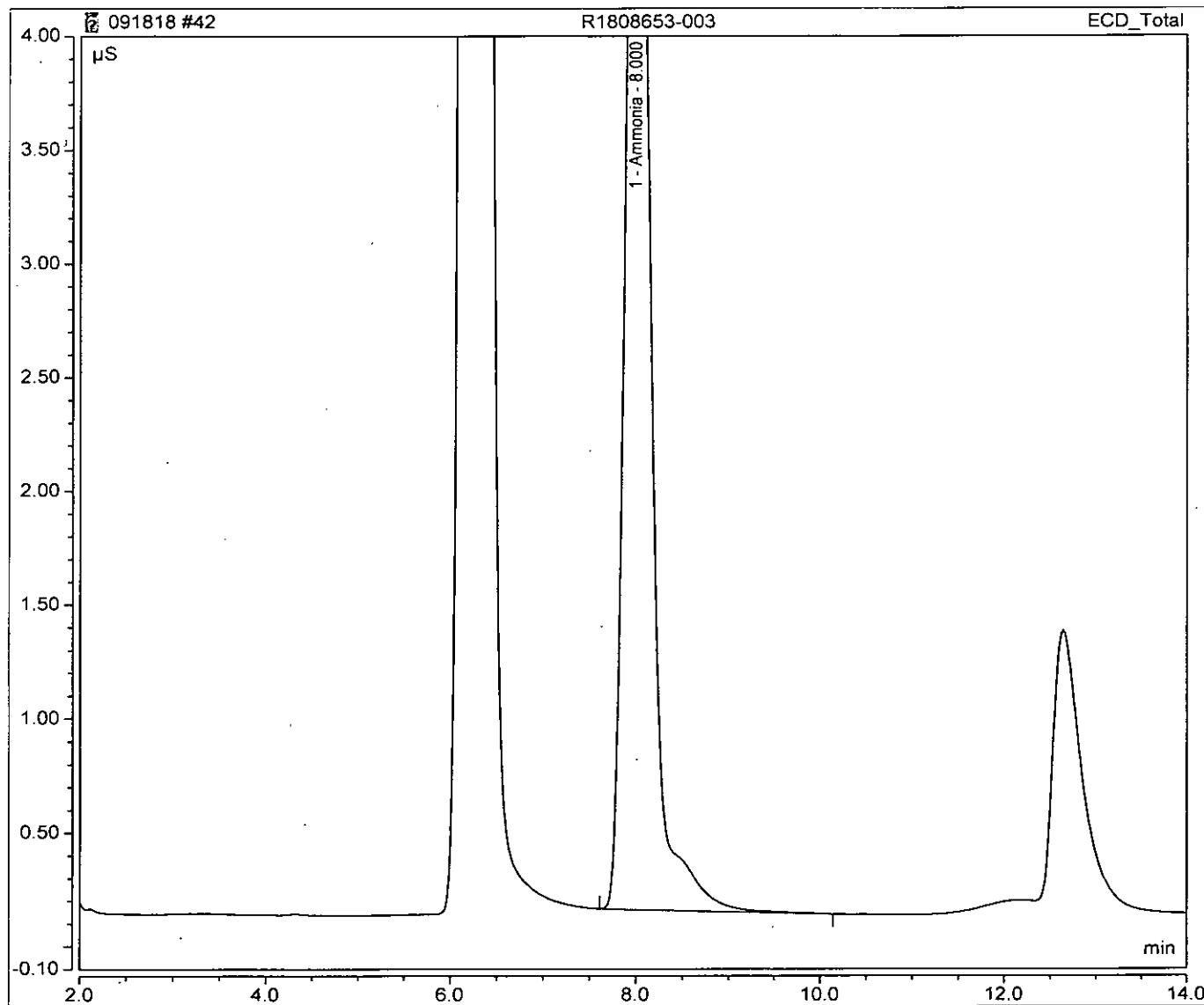
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.326	1.367	0.54879
TOTAL:				0.33	1.37	0.55



Peak Integration Report

Sample Name:	R1808653-003	Inj. No.:	42
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 15:04	Comments:	ASTM D6919-09 Ammonia LL

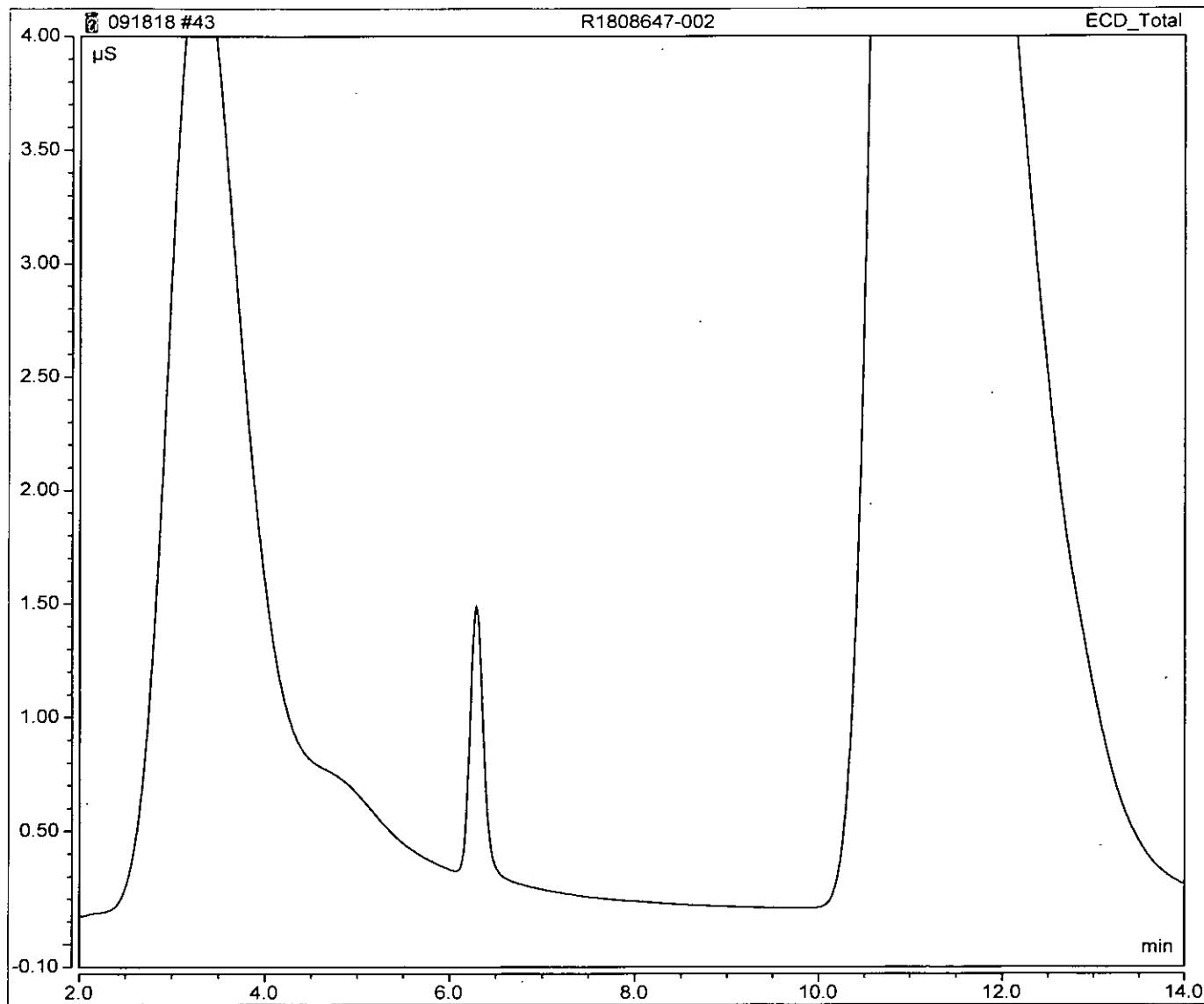
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.00	Ammonia	BMB	1.762	5.816	5.42503
TOTAL:				1.76	5.82	5.43



Peak Integration Report

<u>Sample Name:</u>	R1808647-002	<u>Inj. No.:</u>	43
<u>File ID:</u>	Instrument Data\IC9\Data\2018\09September2018		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	10.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	18-Sep-2018 / 15:20	<u>Comments:</u>	ASTM D6919-09 Ammonia

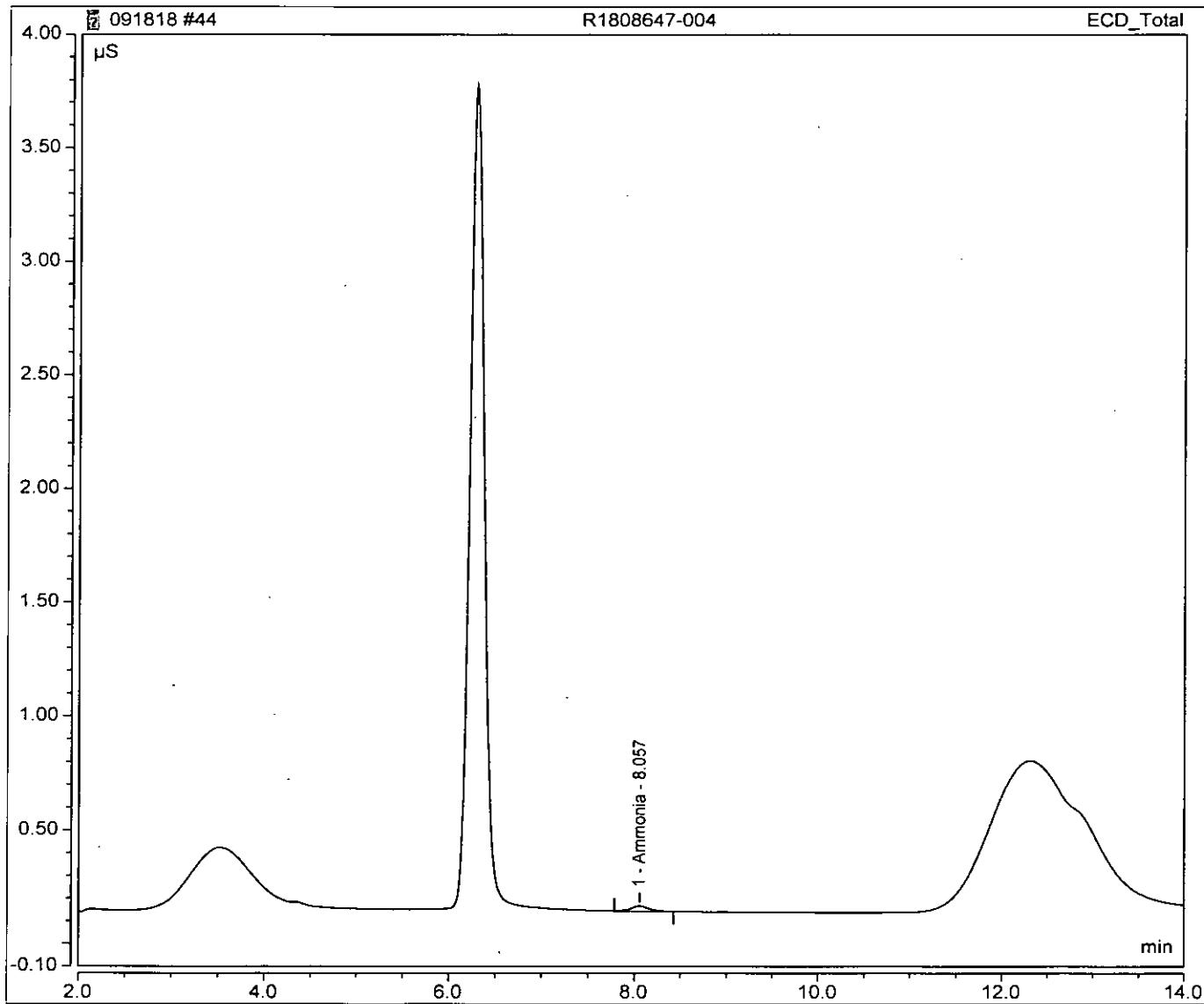
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808647-004	Inj. No.:	44
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 15:36	Comments:	ASTM D6919-09 Ammonia

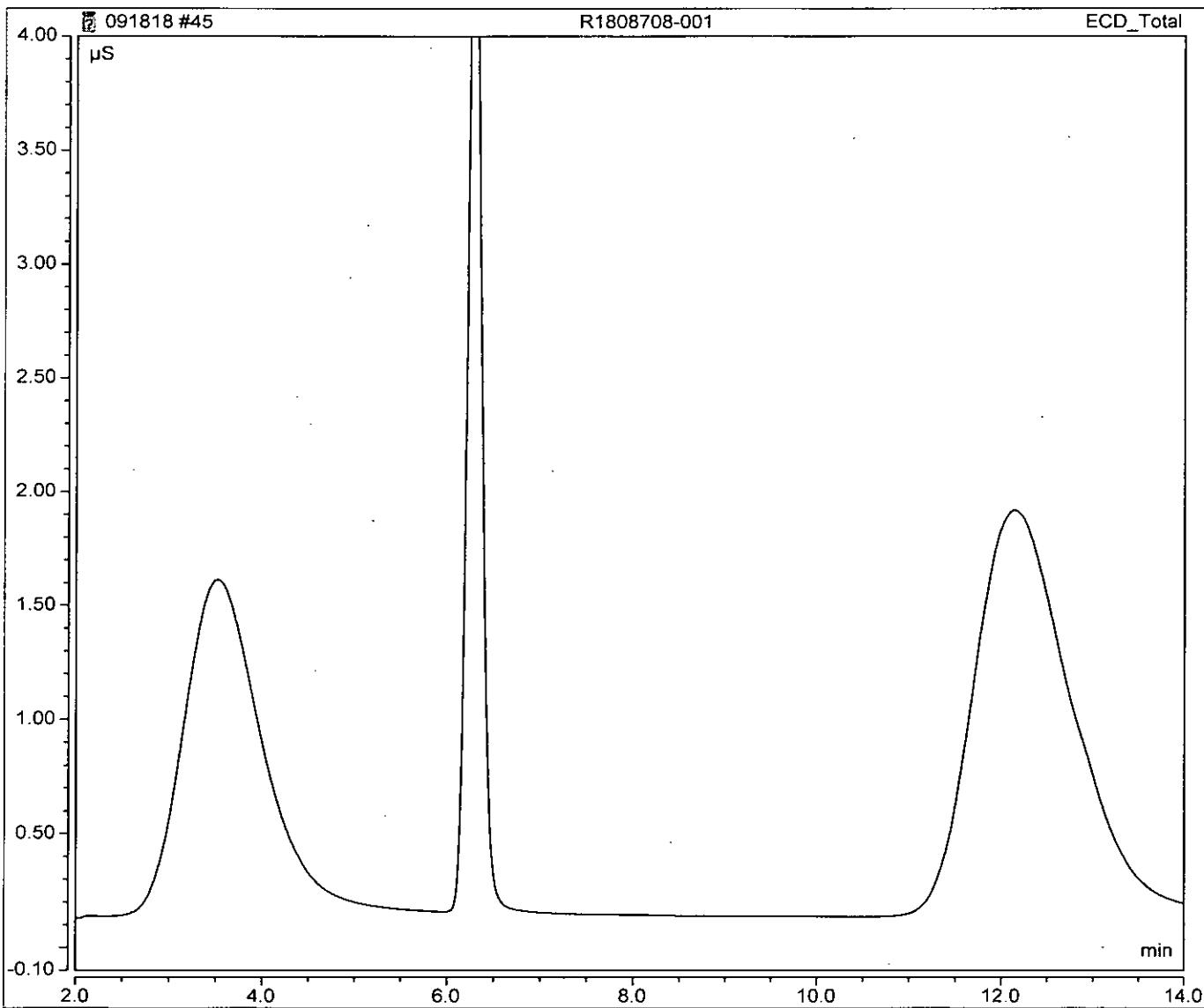
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.06	Ammonia	BMB	0.005	0.023	0.04914
TOTAL:				0.00	0.02	0.05



Peak Integration Report

Sample Name:	R1808708-001	Inj. No.:	45
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 15:52	Comments:	ASTM D6919-09 Ammonia

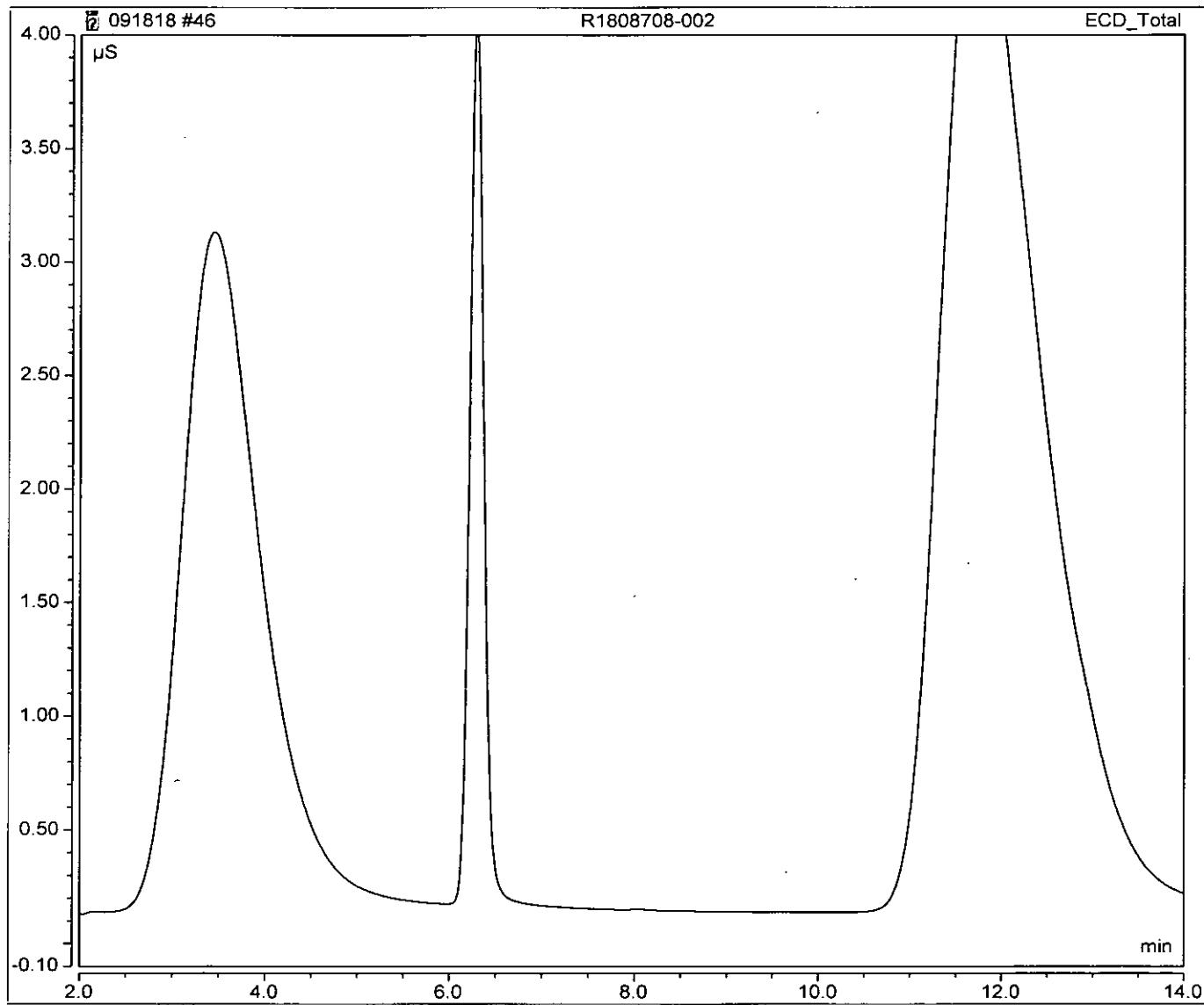
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808708-002	Inj. No.:	46
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 16:08	Comments:	ASTM D6919-09 Ammonia

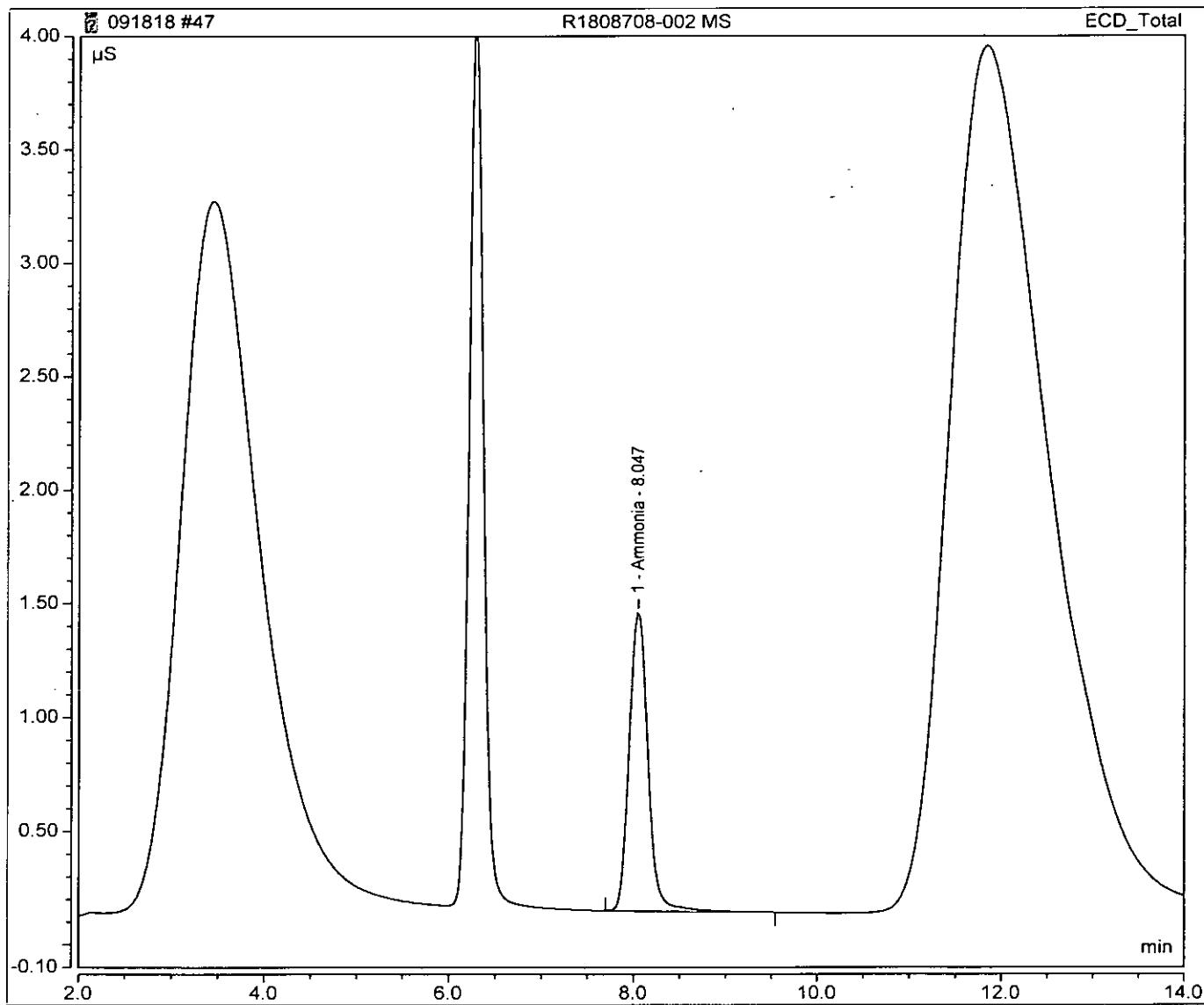
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808708-002 MS	Inj. No.:	47
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 16:24	Comments:	ASTM D6919-09 Ammonia

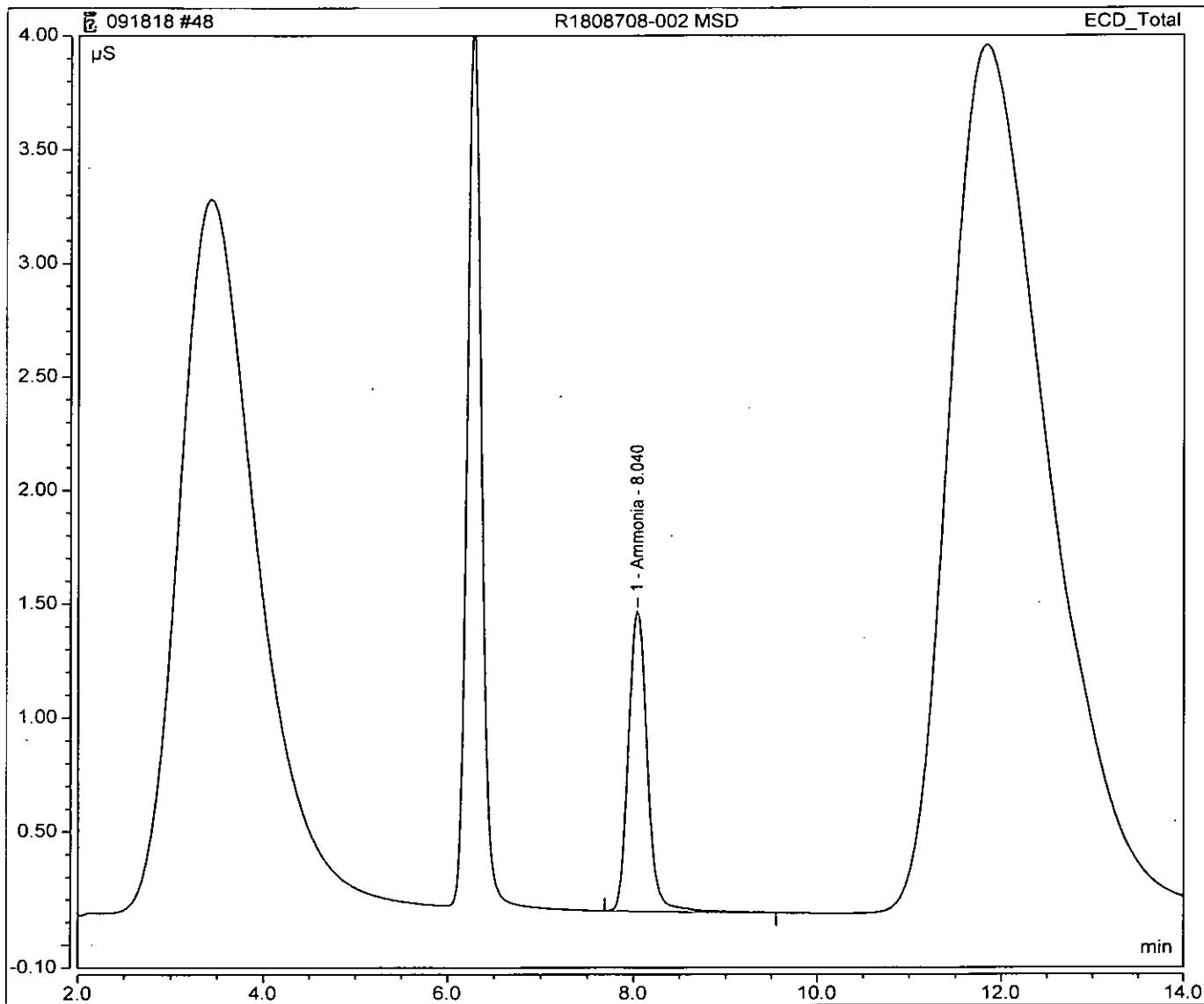
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.309	1.314	5.16240
TOTAL:				0.31	1.31	5.16



Peak Integration Report

Sample Name:	R1808708-002 MSD	Inj. No.:	48
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 16:40	Comments:	ASTM D6919-09 Ammonia

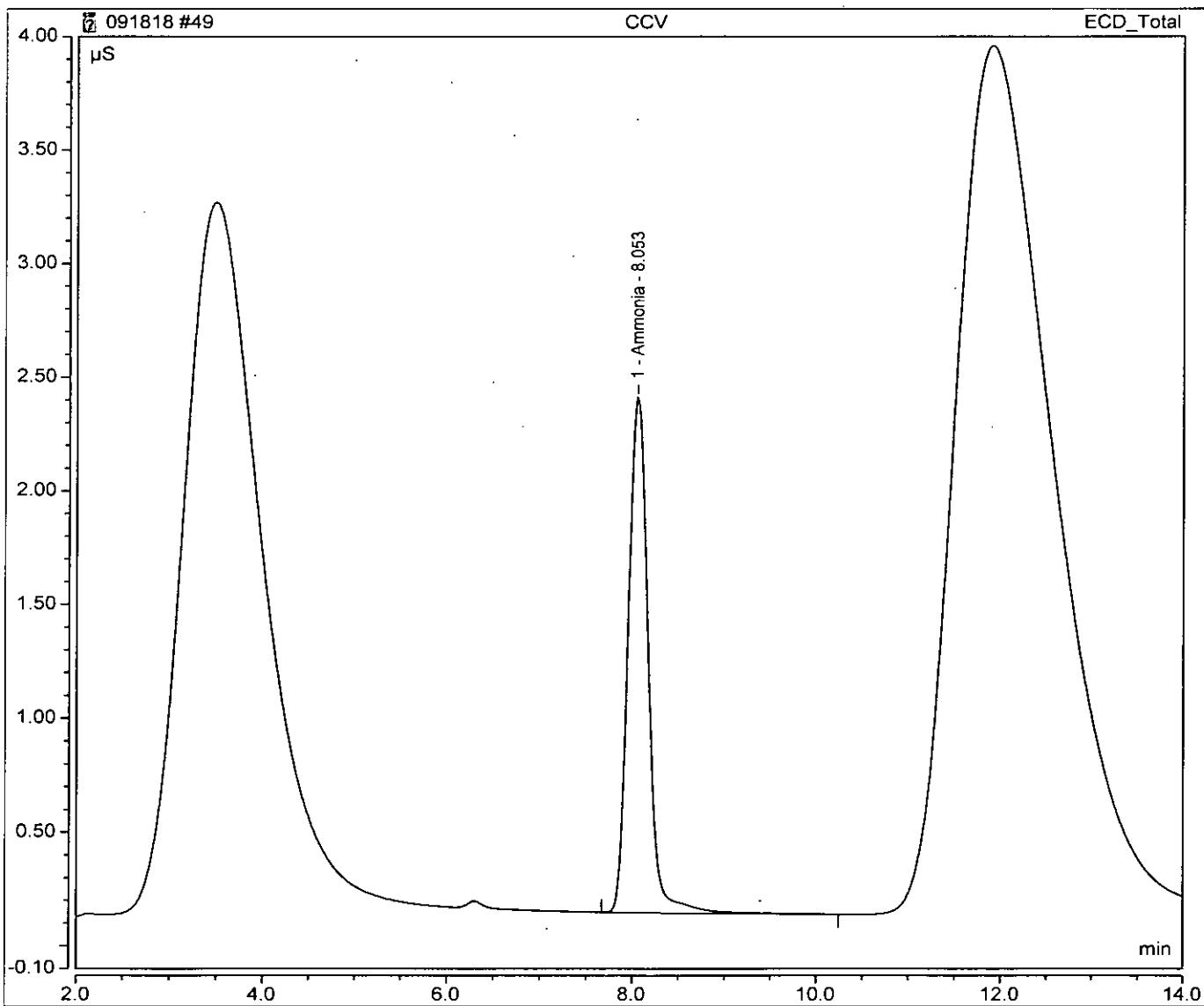
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.311	1.319	5.19180
TOTAL:				0.31	1.32	5.19



Peak Integration Report

Sample Name:	CCV	Inj. No.:	49
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 16:56	Comments:	ASTM D6919-09 Ammonia

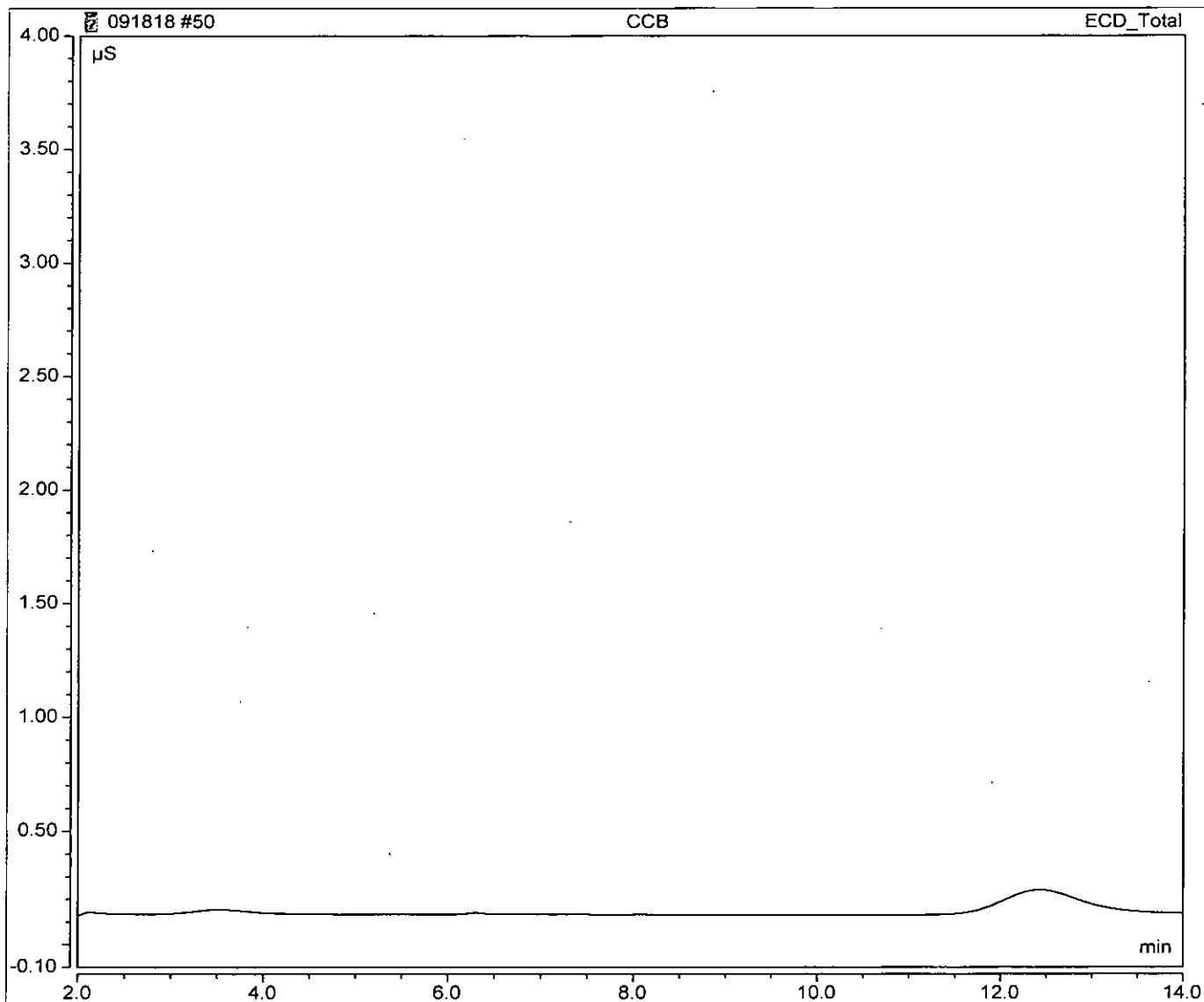
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.566	2.264	1.08643
TOTAL:				0.57	2.26	1.09



Peak Integration Report

<u>Sample Name:</u>	CCB	<u>Inj. No.:</u>	50
<u>File ID:</u>	Instrument Data\IC9\Data\2018\09September2018		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	1.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	18-Sep-2018 / 17:12	<u>Comments:</u>	ASTM D6919-09 Ammonia

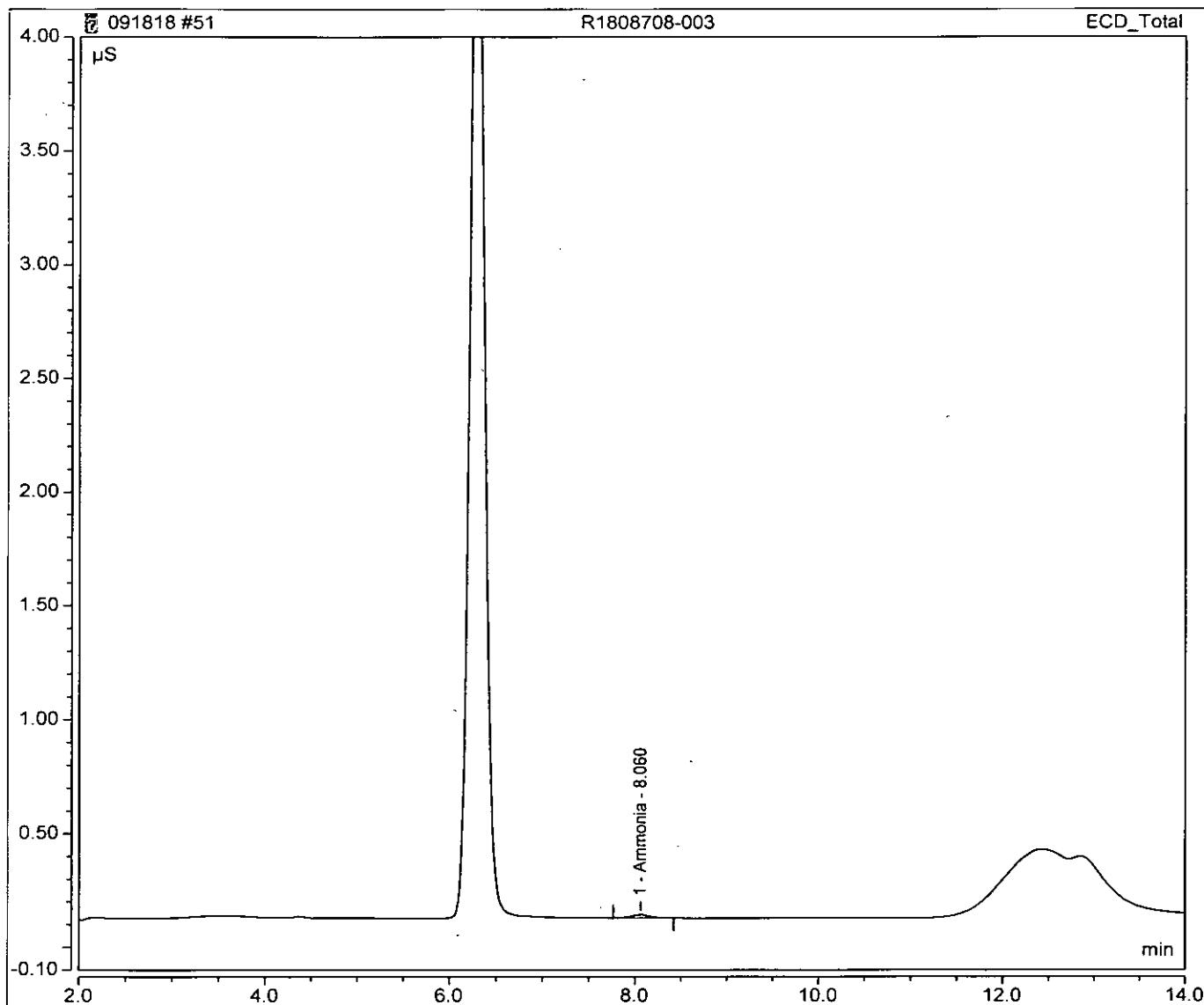
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808708-003	Inj. No.:	51
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 17:28	Comments:	ASTM D6919-09 Ammonia

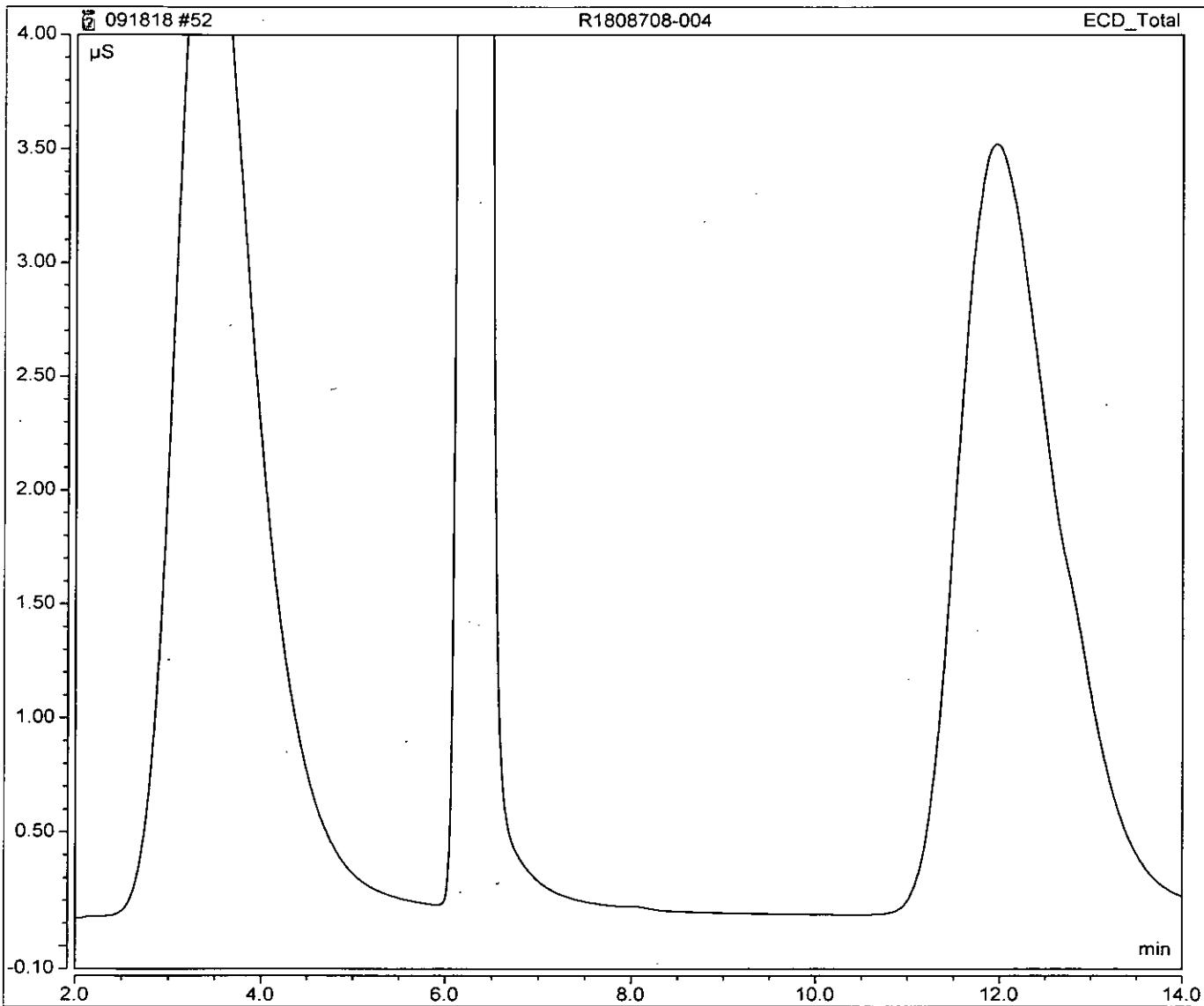
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.06	Ammonia	BMB	0.003	0.014	0.02444
TOTAL:				0.00	0.01	0.02



Peak Integration Report

Sample Name:	R1808708-004	Inj. No.:	52
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 17:44	Comments:	ASTM D6919-09 Ammonia

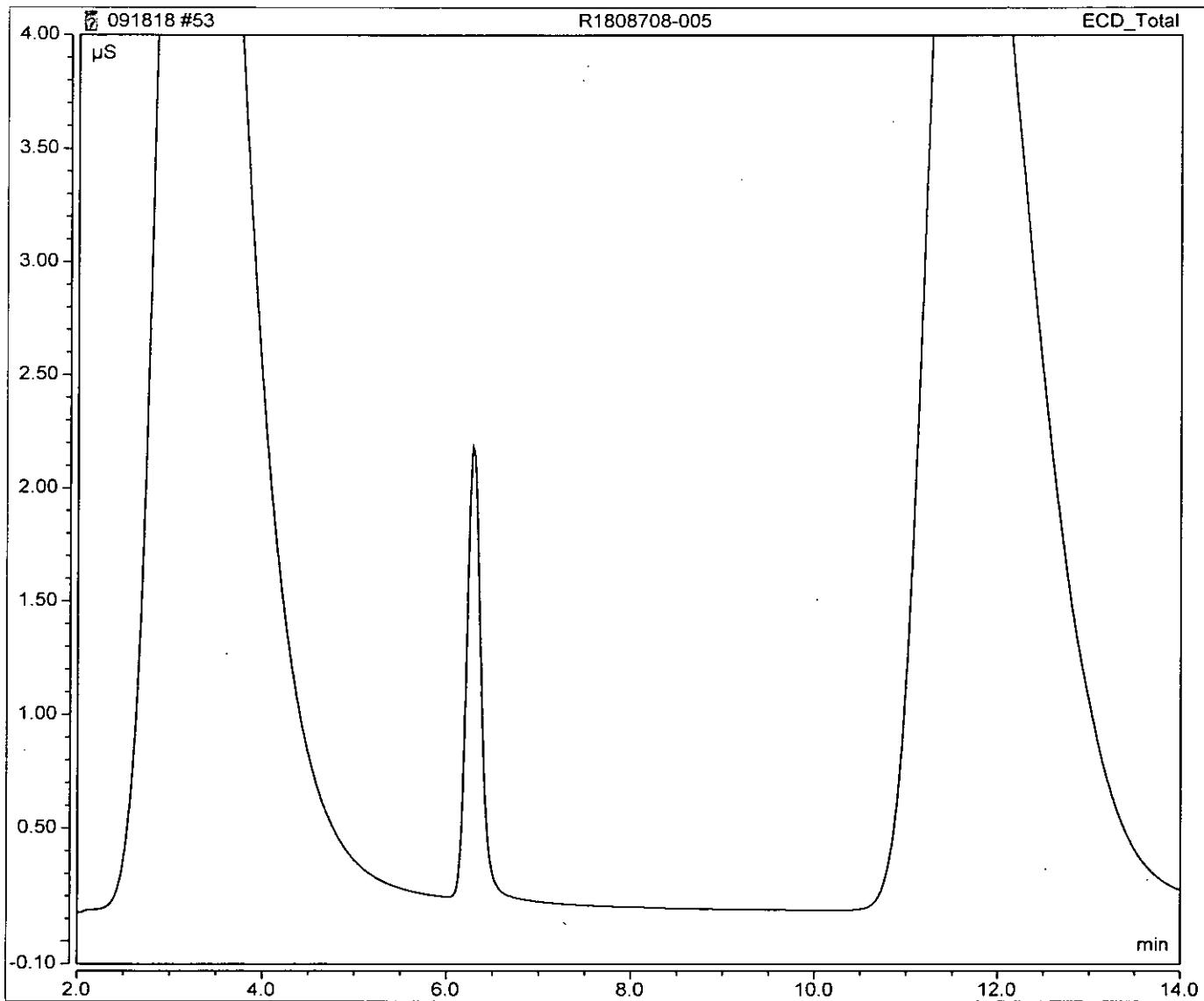
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

<u>Sample Name:</u>	R1808708-005	<u>Inj. No.:</u>	53
<u>File ID:</u>	Instrument Data\IC9\Data\2018\09September2018		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	10.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	18-Sep-2018 / 18:00	<u>Comments:</u>	ASTM D6919-09 Ammonia

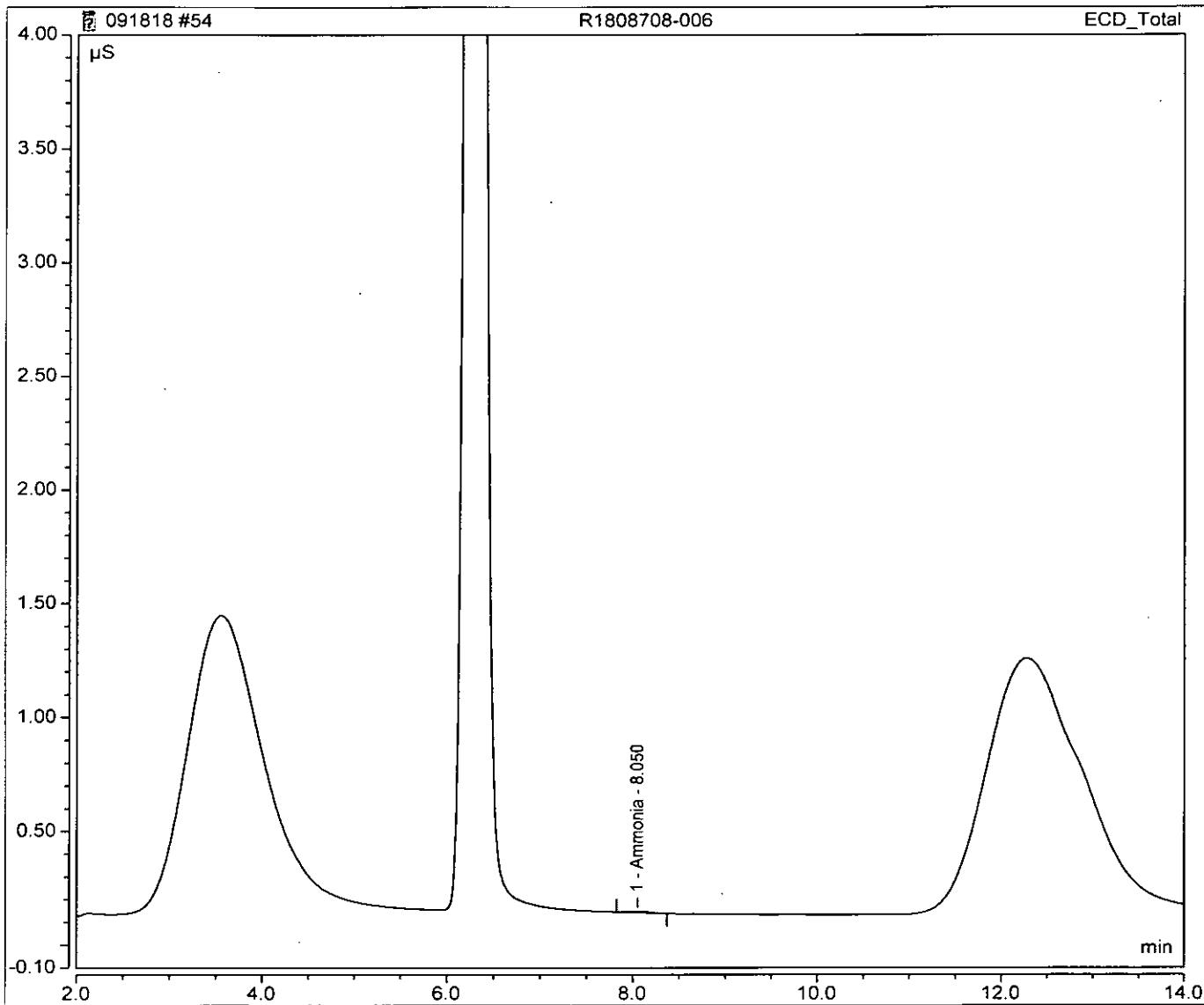
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
		TOTAL:		0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808708-006	Inj. No.:	54
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 18:16	Comments:	ASTM D6919-09 Ammonia

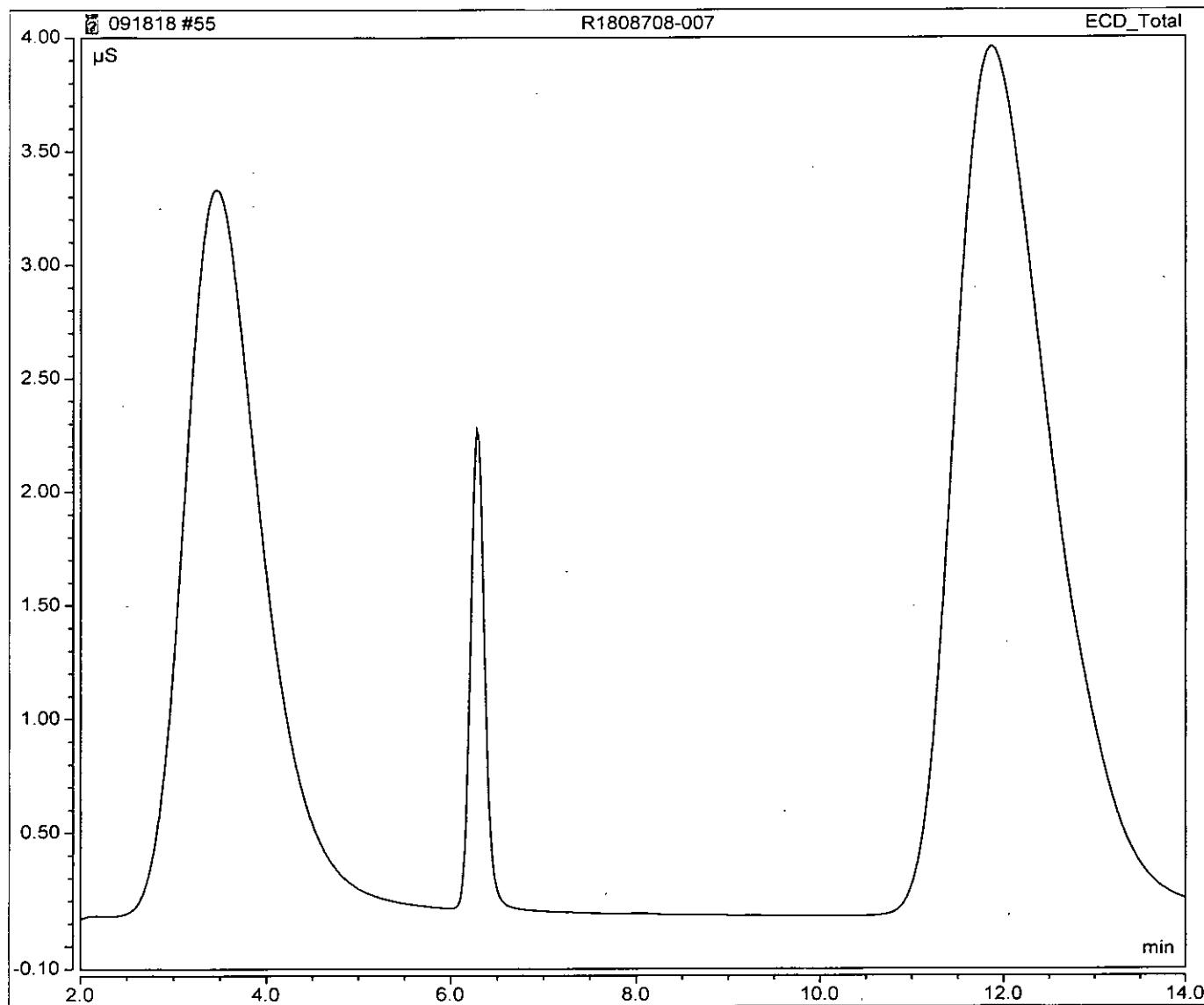
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.001	0.007	0.00317
TOTAL:				0.00	0.01	0.00



Peak Integration Report

Sample Name:	R1808708-007	Inj. No.:	55
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 18:32	Comments:	ASTM D6919-09 Ammonia

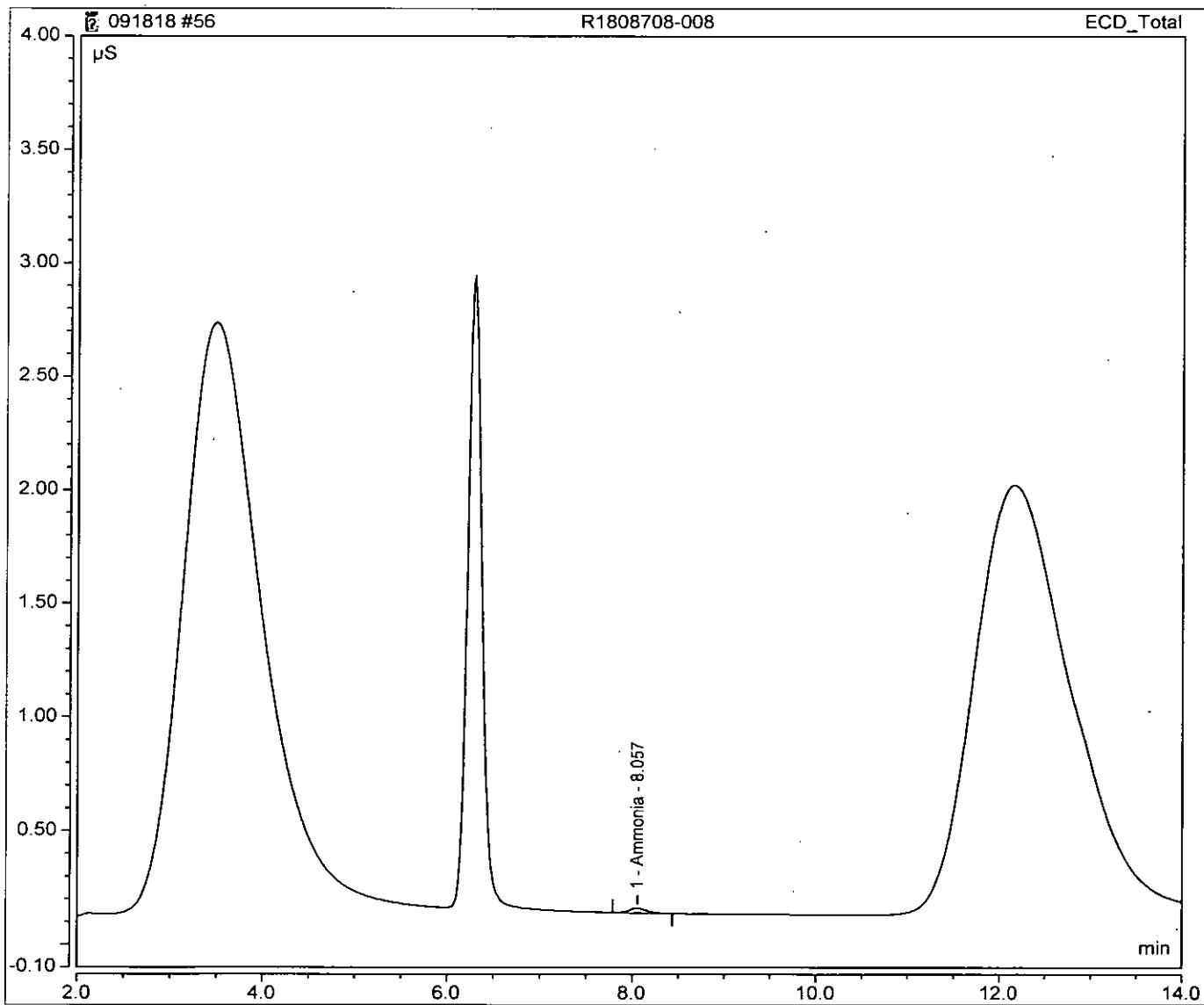
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808708-008	Inj. No.:	56
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 18:48	Comments:	ASTM D6919-09 Ammonia

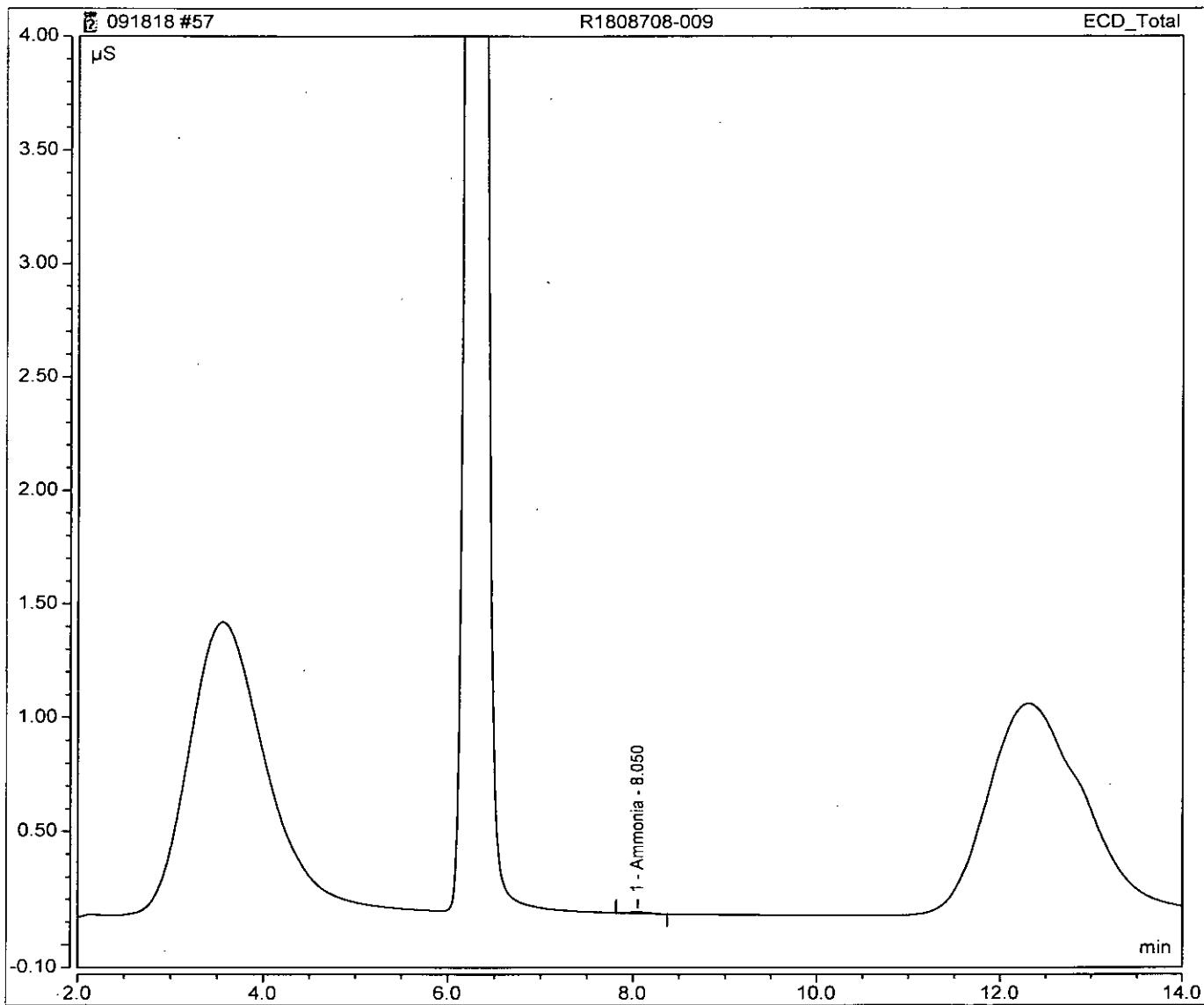
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.06	Ammonia	BMB	0.004	0.021	0.04393
TOTAL:				0.00	0.02	0.04



Peak Integration Report

Sample Name:	R1808708-009	Inj. No.:	57
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 19:04	Comments:	ASTM D6919-09 Ammonia

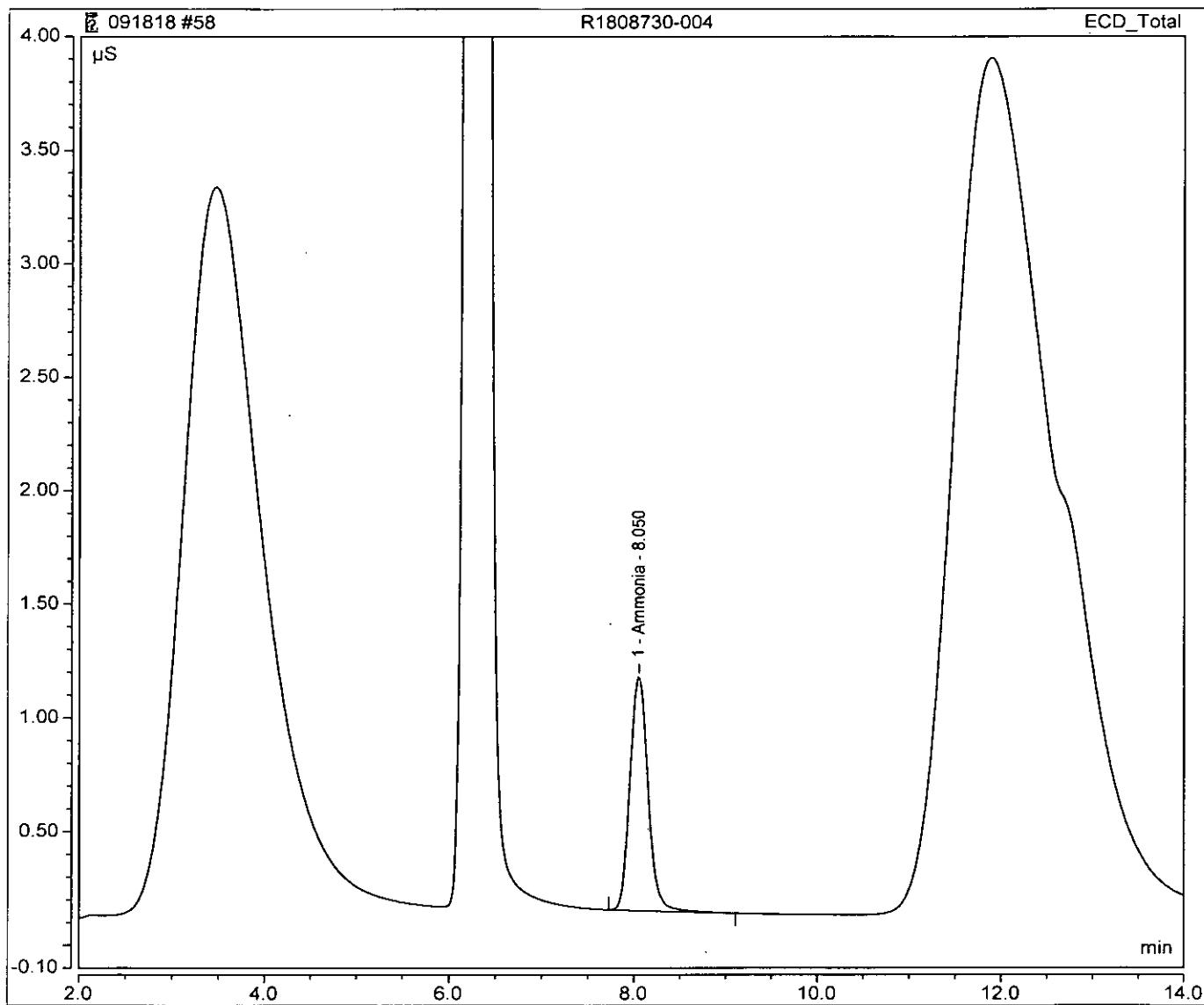
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.001	0.006	0.00198
TOTAL:				0.00	0.01	0.00



Peak Integration Report

Sample Name:	R1808730-004	Inj. No.:	58
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 19:20	Comments:	ASTM D6919-09 Ammonia

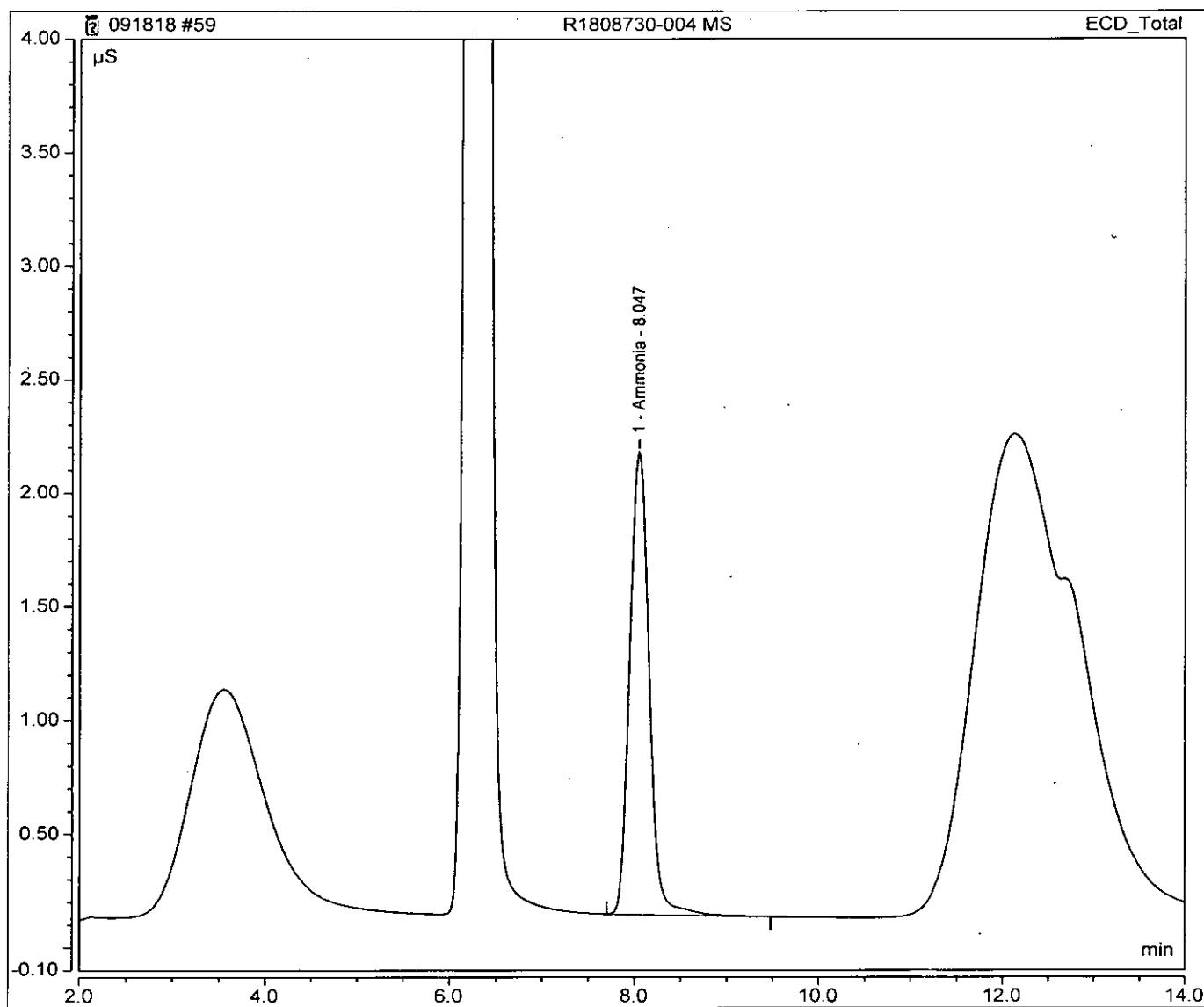
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.235	1.029	3.74909
TOTAL:				0.23	1.03	3.75



Peak Integration Report

Sample Name:	R1808730-004 MS	Inj. No.:	59
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 19:37	Comments:	ASTM D6919-09 Ammonia

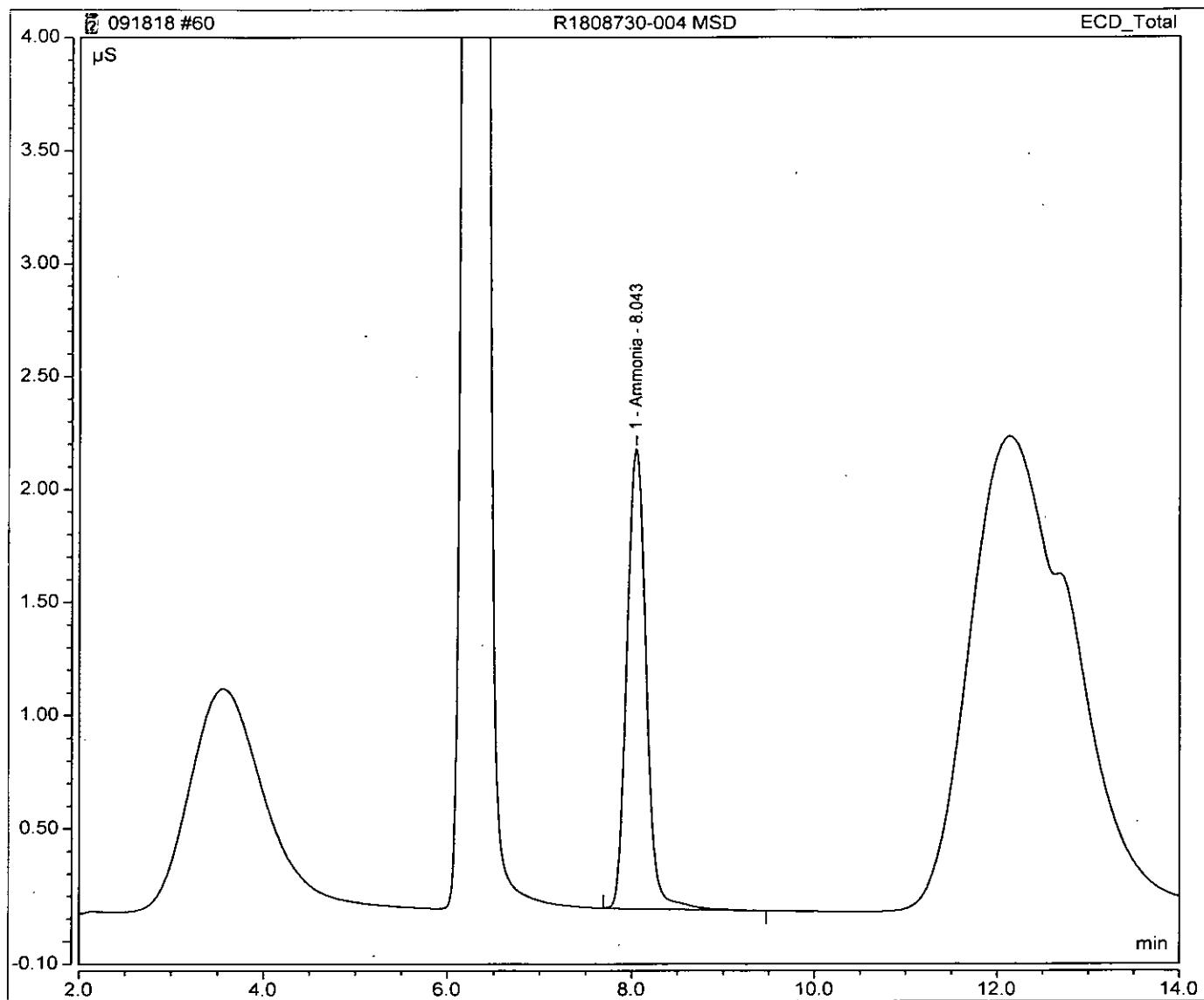
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.497	2.034	9.20570
TOTAL:				0.50	2.03	9.21



Peak Integration Report

Sample Name:	R1808730-004 MSD	Inj. No.:	60
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 19:53	Comments:	ASTM D6919-09 Ammonia

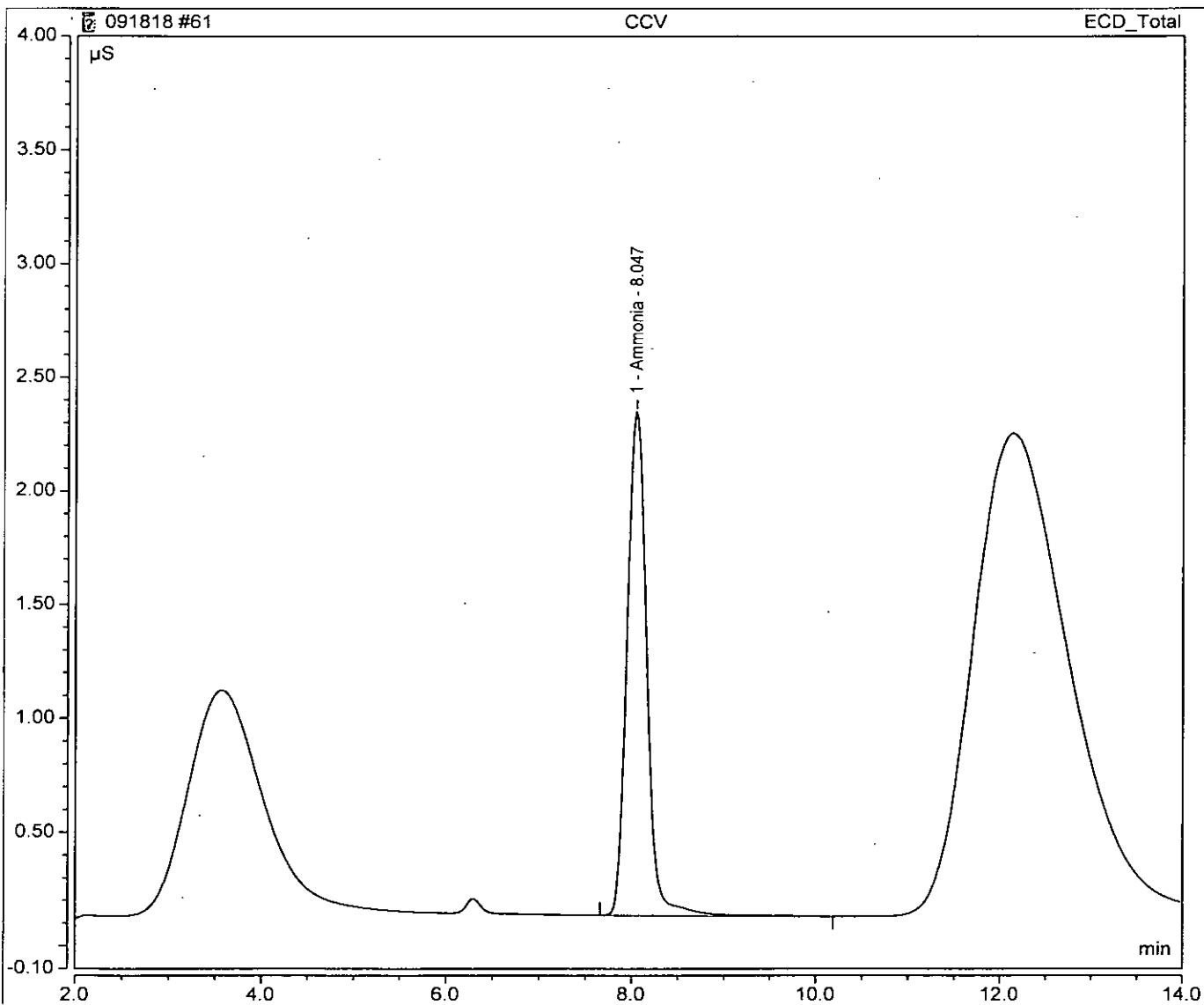
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.496	2.033	9.18337
TOTAL:				0.50	2.03	9.18



Peak Integration Report

Sample Name:	CCV	Inj. No.:	61
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 20:09	Comments:	ASTM D6919-09 Ammonia

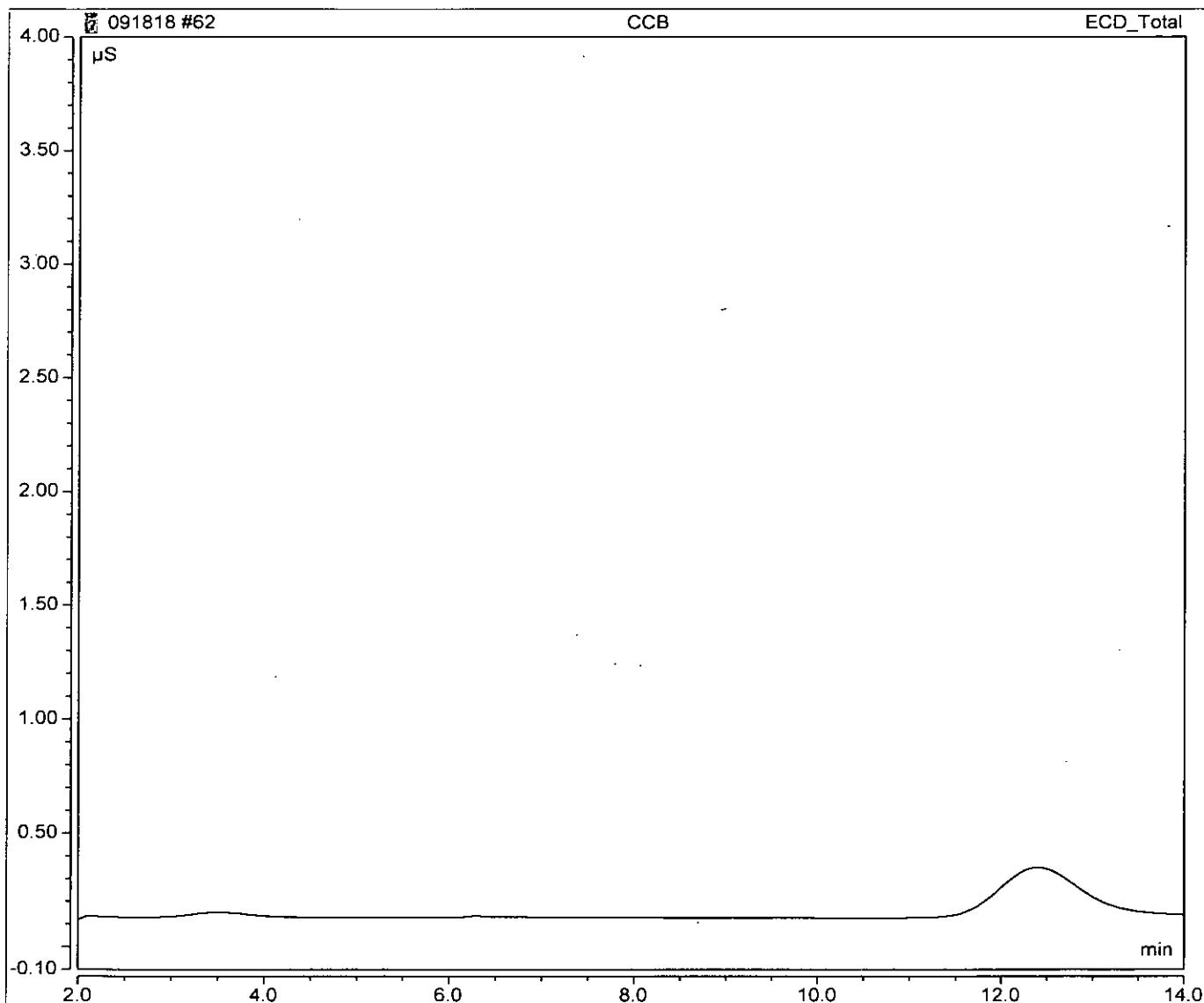
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.549	2.210	1.04468
TOTAL:				0.55	2.21	1.04



Peak Integration Report

Sample Name:	CCB	Inj. No.:	62
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 20:25	Comments:	ASTM D6919-09 Ammonia

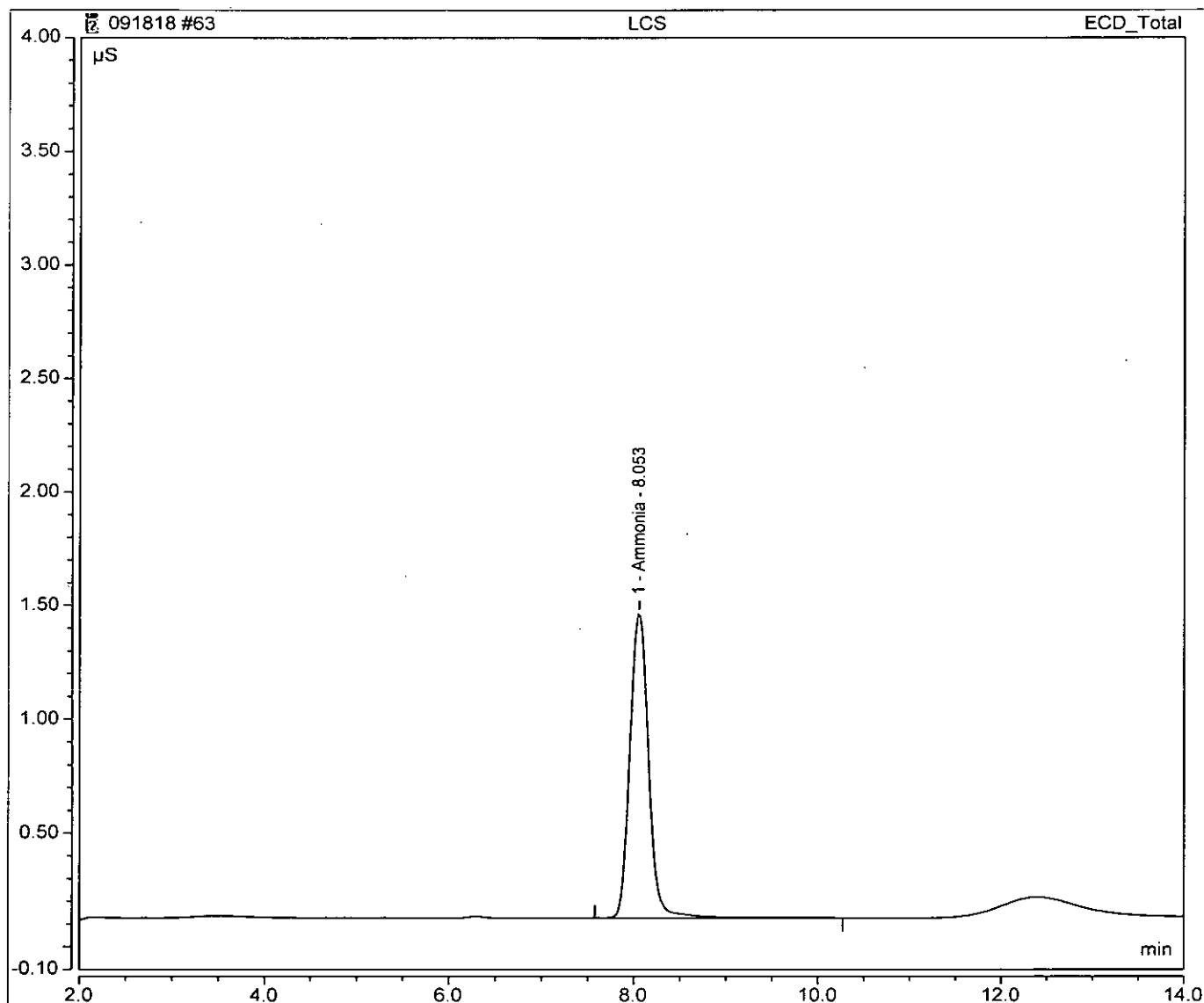
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	LCS	Inj. No.:	63
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 20:41	Comments:	ASTM D6919-09 Ammonia

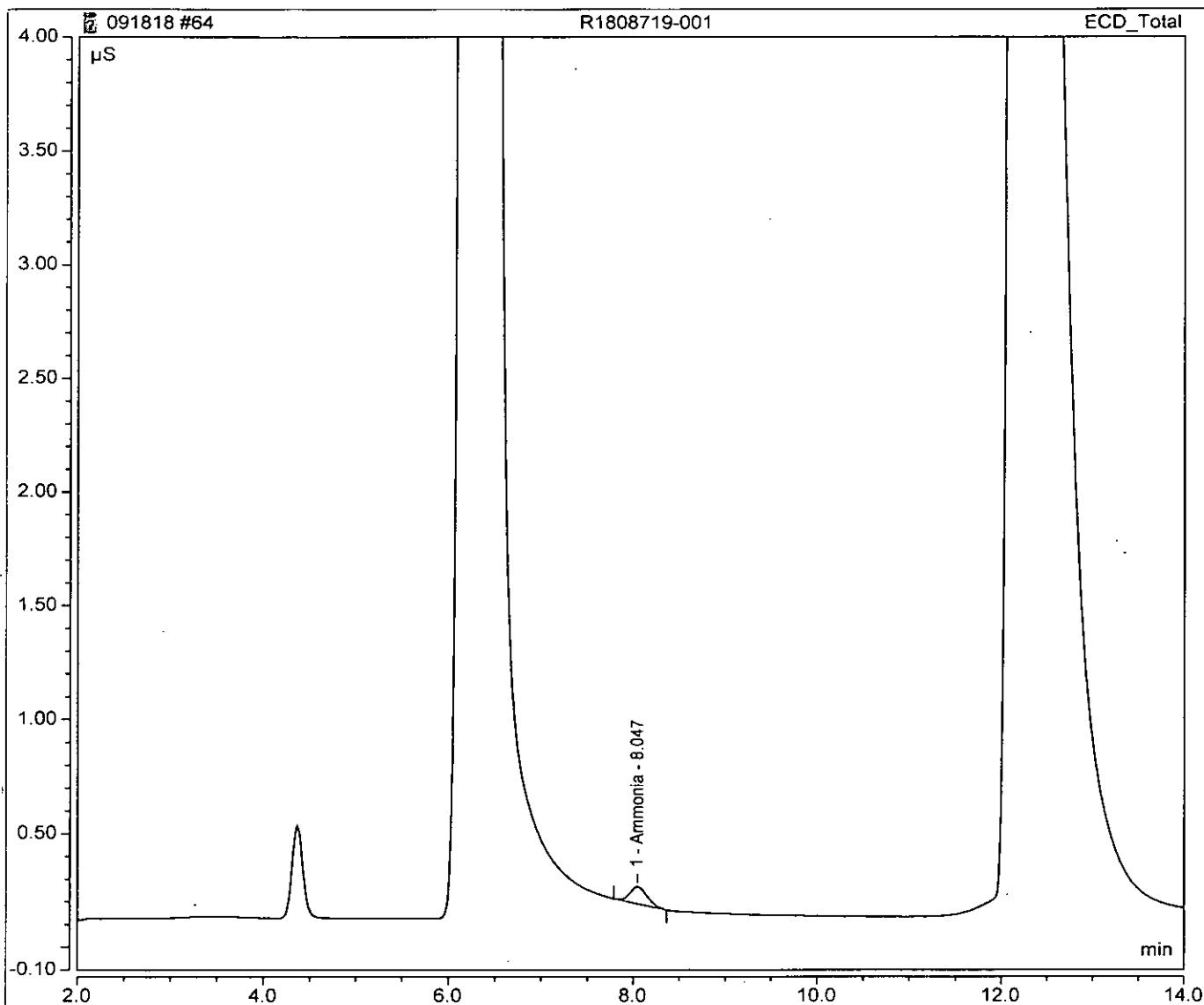
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.316	1.338	0.52943
TOTAL:				0.32	1.34	0.53



Peak Integration Report

Sample Name:	R1808719-001	Inj. No.:	64
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (µL):	50.00
Inj. Date / Time:	18-Sep-2018 / 20:57	Comments:	ASTM D6919-09 Ammonia

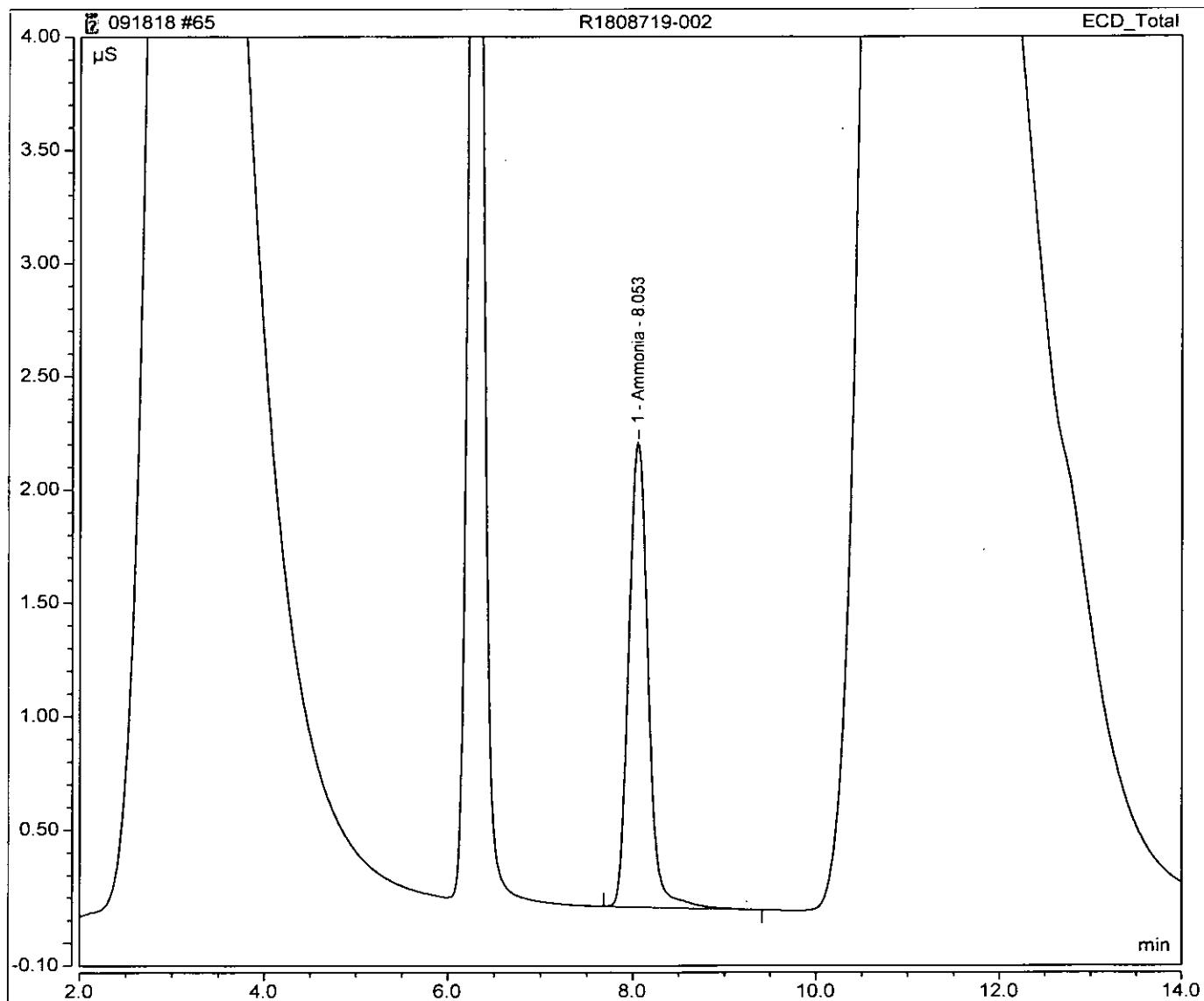
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.016	0.075	0.20566
TOTAL:				0.02	0.07	0.21



Peak Integration Report

Sample Name:	R1808719-002	Inj. No.:	65
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	500.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 21:13	Comments:	ASTM D6919-09 Ammonia

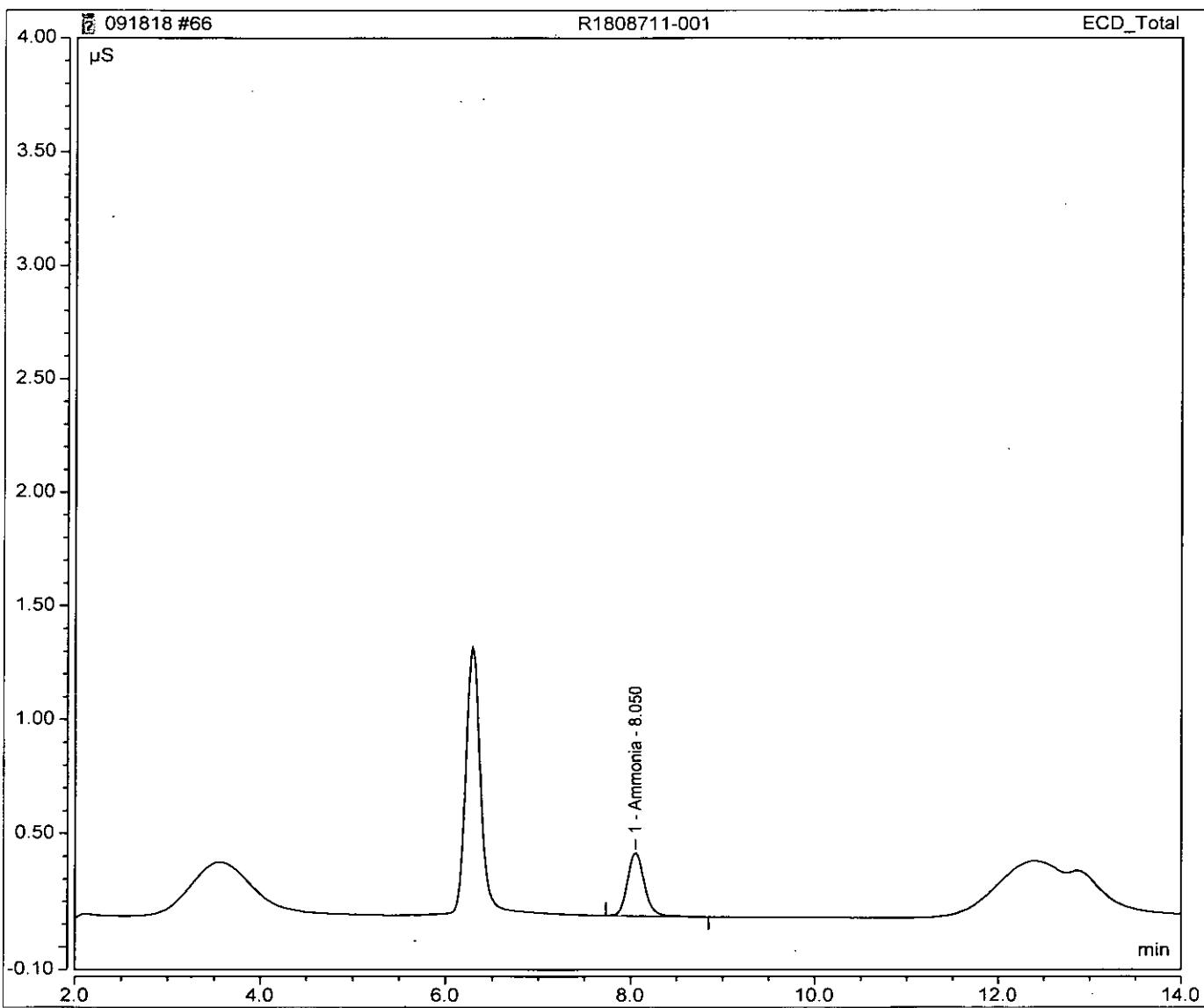
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.502	2.049	466.87179
TOTAL:				0.50	2.05	466.87



Peak Integration Report

Sample Name:	R1808711-001	Inj. No.:	66
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	100.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 21:29	Comments:	ASTM D6919-09 Ammonia

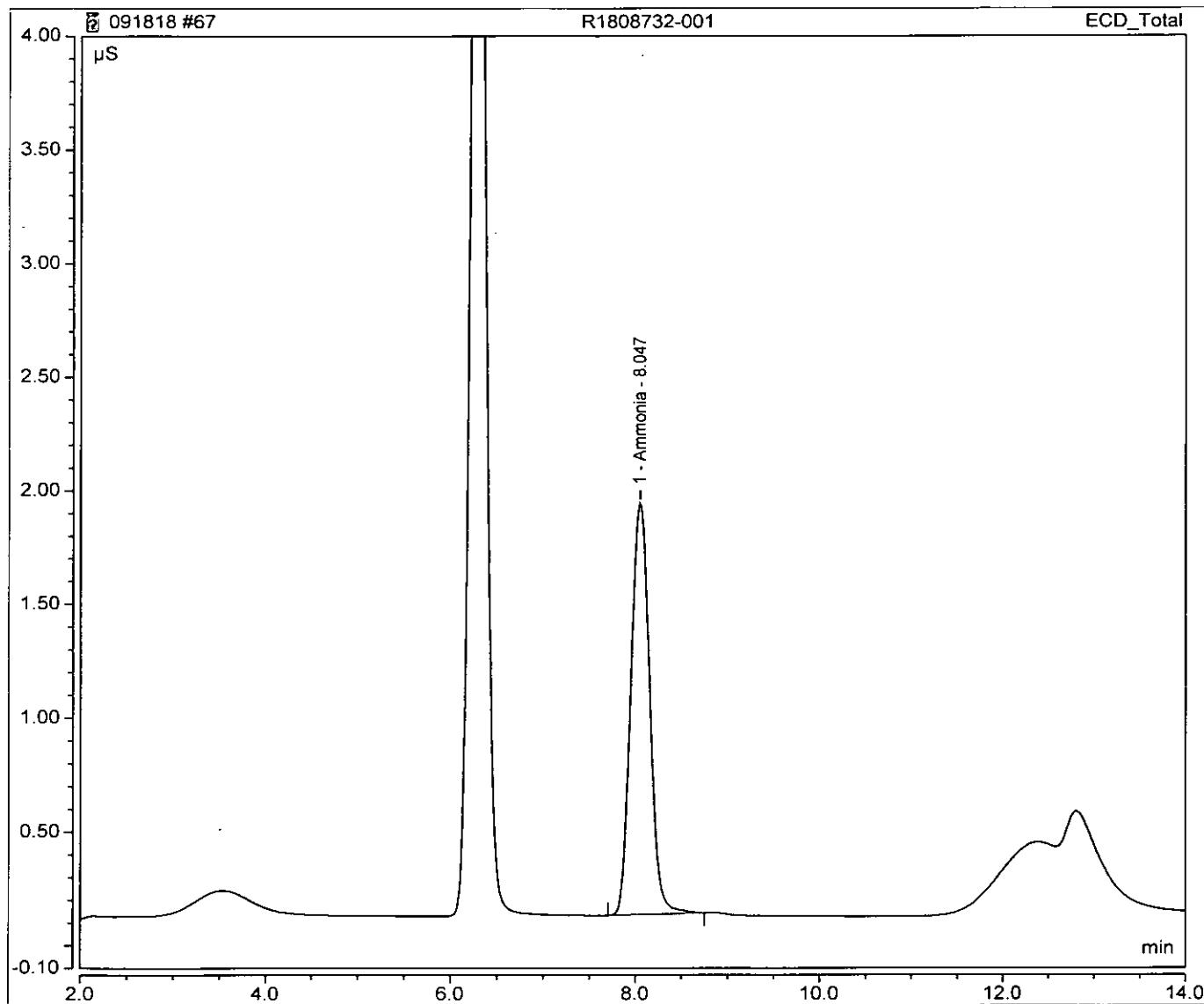
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.059	0.278	8.25777
TOTAL:				0.06	0.28	8.26



Peak Integration Report

Sample Name:	R1808732-001	Inj. No.:	67
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	30.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 21:45	Comments:	ASTM D6919-09 Ammonia

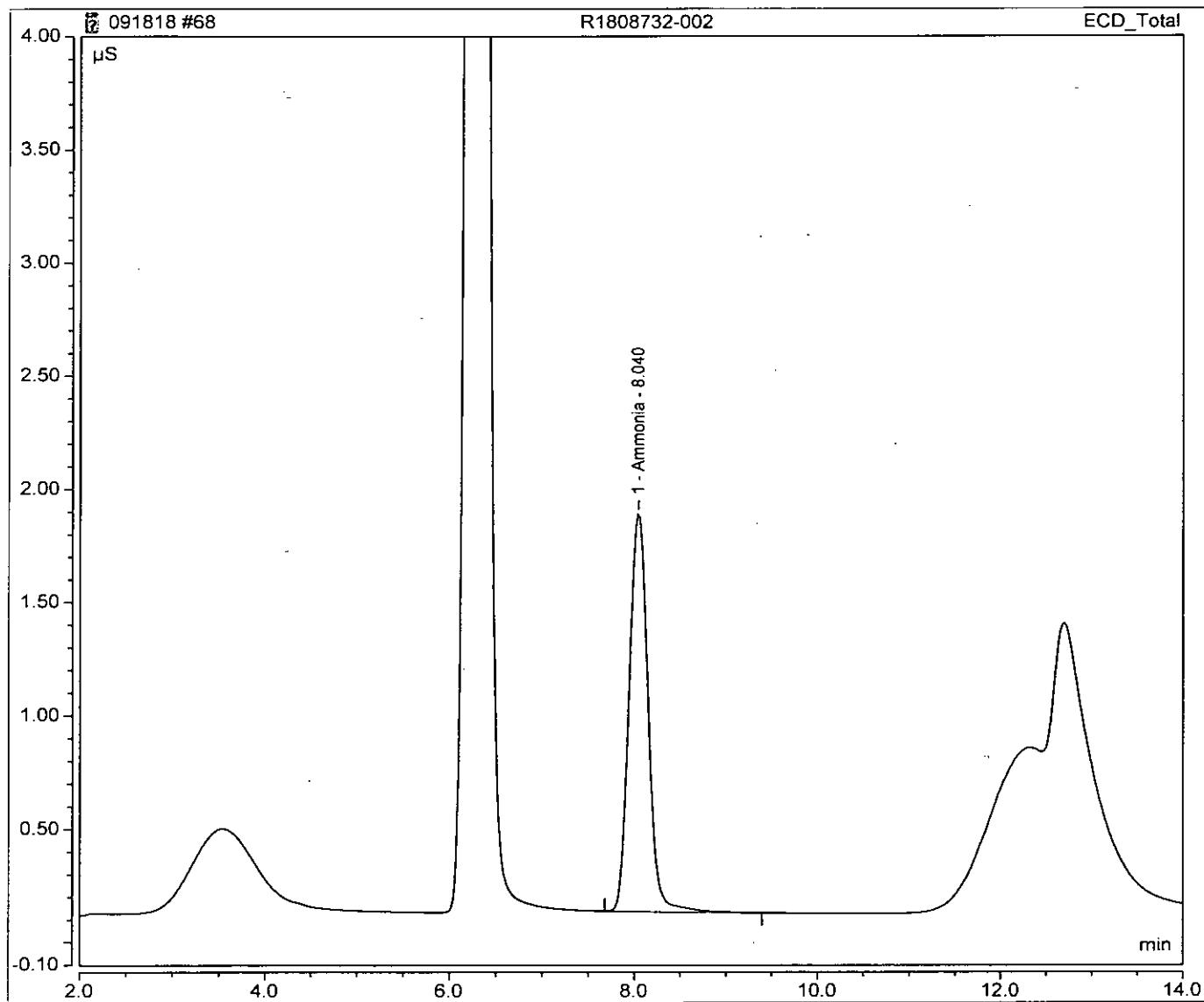
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.429	1.809	22.96937
TOTAL:				0.43	1.81	22.97



Peak Integration Report

Sample Name:	R1808732-002	Inj. No.:	68
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 22:01	Comments:	ASTM D6919-09 Ammonia

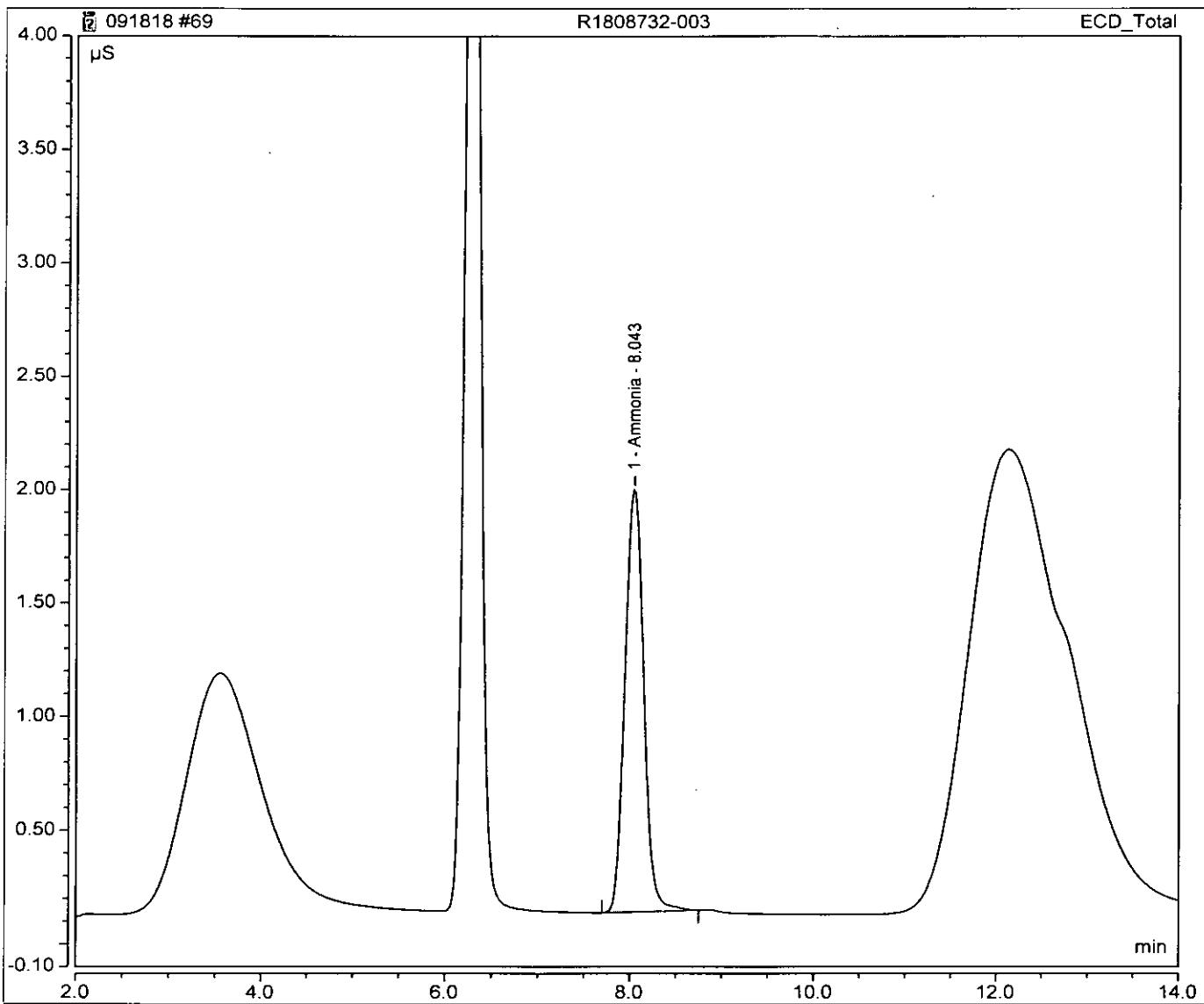
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.422	1.756	7.50768
TOTAL:				0.42	1.76	7.51



Peak Integration Report

<u>Sample Name:</u>	R1808732-003	<u>Inj. No.:</u>	69
<u>File ID:</u>	<u>Instrument Data\IC9\Data\2018\09September2018</u>		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	30.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	18-Sep-2018 / 22:17	<u>Comments:</u>	ASTM D6919-09 Ammonia

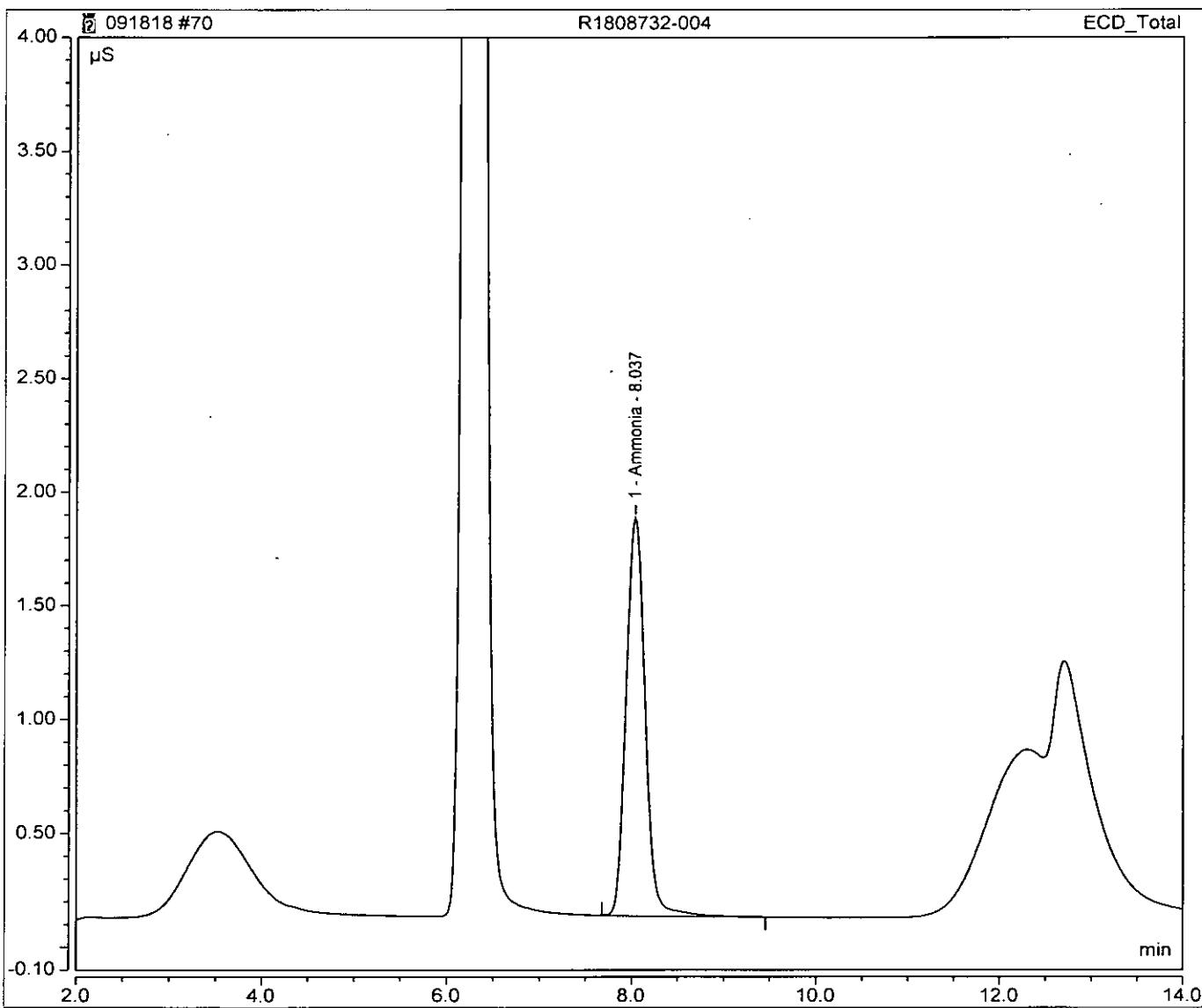
No.	Time min	Peak Name	Peak Type	Area μS*min	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.443	1.862	23.91302
TOTAL:				0.44	1.86	23.91



Peak Integration Report

Sample Name:	R1808732-004	Inj. No.:	70
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 22:33	Comments:	ASTM D6919-09 Ammonia

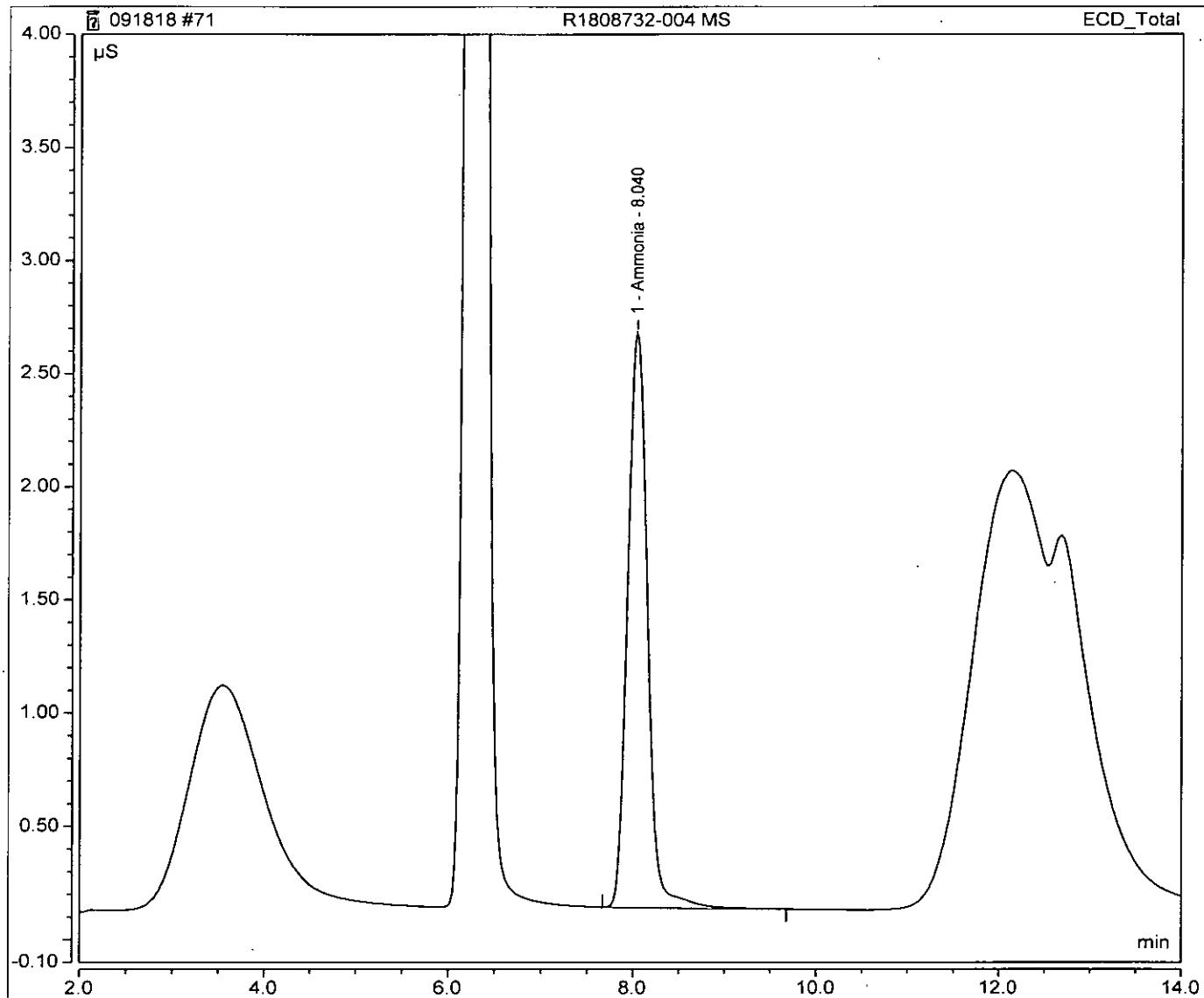
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^{\star}\text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.419	1.746	7.44316
TOTAL:				0.42	1.75	7.44



Peak Integration Report

Sample Name:	R1808732-004 MS	Inj. No.:	71
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 22:49	Comments:	ASTM D6919-09 Ammonia

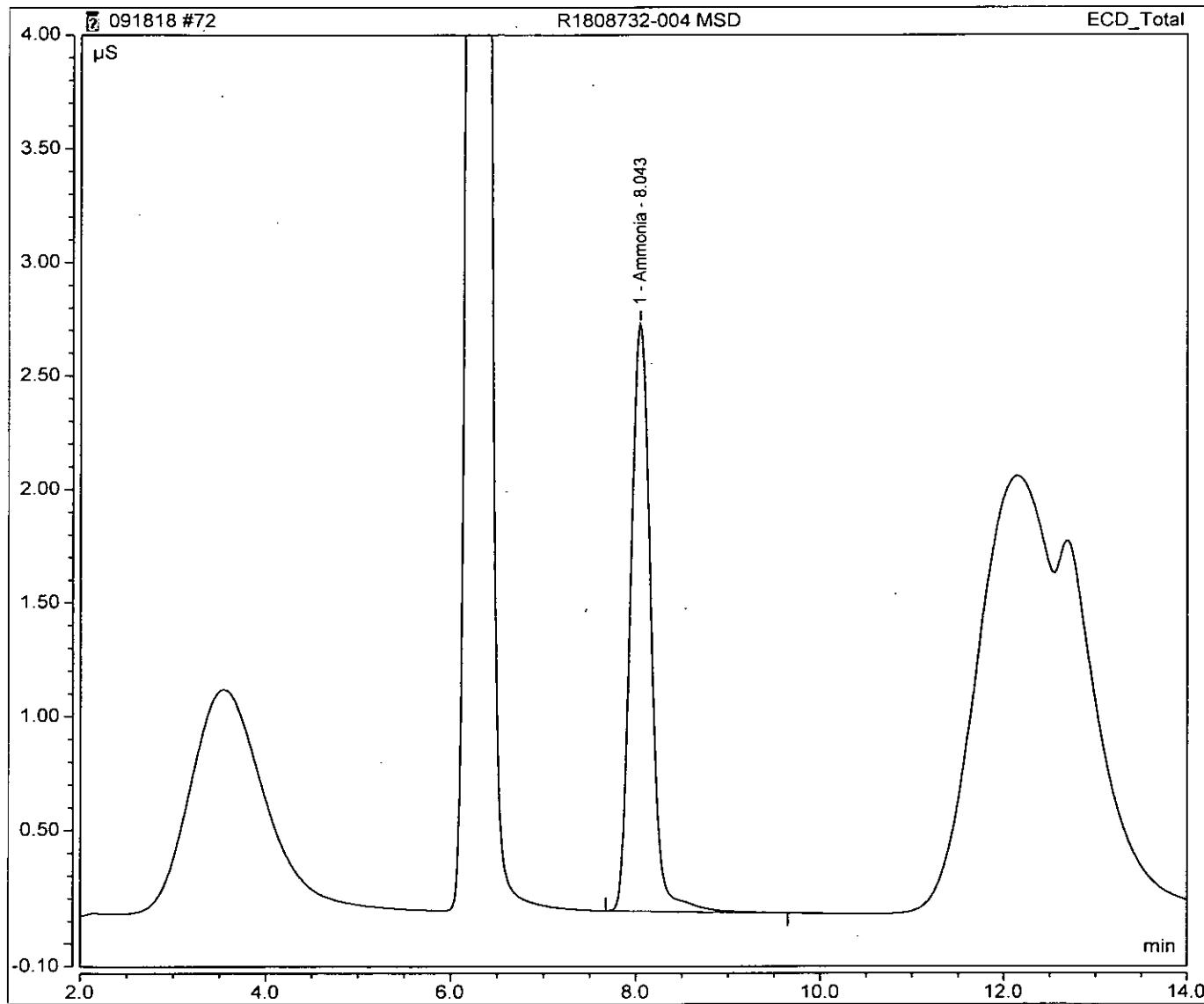
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.638	2.537	12.68808
TOTAL:				0.64	2.54	12.69



Peak Integration Report

Sample Name:	R1808732-004 MSD	Inj. No.:	72
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 23:05	Comments:	ASTM D6919-09 Ammonia

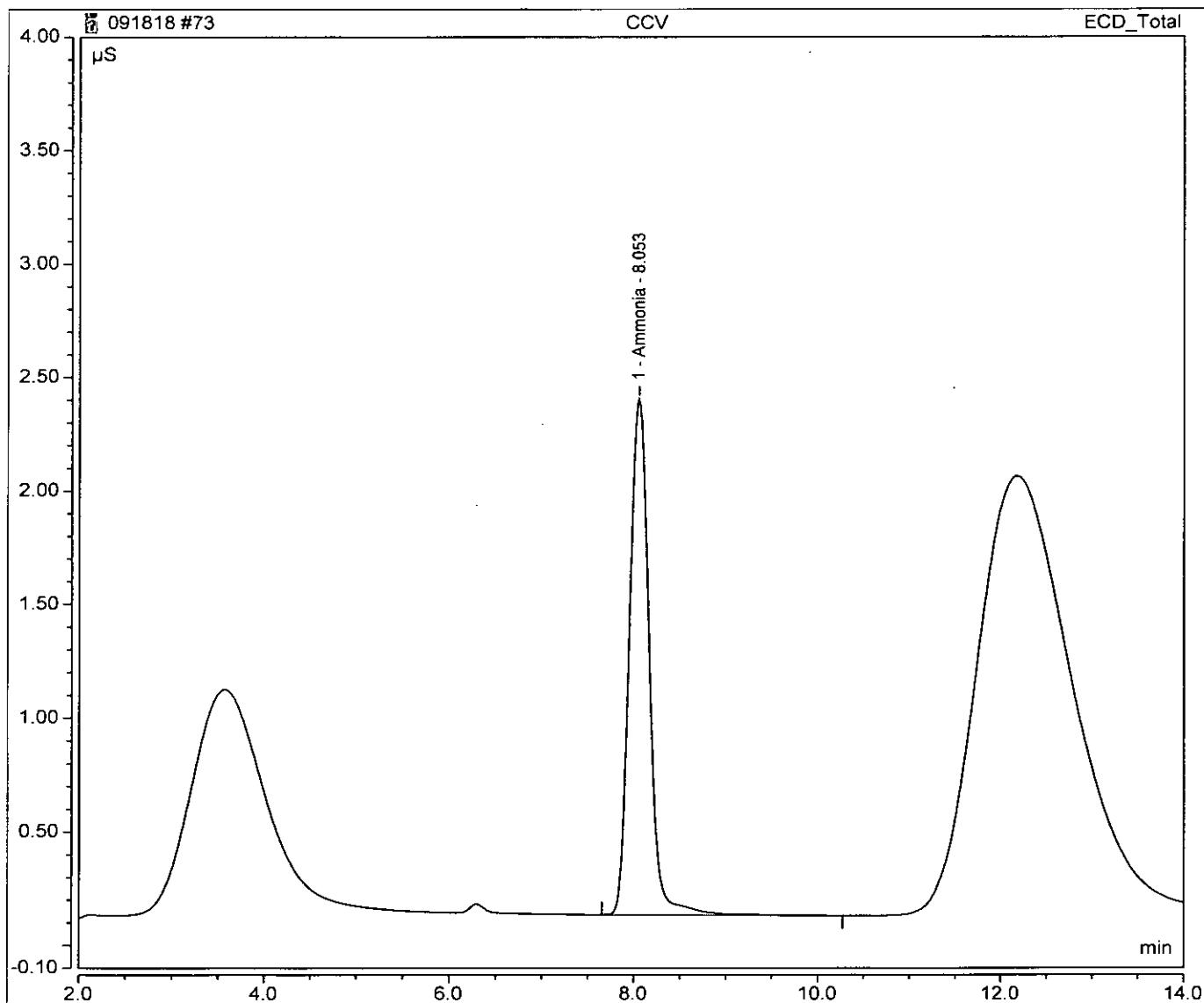
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.651	2.584	13.03209
TOTAL:				0.65	2.58	13.03



Peak Integration Report

<u>Sample Name:</u>	CCV	<u>Inj. No.:</u>	73
<u>File ID:</u>	Instrument Data\IC9\Data\2018\09September2018		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	1.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	18-Sep-2018 / 23:21	<u>Comments:</u>	ASTM D6919-09 Ammonia

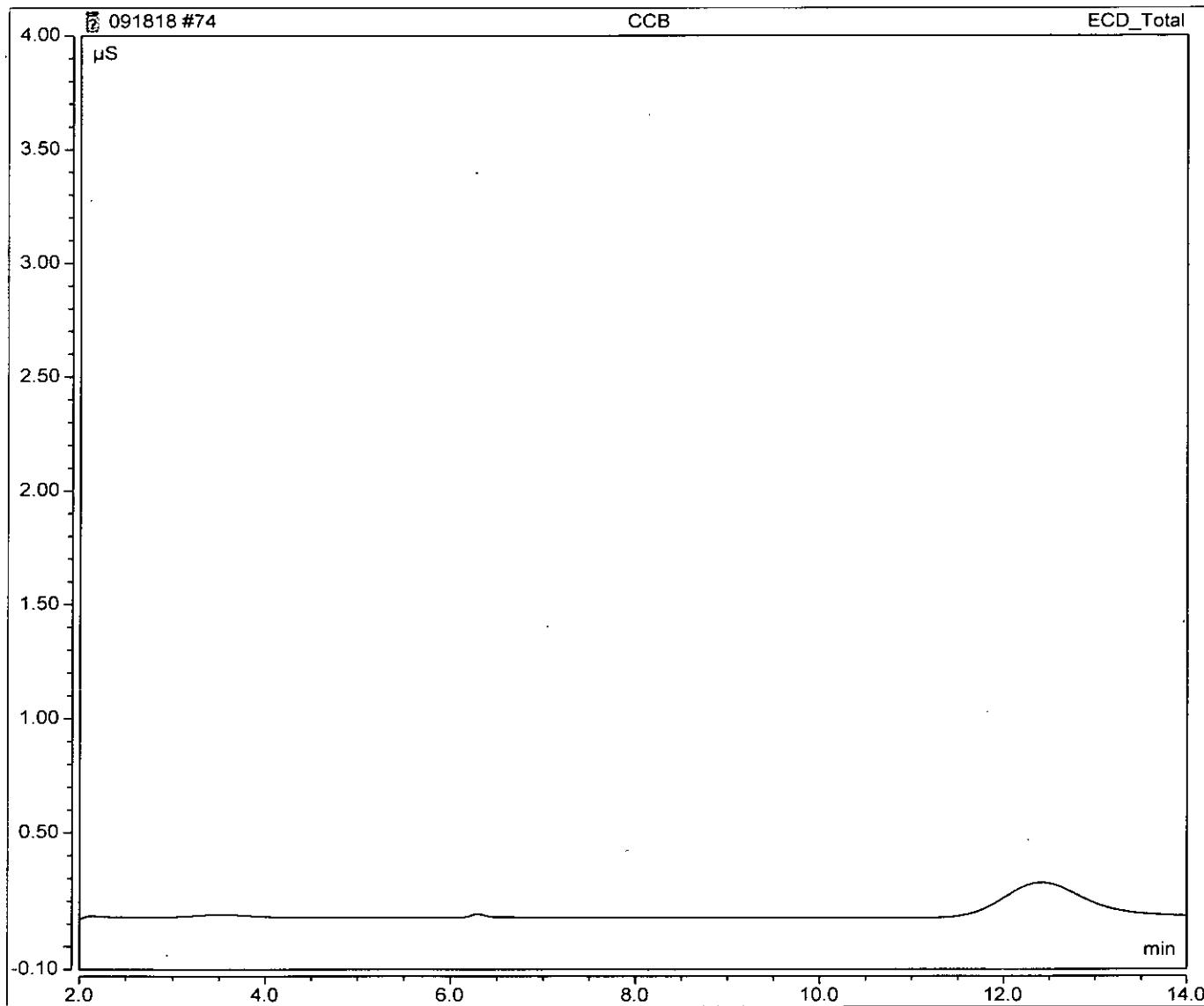
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.565	2.269	1.08548
TOTAL:				0.57	2.27	1.09



Peak Integration Report

Sample Name:	CCB	Inj. No.:	74
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 23:37	Comments:	ASTM D6919-09 Ammonia

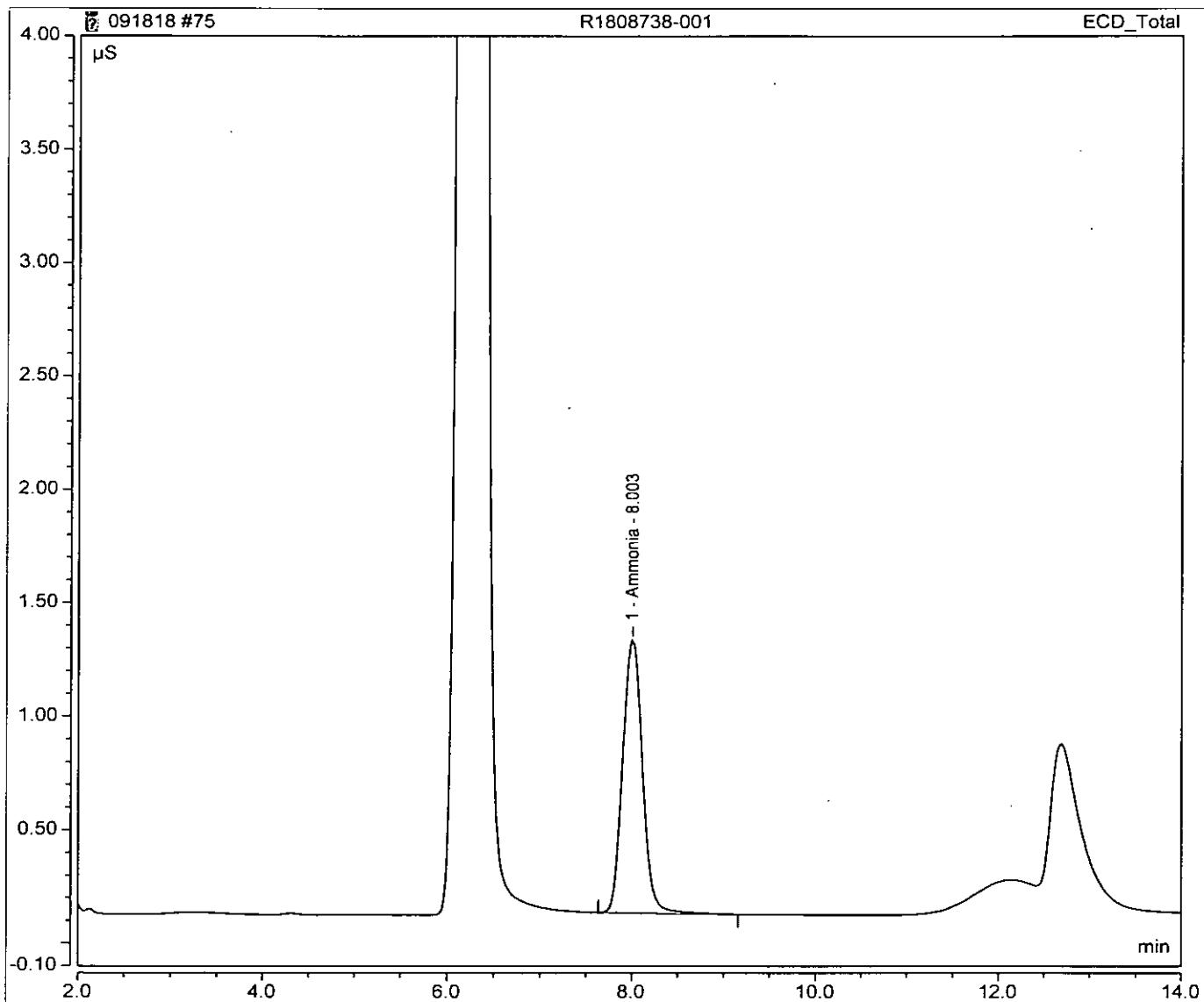
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808738-001	Inj. No.:	75
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	18-Sep-2018 / 23:53	Comments:	ASTM D6919-09 Ammonia LL

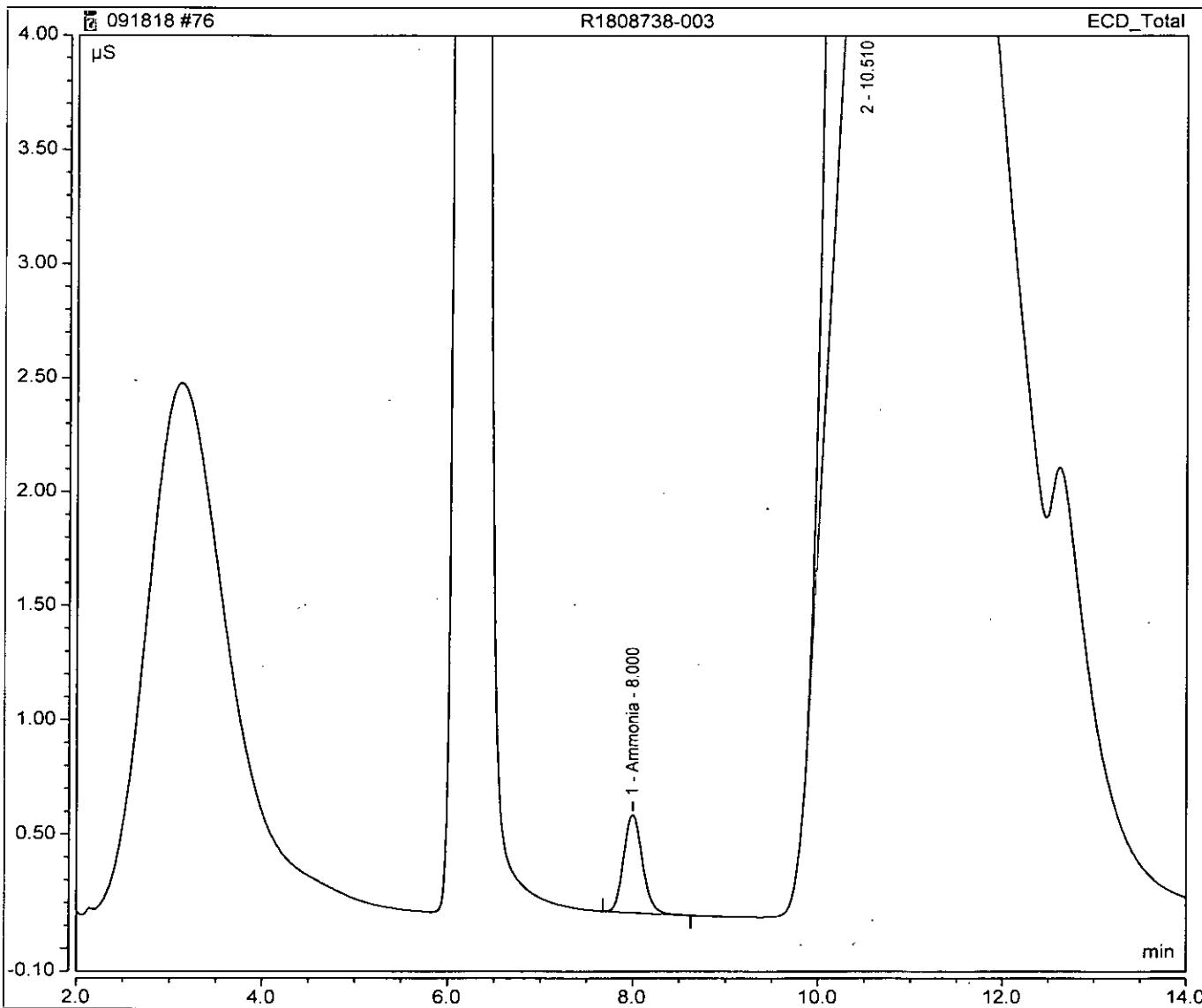
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.00	Ammonia	BMB	0.301	1.202	0.50012
TOTAL:				0.30	1.20	0.50



Peak Integration Report

Sample Name:	R1808738-003	Inj. No.:	76
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 00:09	Comments:	ASTM D6919-09 Ammonia LL

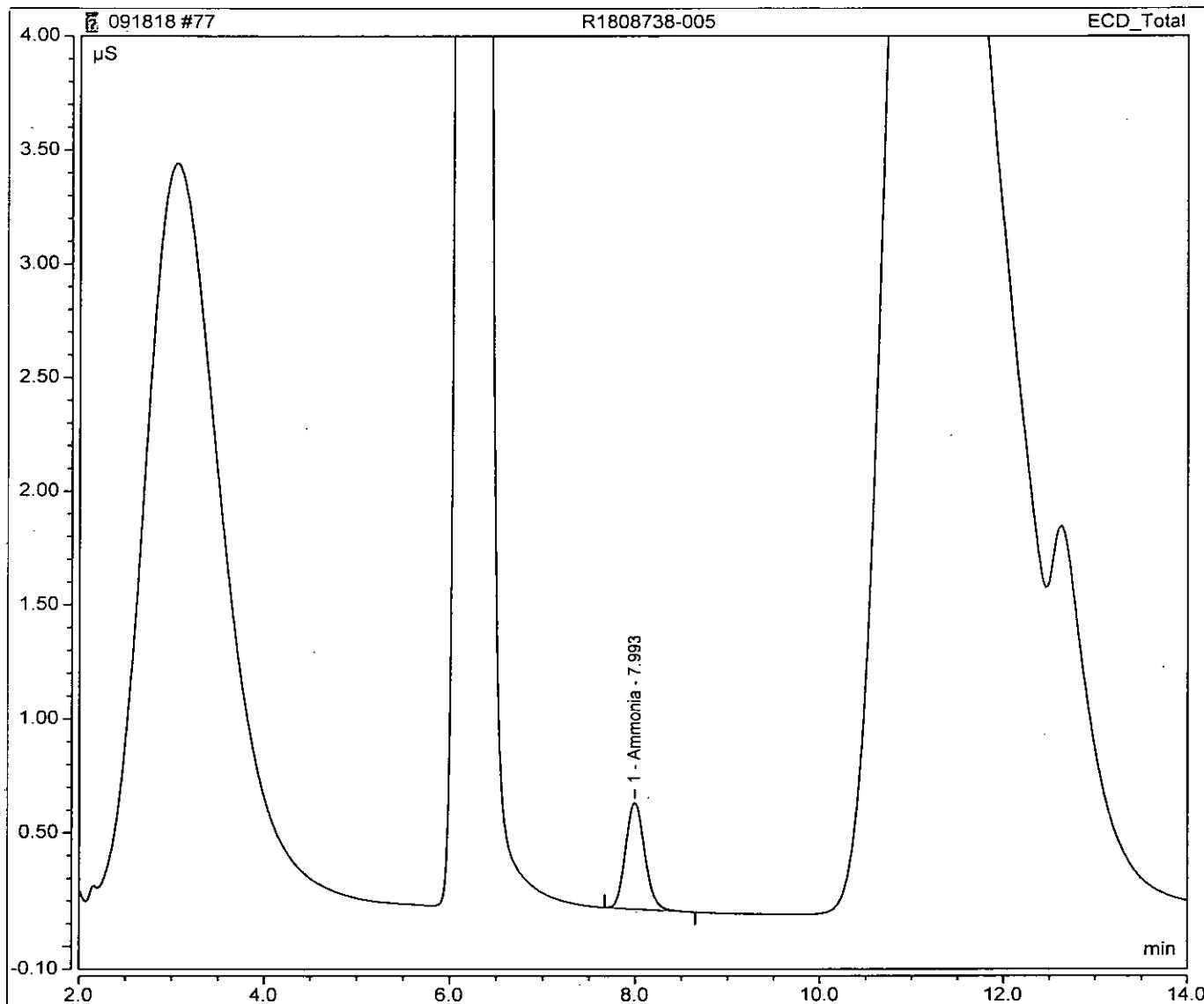
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.00	Ammonia	BMB	0.101	0.429	0.14740
TOTAL:				0.10	0.43	0.15



Peak Integration Report

Sample Name:	R1808738-005	Inj. No.:	77
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 00:25	Comments:	ASTM D6919-09 Ammonia LL

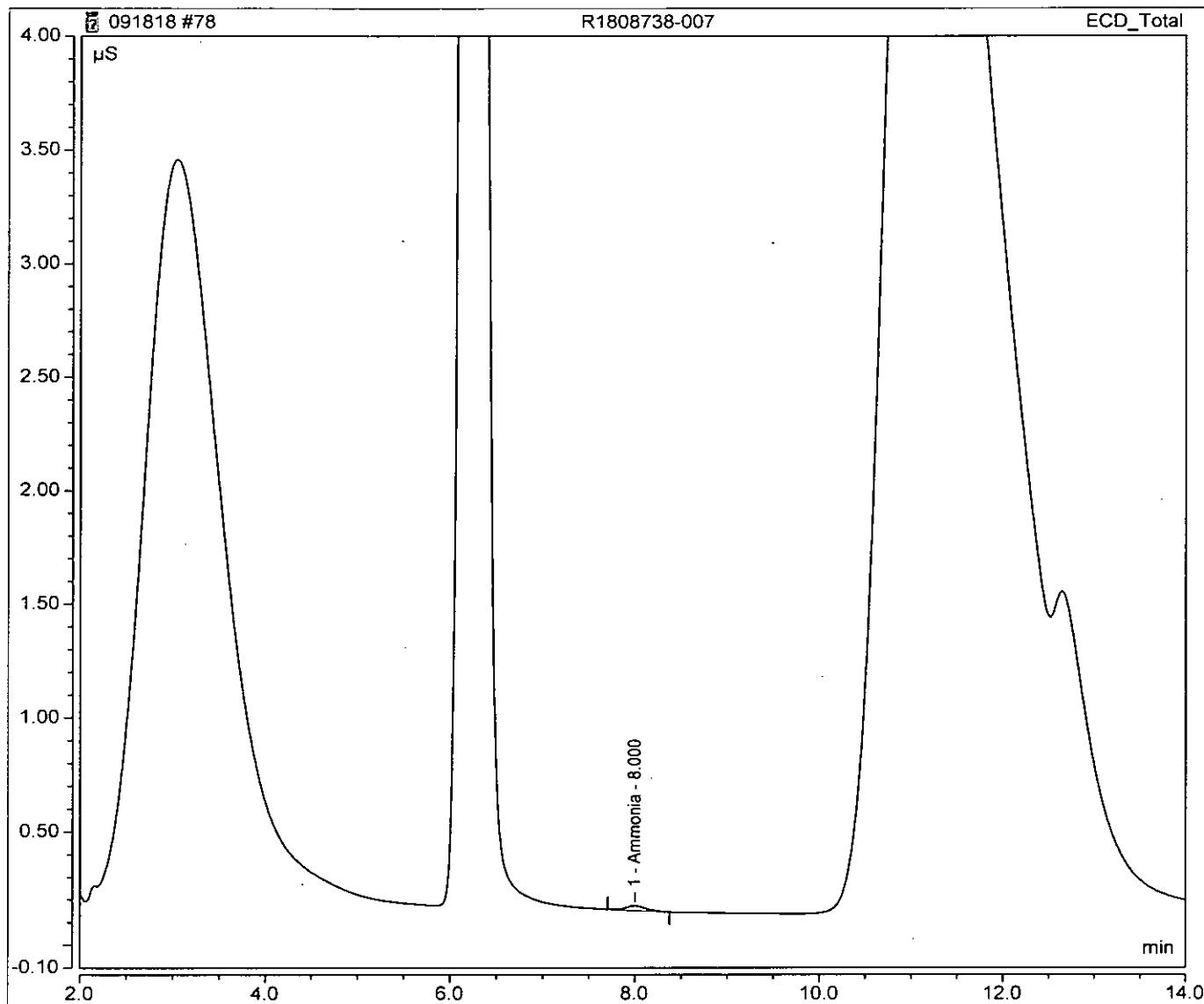
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	7.99	Ammonia	BMB	0.112	0.468	0.16486
TOTAL:				0.11	0.47	0.16



Peak Integration Report

Sample Name:	R1808738-007	Inj. No.:	78
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 00:41	Comments:	ASTM D6919-09 Ammonia LL

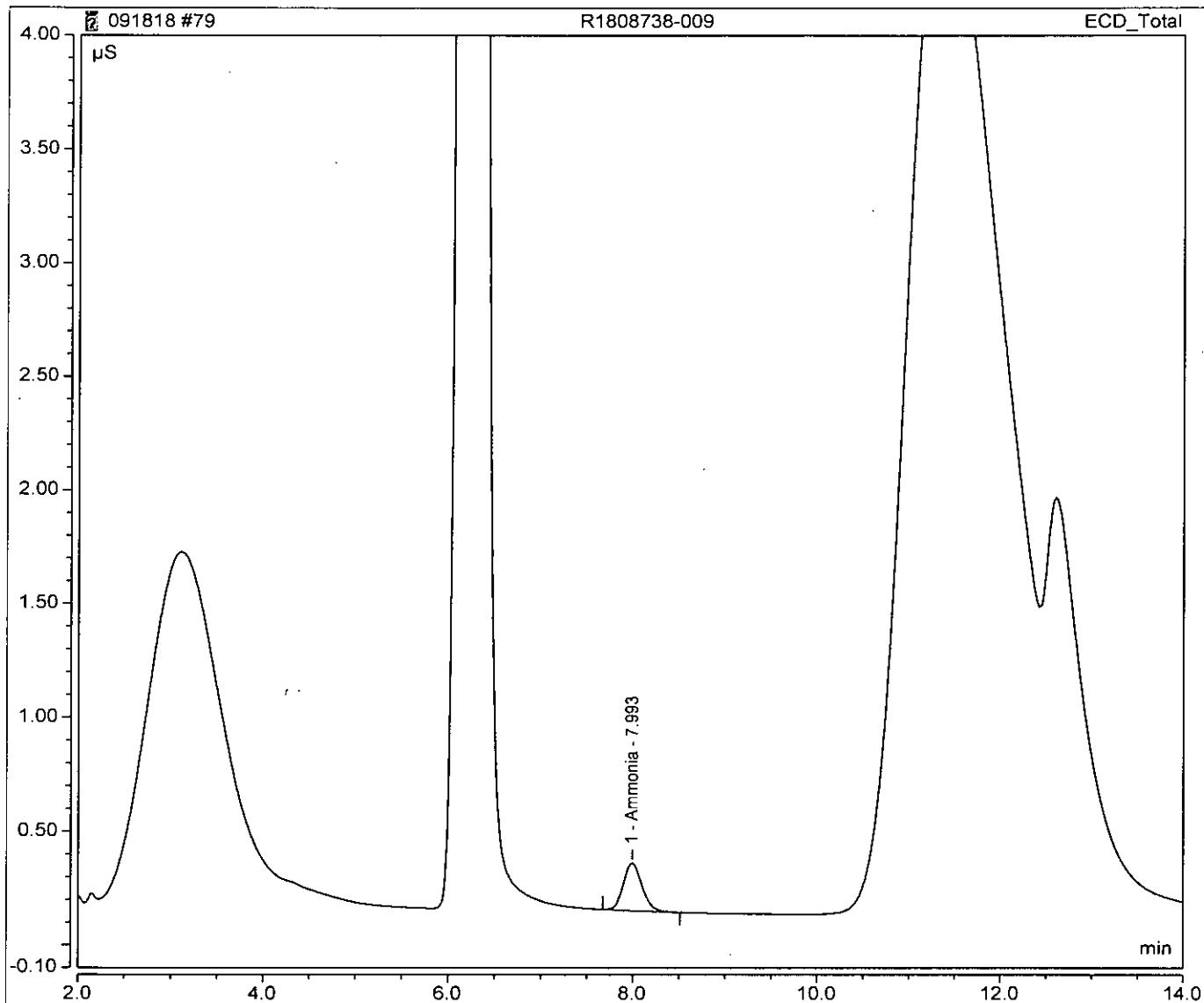
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.00	Ammonia	BMB	0.005	0.021	0.00525
TOTAL:				0.01	0.02	0.01



Peak Integration Report

Sample Name:	R1808738-009	Inj. No.:	79
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 00:57	Comments:	ASTM D6919-09 Ammonia LL

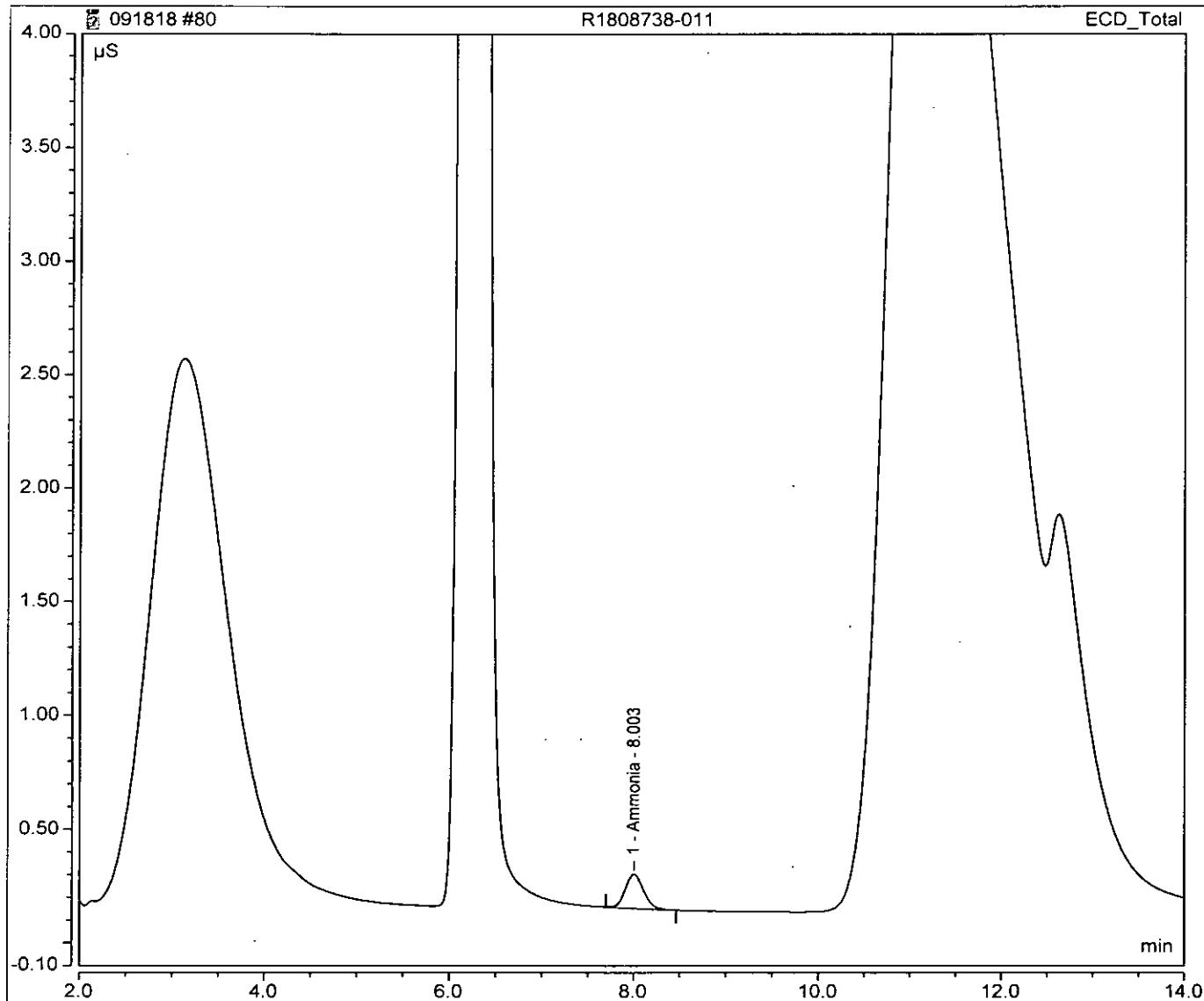
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	7.99	Ammonia	BMB	0.049	0.209	0.06758
TOTAL:				0.05	0.21	0.07



Peak Integration Report

Sample Name:	R1808738-011	Inj. No.:	80
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 01:14	Comments:	ASTM D6919-09 Ammonia LL

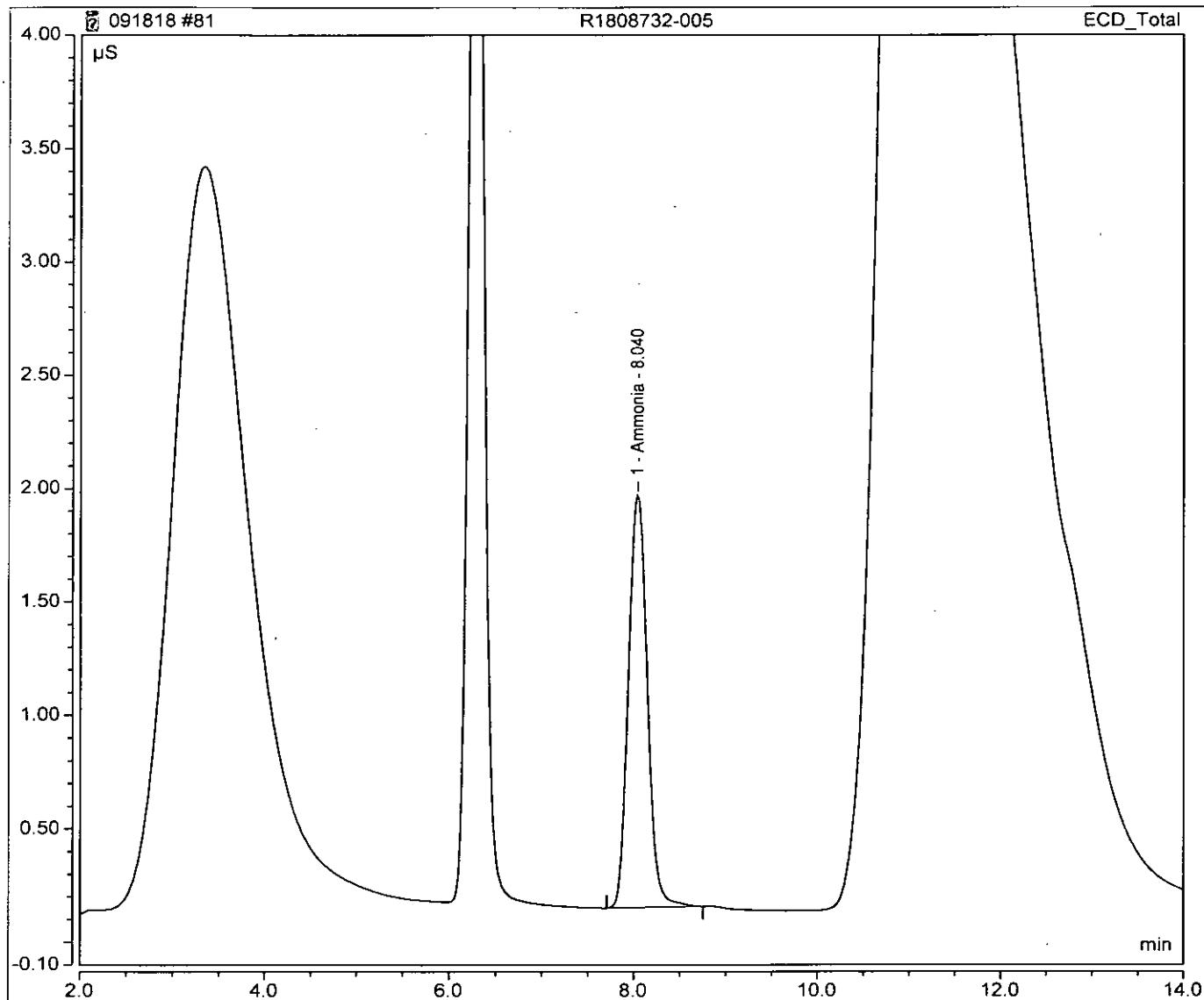
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.00	Ammonia	BMB	0.034	0.150	0.04614
TOTAL:				0.03	0.15	0.05



Peak Integration Report

<u>Sample Name:</u>	R1808732-005	<u>Inj. No.:</u>	81
<u>File ID:</u>	Instrument Data\IC9\Data\2018\09September2018		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	30.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	19-Sep-2018 / 01:30	<u>Comments:</u>	ASTM D6919-09 Ammonia

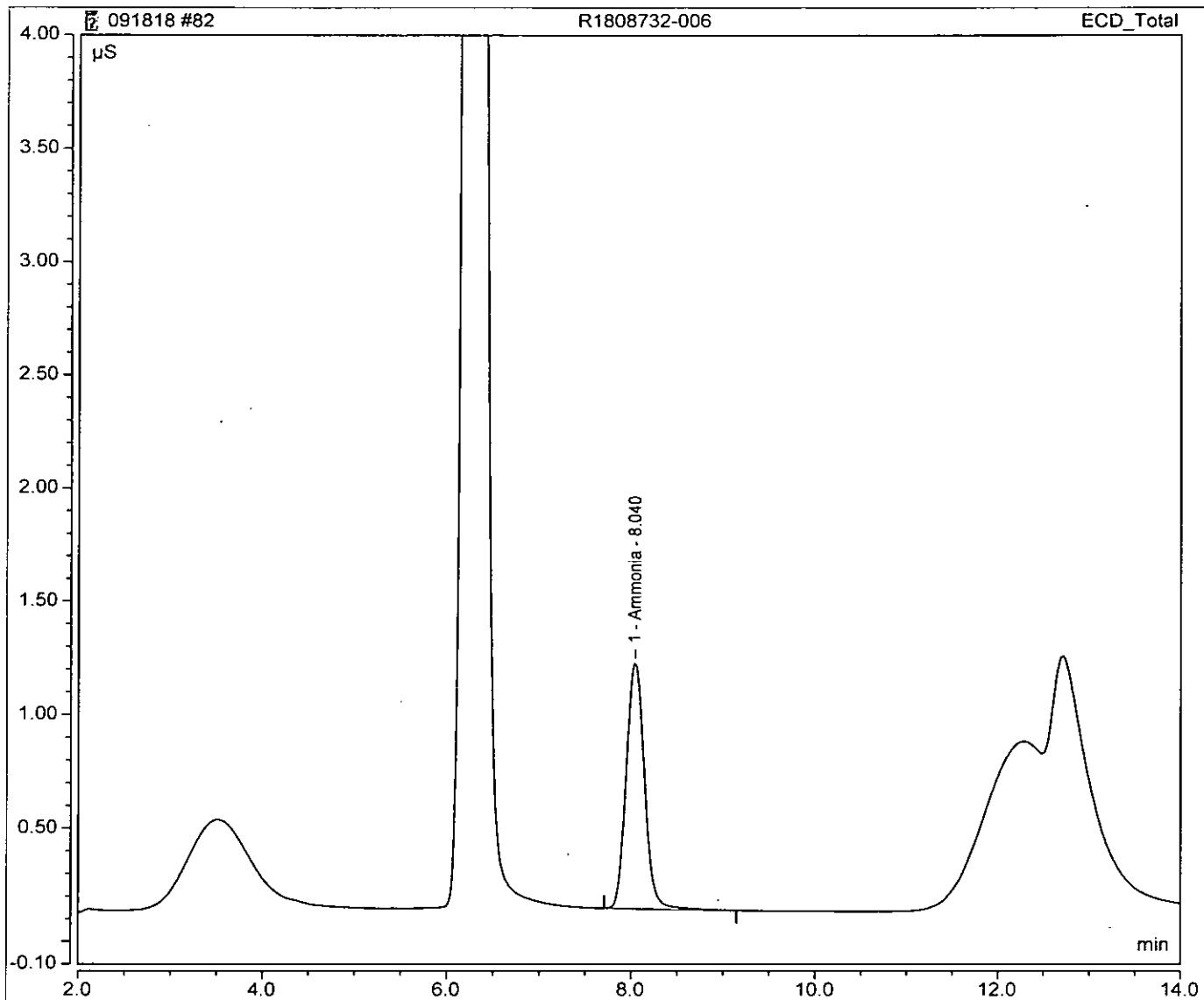
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.431	1.819	23.09701
TOTAL:				0.43	1.82	23.10



Peak Integration Report

Sample Name:	R1808732-006	Inj. No.:	82
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 01:46	Comments:	ASTM D6919-09 Ammonia

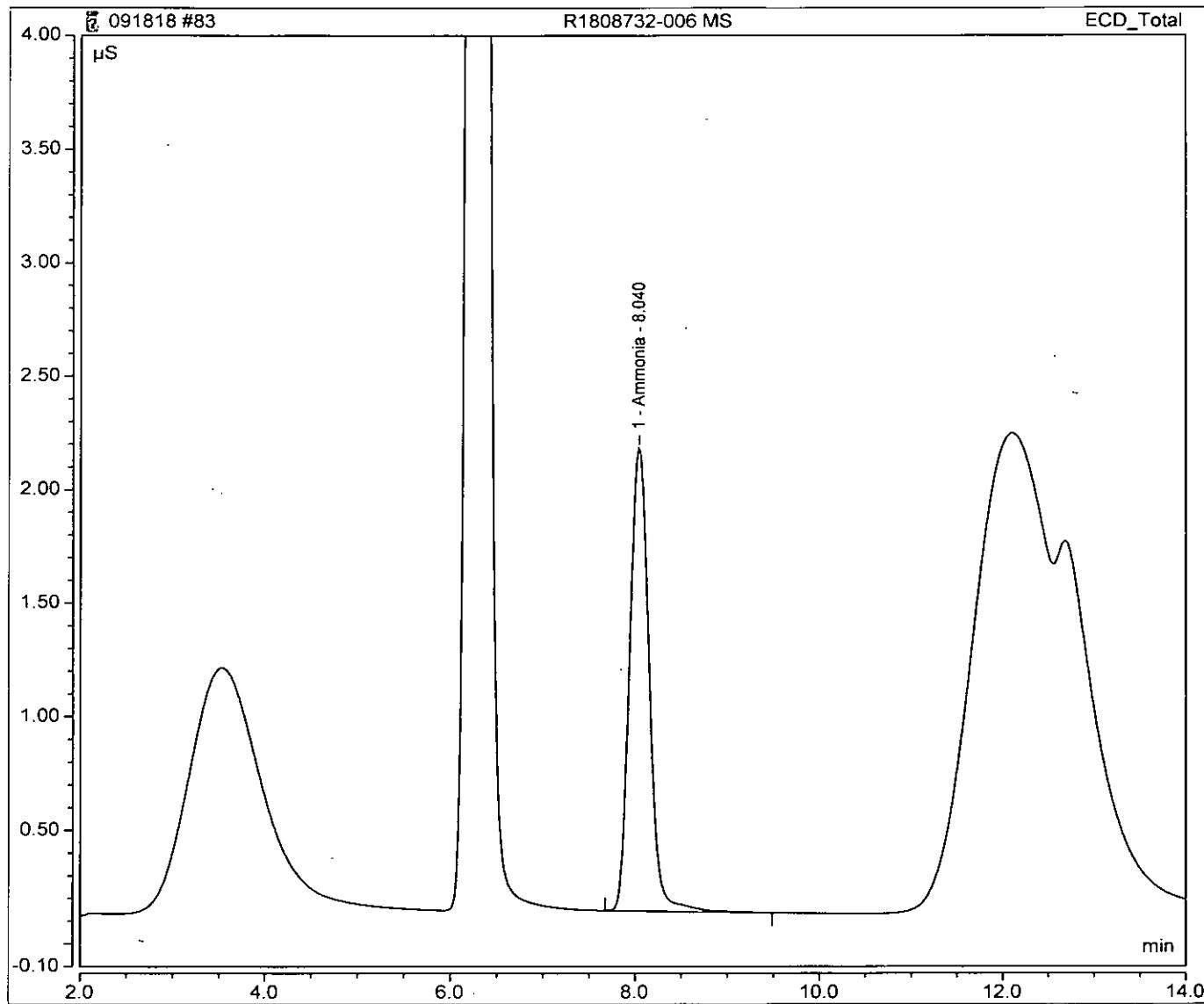
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.249	1.087	3.99902
TOTAL:				0.25	1.09	4.00



Peak Integration Report

Sample Name:	R1808732-006 MS	Inj. No.:	83
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 02:02	Comments:	ASTM D6919-09 Ammonia

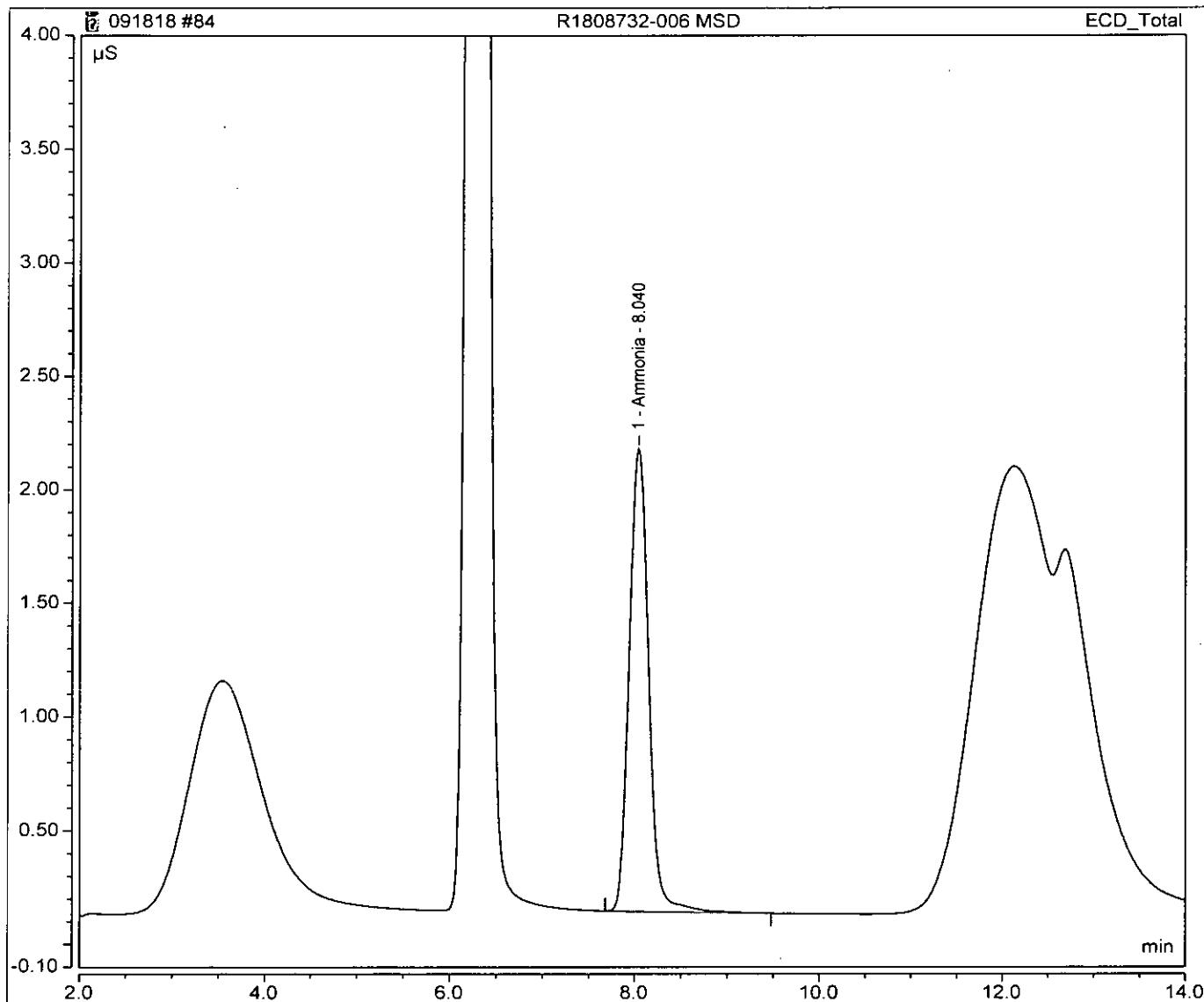
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^{\cdot}\text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.497	2.037	9.21662
TOTAL:				0.50	2.04	9.22



Peak Integration Report

Sample Name:	R1808732-006 MSD	Inj. No.:	84
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 02:18	Comments:	ASTM D6919-09 Ammonia

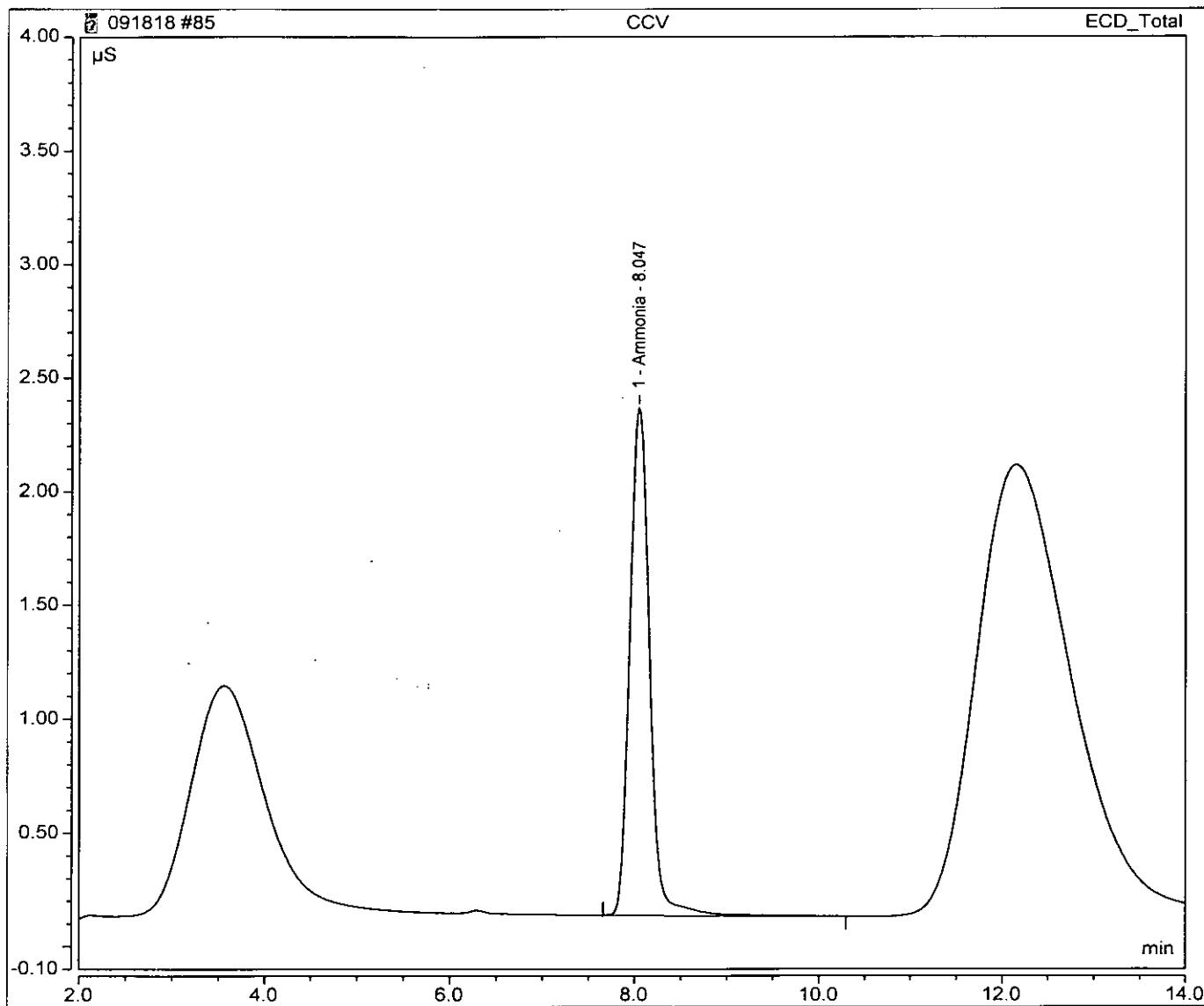
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.04	Ammonia	BMB	0.497	2.034	9.20953
TOTAL:				0.50	2.03	9.21



Peak Integration Report

Sample Name:	CCV	Inj. No.:	85
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 02:34	Comments:	ASTM D6919-09 Ammonia

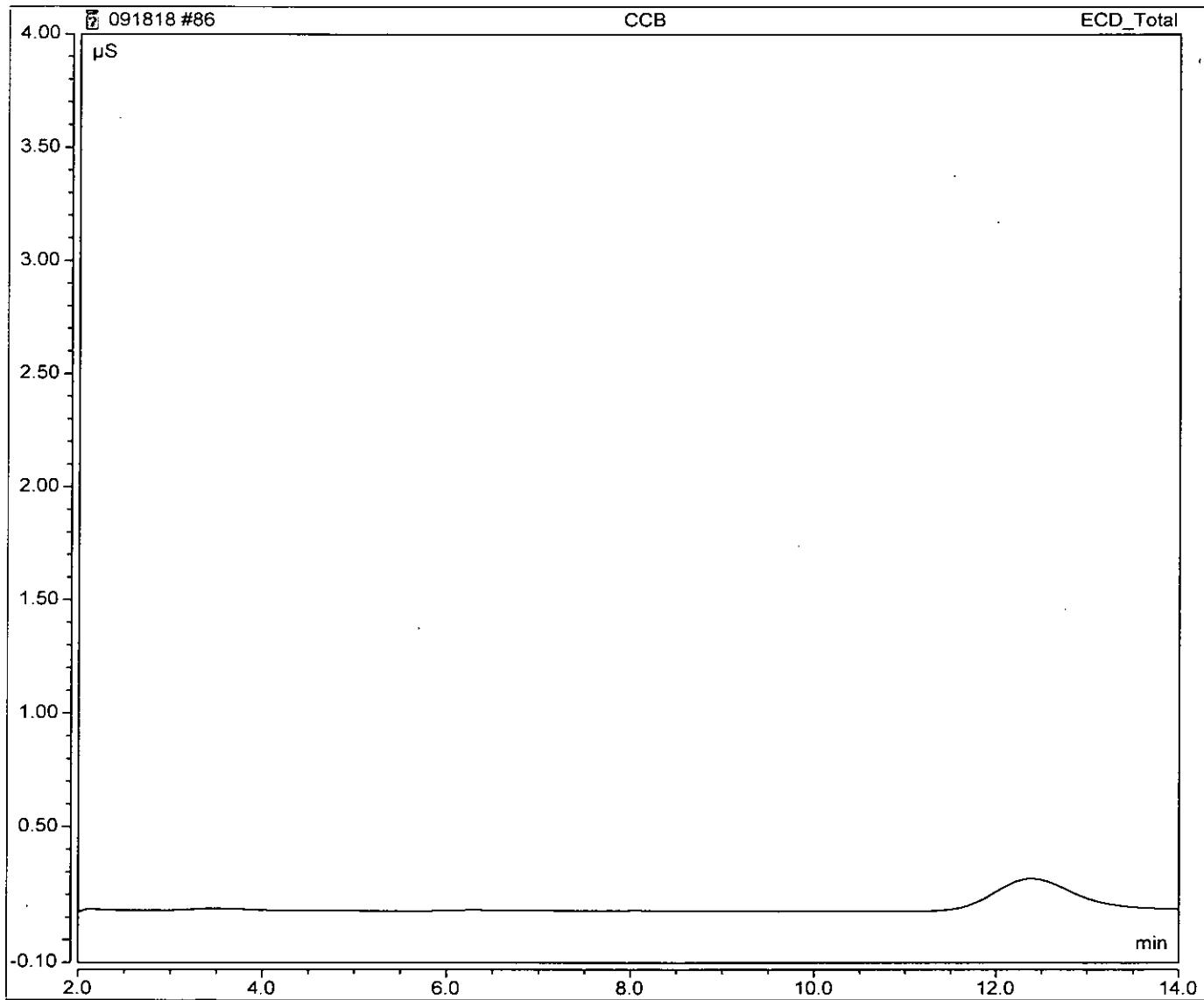
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.555	2.231	1.06043
TOTAL:				0.56	2.23	1.06



Peak Integration Report

Sample Name:	CCB	Inj. No.:	86
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 02:50	Comments:	ASTM D6919-09 Ammonia

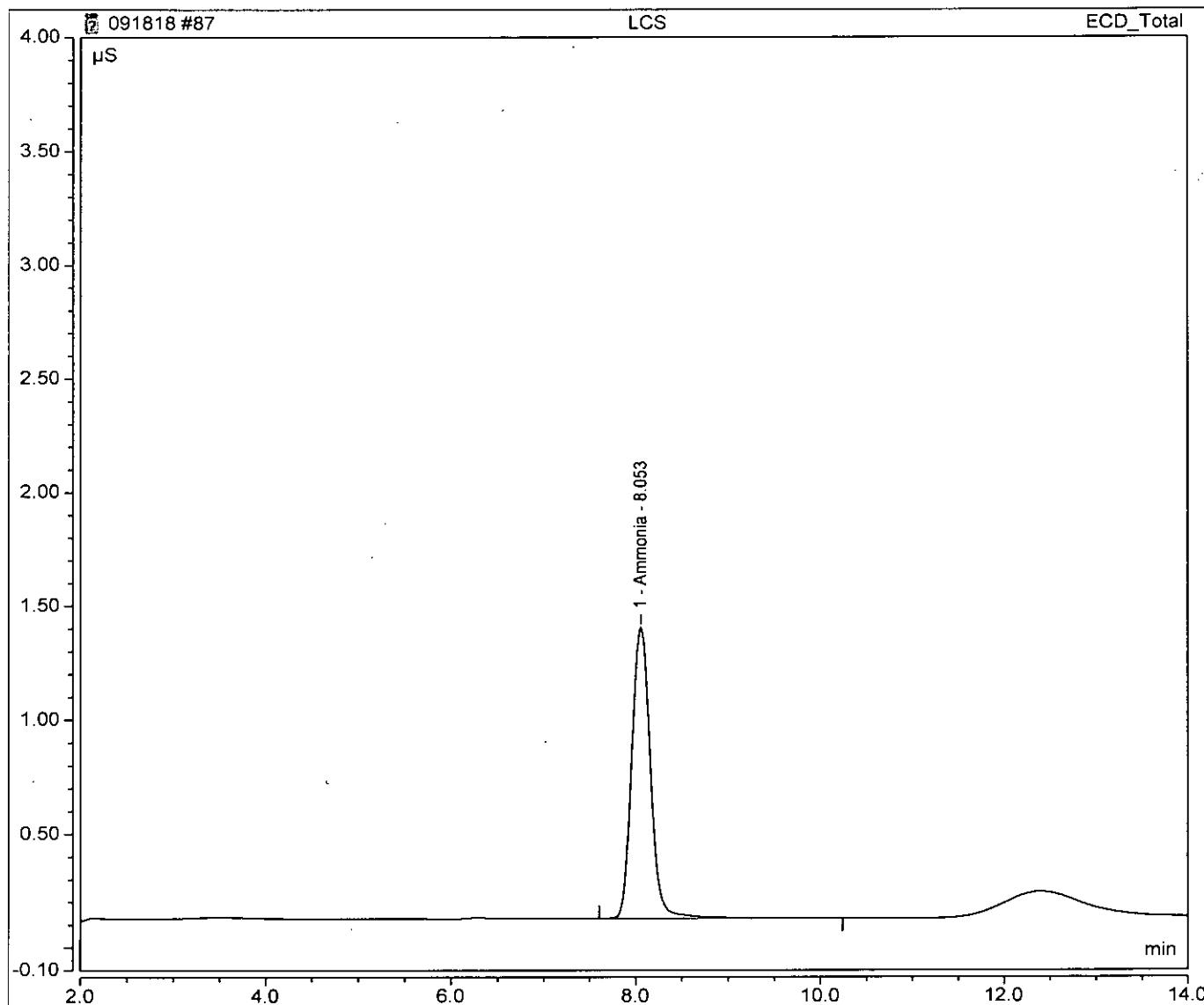
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

<u>Sample Name:</u>	LCS	<u>Inj. No.:</u>	87
<u>File ID:</u>	Instrument Data\IC9\Data\2018\09September2018		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	1.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	19-Sep-2018	<u>Comments:</u>	ASTM D6919-09 Ammonia

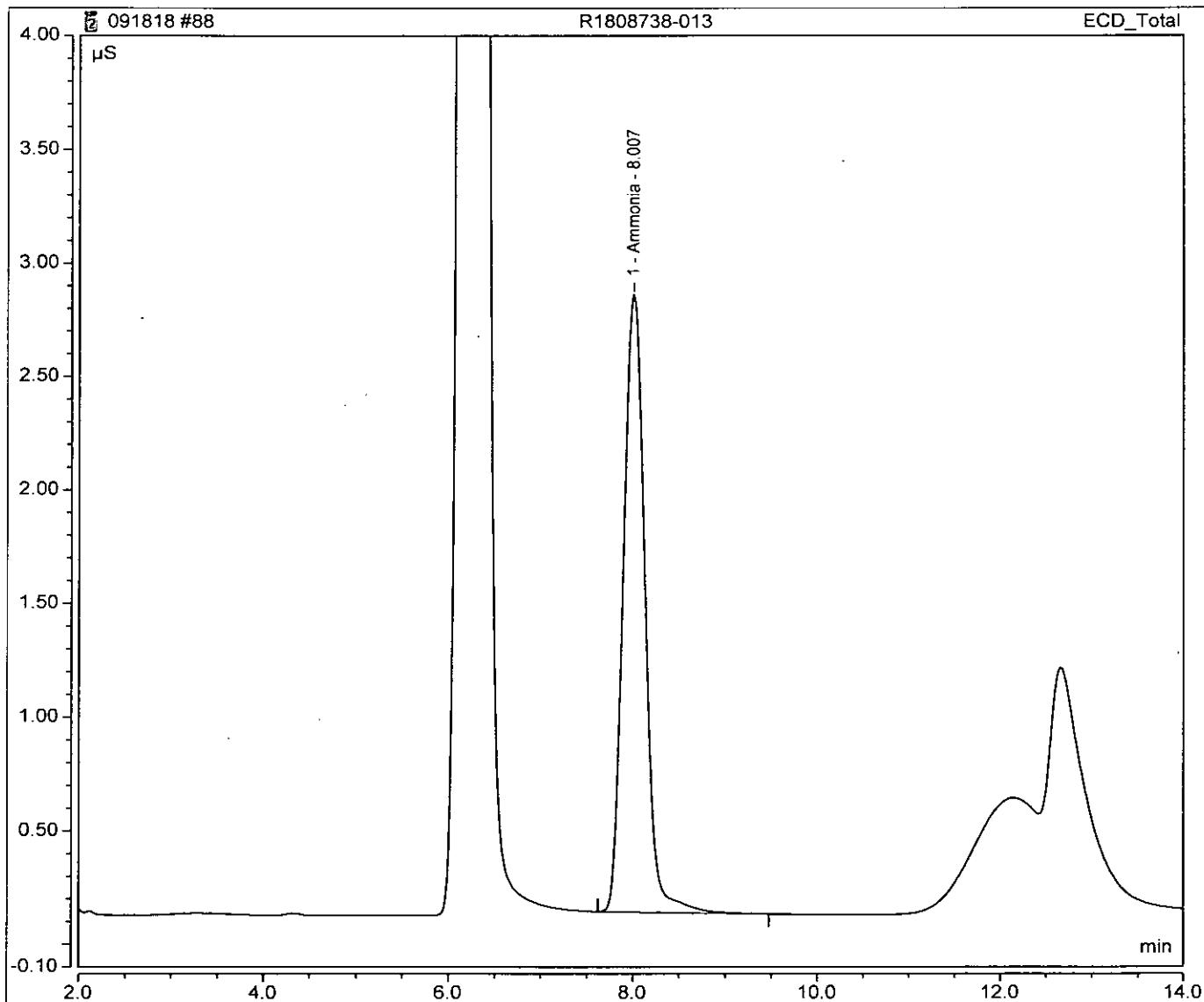
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.301	1.276	0.49966
		TOTAL:		0.30	1.28	0.50



Peak Integration Report

<u>Sample Name:</u>	R1808738-013	<u>Inj. No.:</u>	88
<u>File ID:</u>	Instrument Data\IC9\Data\2018\09September2018		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	1.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	19-Sep-2018 / 03:22	<u>Comments:</u>	ASTM D6919-09 Ammonia LL

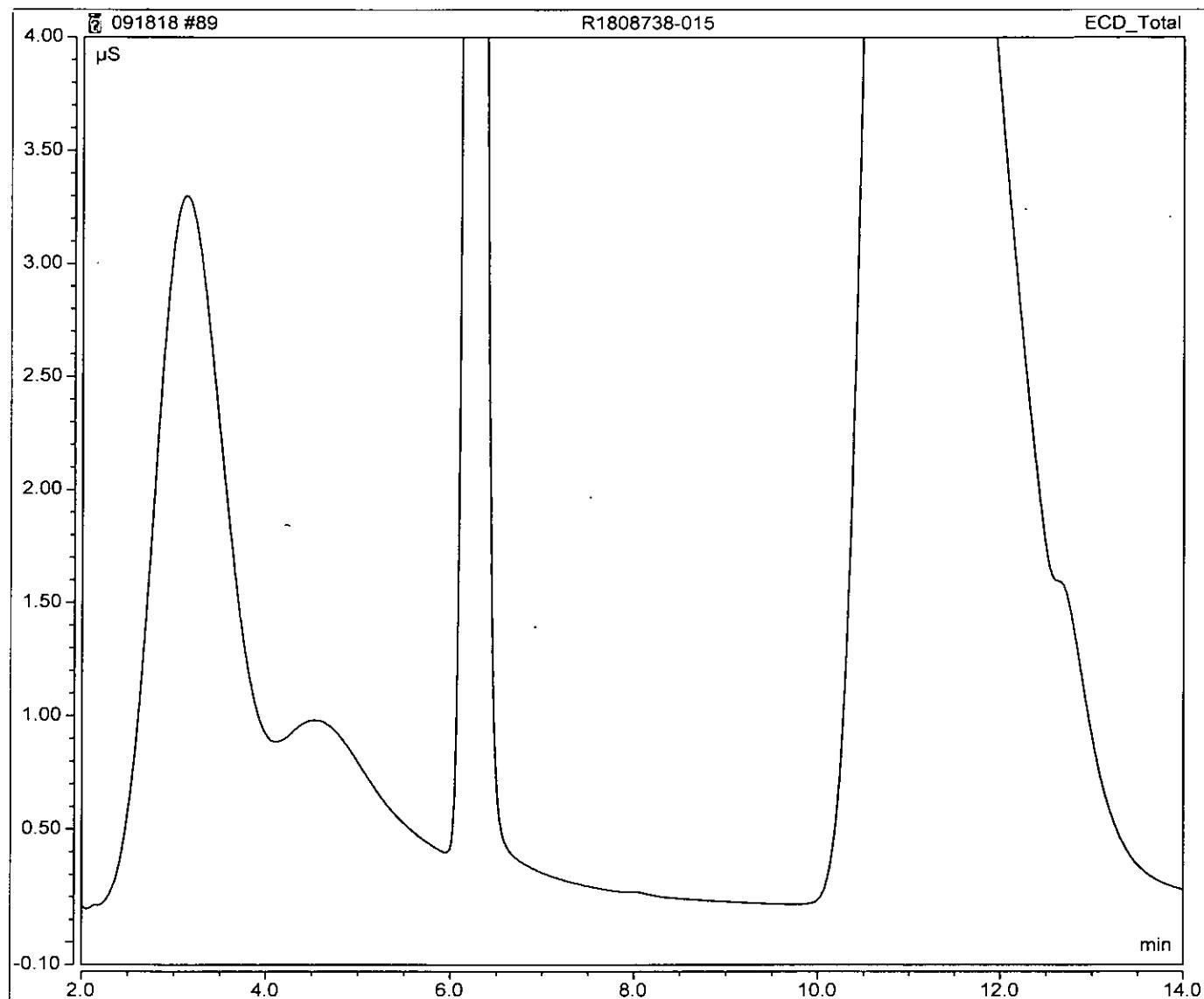
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.01	Ammonia	BMB	0.739	2.715	1.54319
TOTAL:				0.74	2.71	1.54



Peak Integration Report

Sample Name:	R1808738-015	Inj. No.:	89
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 03:38	Comments:	ASTM D6919-09 Ammonia LL

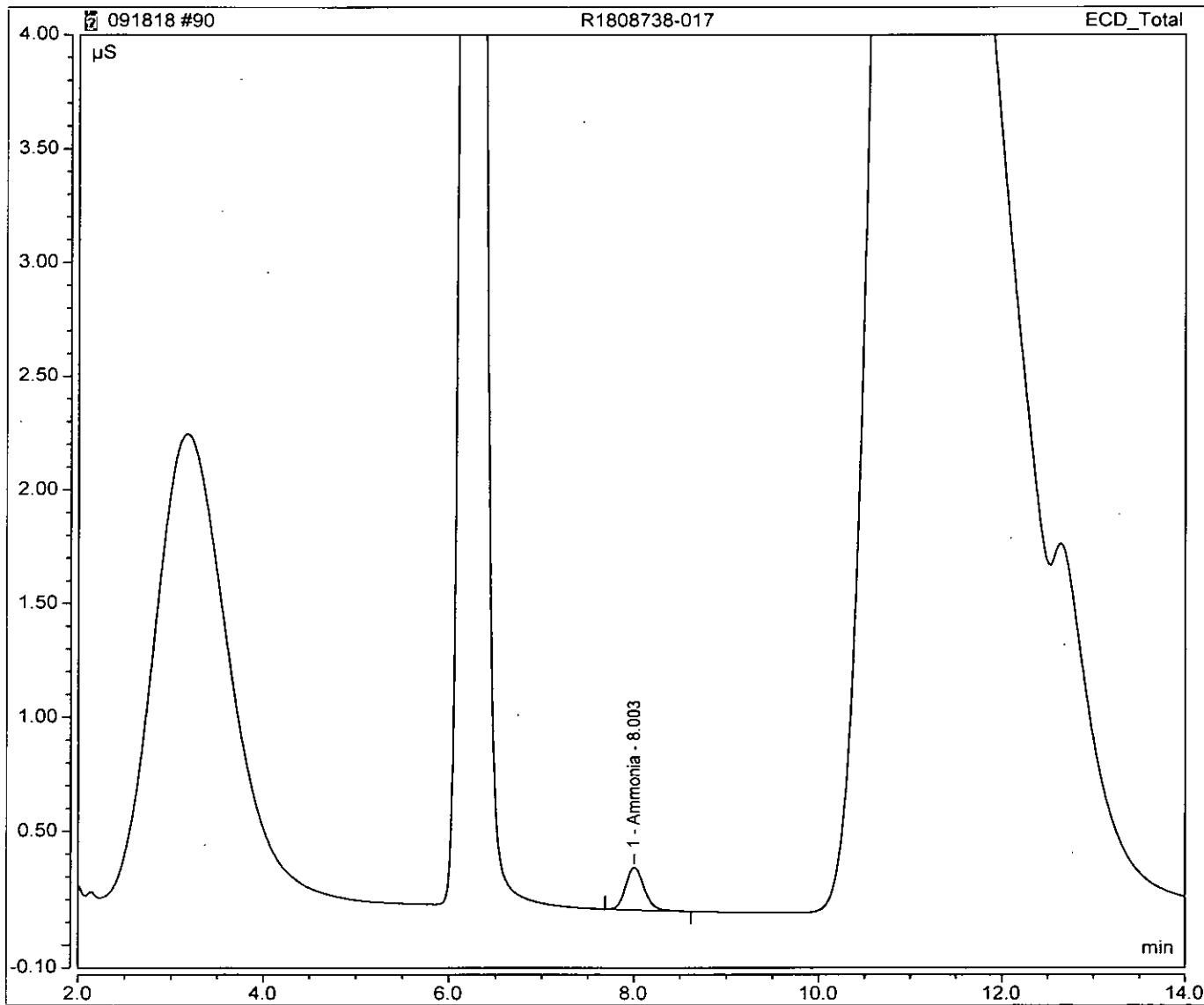
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808738-017	Inj. No.:	90
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 03:54	Comments:	ASTM D6919-09 Ammonia LL

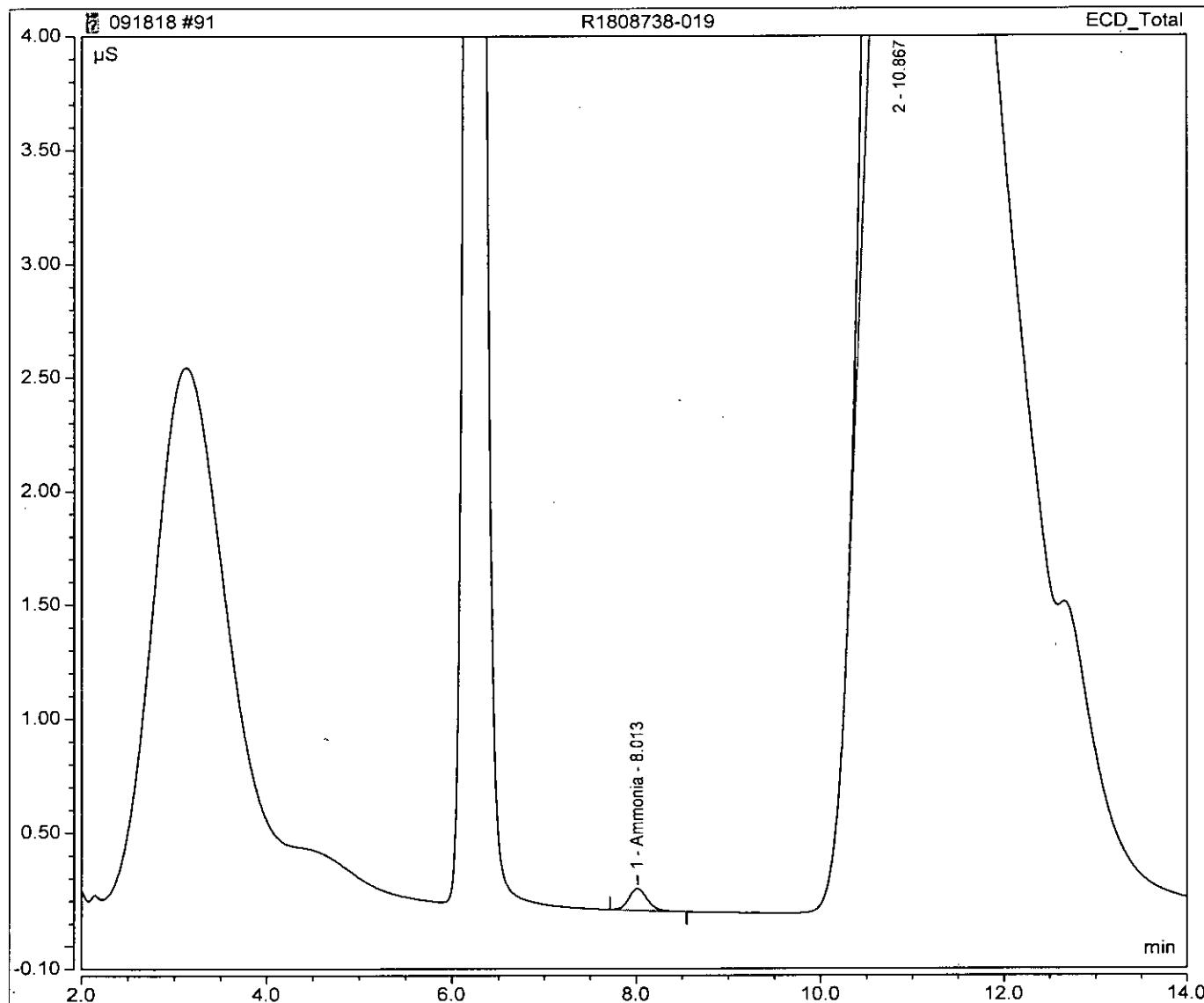
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.00	Ammonia	BMB	0.043	0.187	0.05925
TOTAL:				0.04	0.19	0.06



Peak Integration Report

Sample Name:	R1808738-019	Inj. No.:	91
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 04:10	Comments:	ASTM D6919-09 Ammonia LL

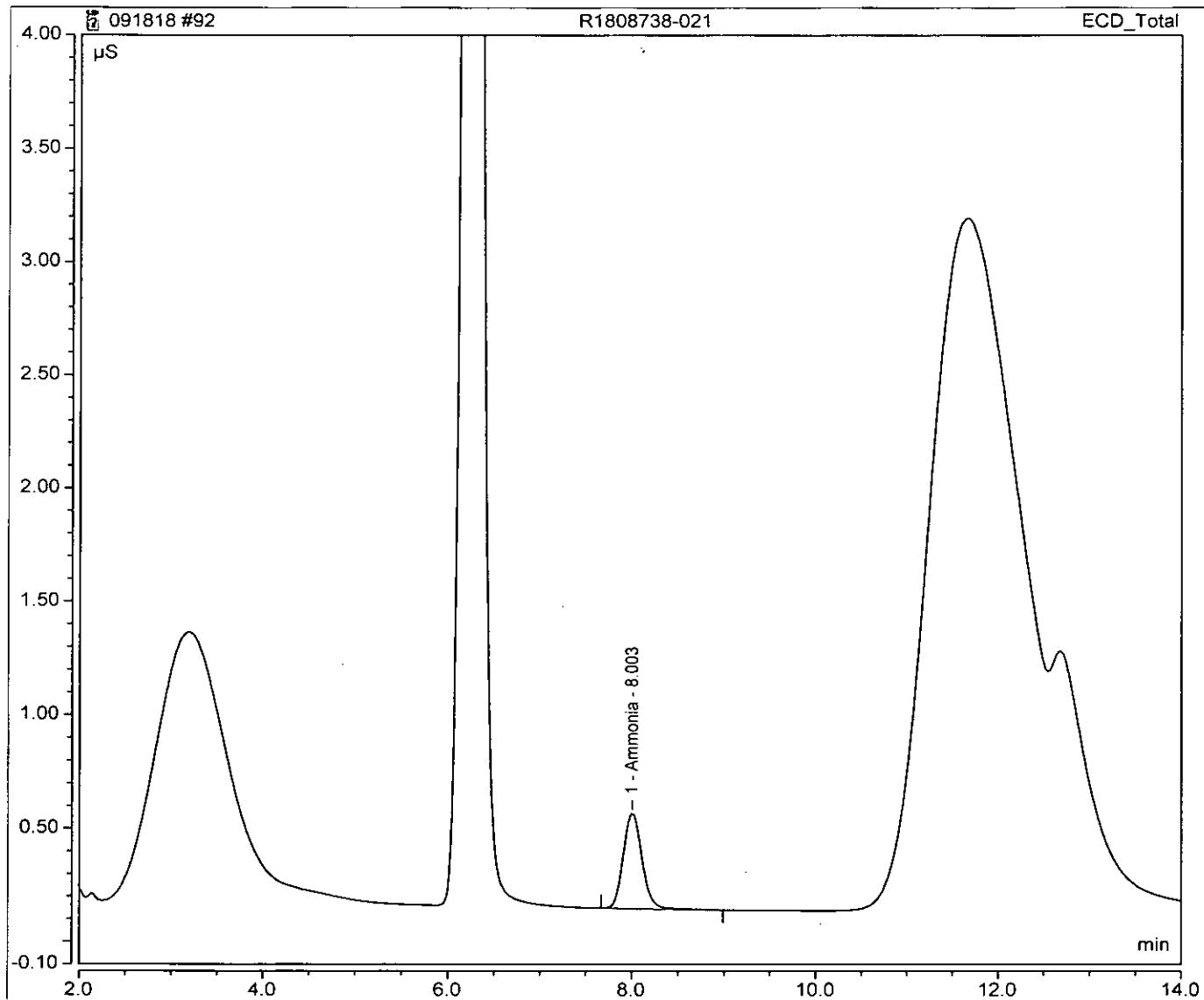
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^{\star}\text{min}$	Height μS	Amount (mg/L)
1	8.01	Ammonia	BMB	0.022	0.096	0.02898
TOTAL:				0.02	0.10	0.03



Peak Integration Report

Sample Name:	R1808738-021	Inj. No.:	92
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 04:26	Comments:	ASTM D6919-09 Ammonia LL

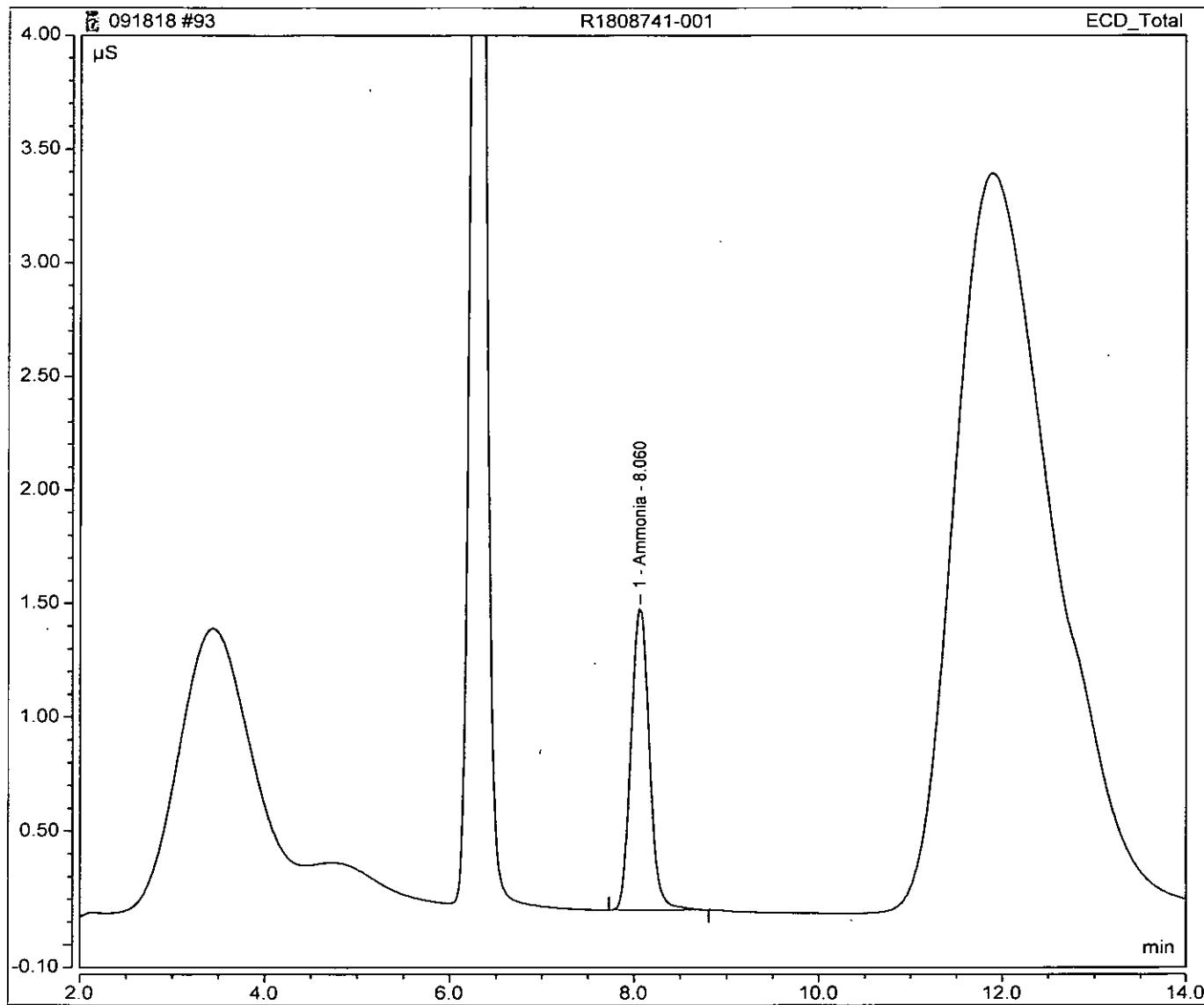
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.00	Ammonia	BMB	0.099	0.421	0.14426
TOTAL:				0.10	0.42	0.14



Peak Integration Report

Sample Name:	R1808741-001	Inj. No.:	93
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	30.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 04:42	Comments:	ASTM D6919-09 Ammonia

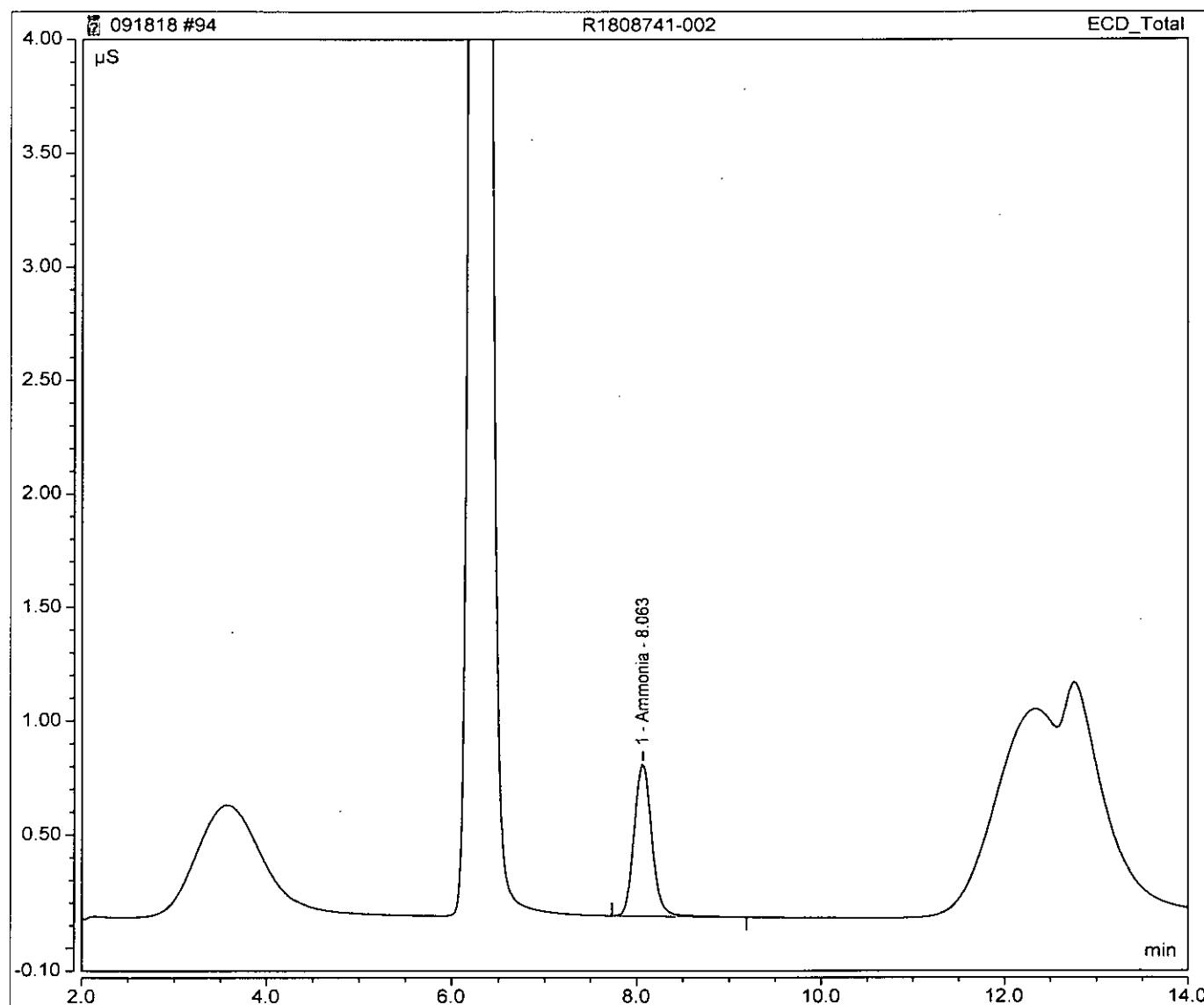
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.06	Ammonia	BMB	0.306	1.329	15.31326
TOTAL:				0.31	1.33	15.31



Peak Integration Report

Sample Name:	R1808741-002	Inj. No.:	94
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 04:58	Comments:	ASTM D6919-09 Ammonia

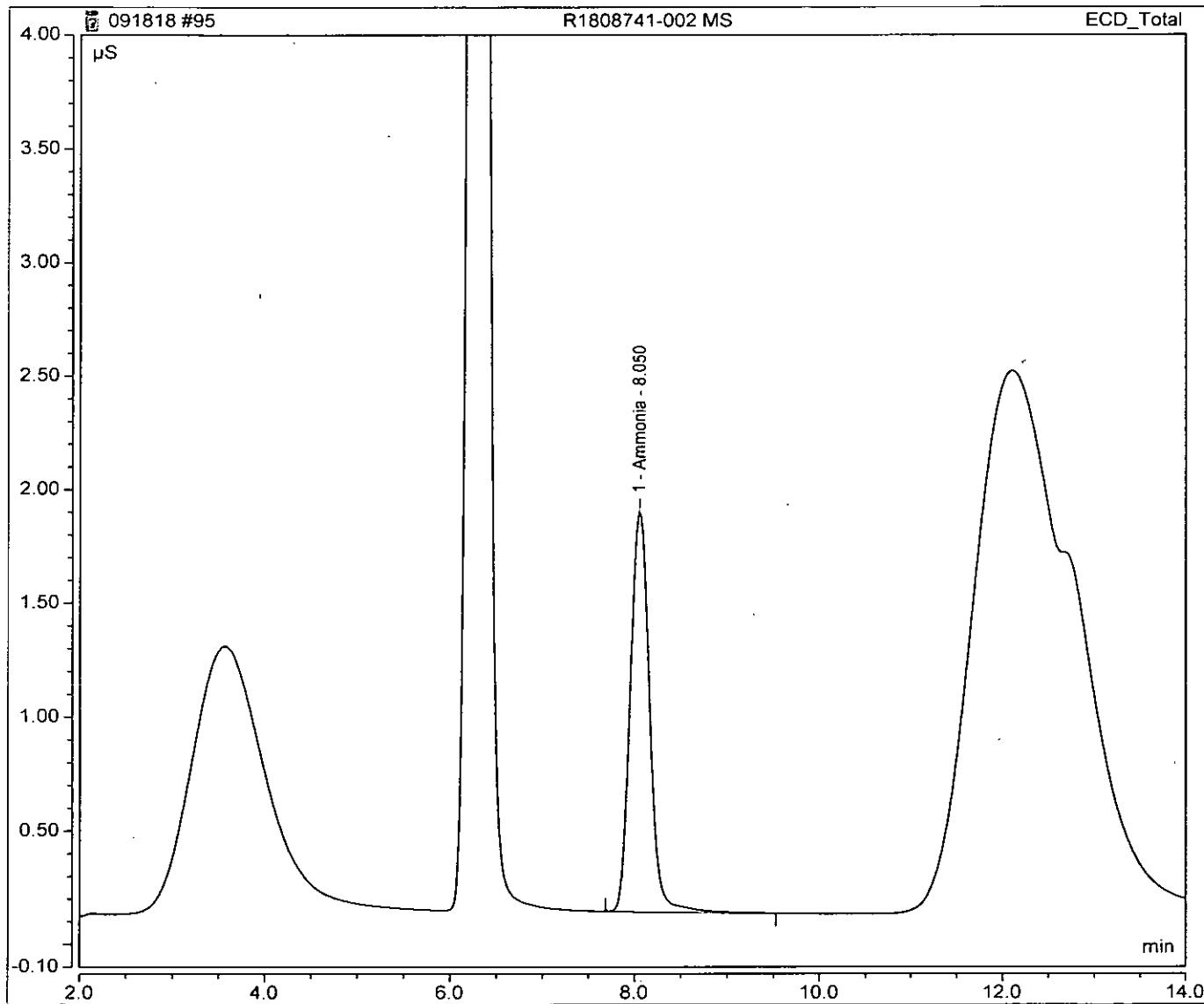
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.06	Ammonia	BMB	0.148	0.667	2.22435
TOTAL:				0.15	0.67	2.22



Peak Integration Report

Sample Name:	R1808741-002 MS	Inj. No.:	95
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 05:14	Comments:	ASTM D6919-09 Ammonia

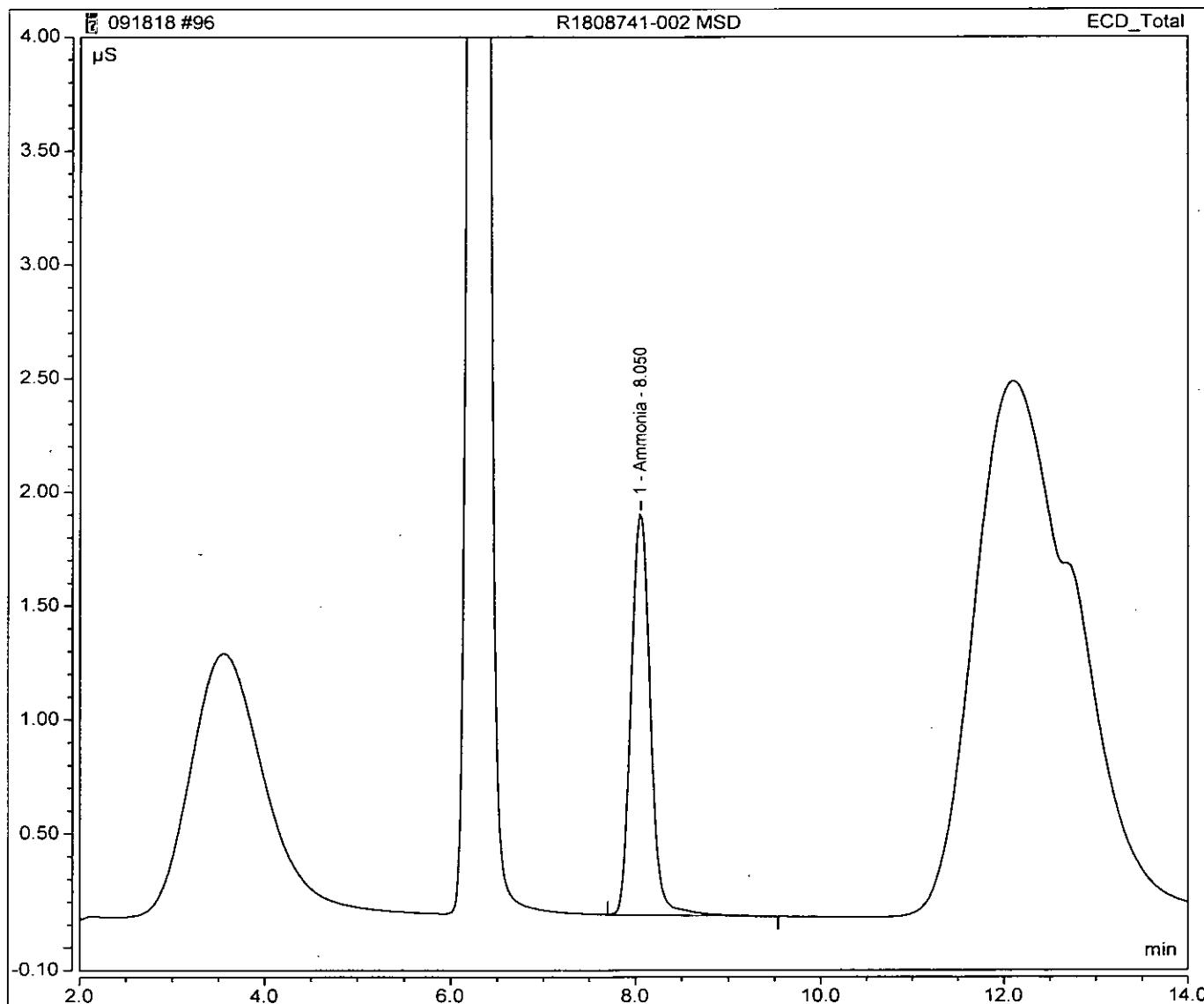
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.423	1.758	7.53635
TOTAL:				0.42	1.76	7.54



Peak Integration Report

Sample Name:	R1808741-002 MSD	Inj. No.:	96
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 05:30	Comments:	ASTM D6919-09 Ammonia

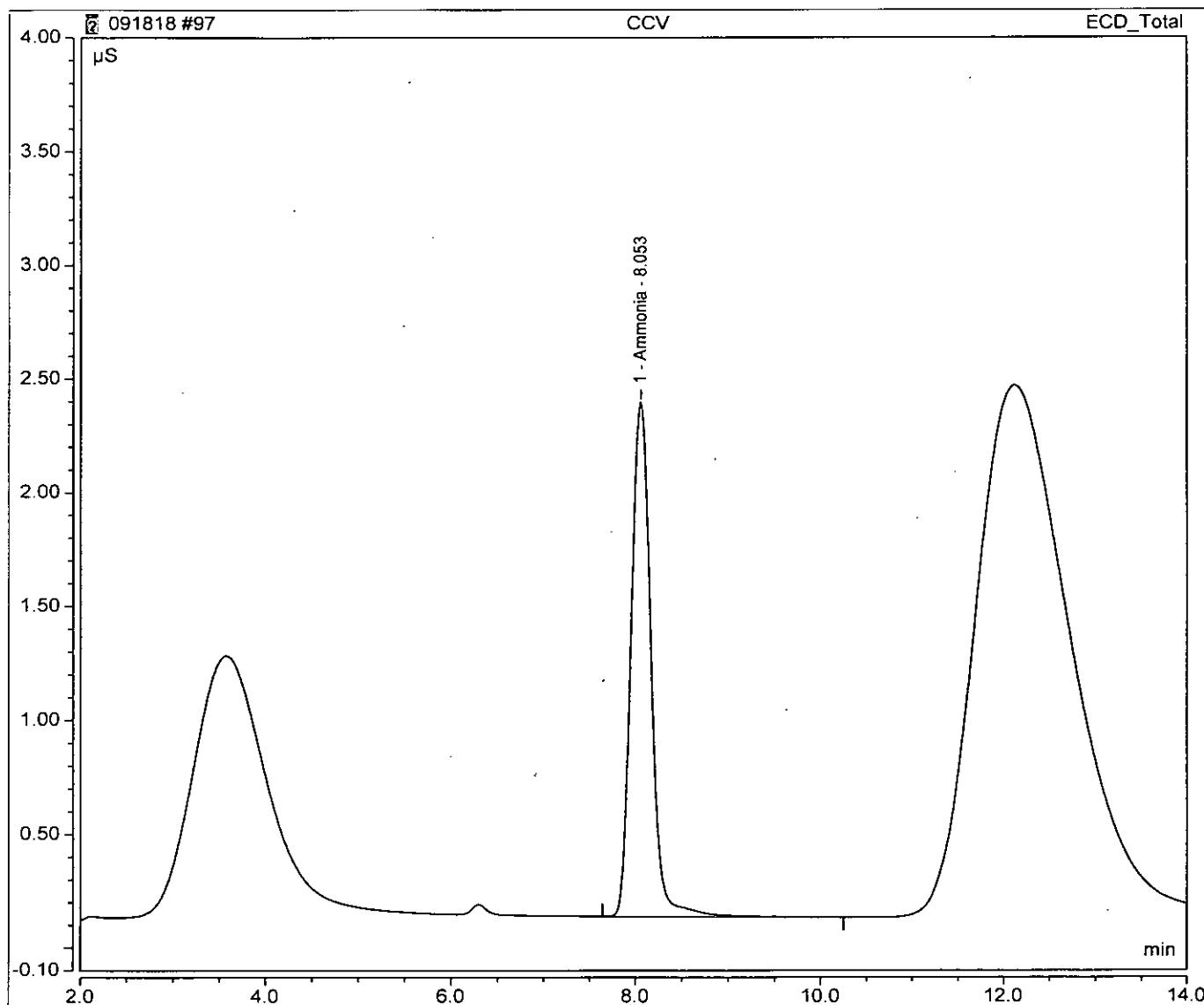
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.424	1.761	7.54845
TOTAL:				0.42	1.76	7.55



Peak Integration Report

Sample Name:	CCV	Inj. No.:	97
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 05:46	Comments:	ASTM D6919-09 Ammonia

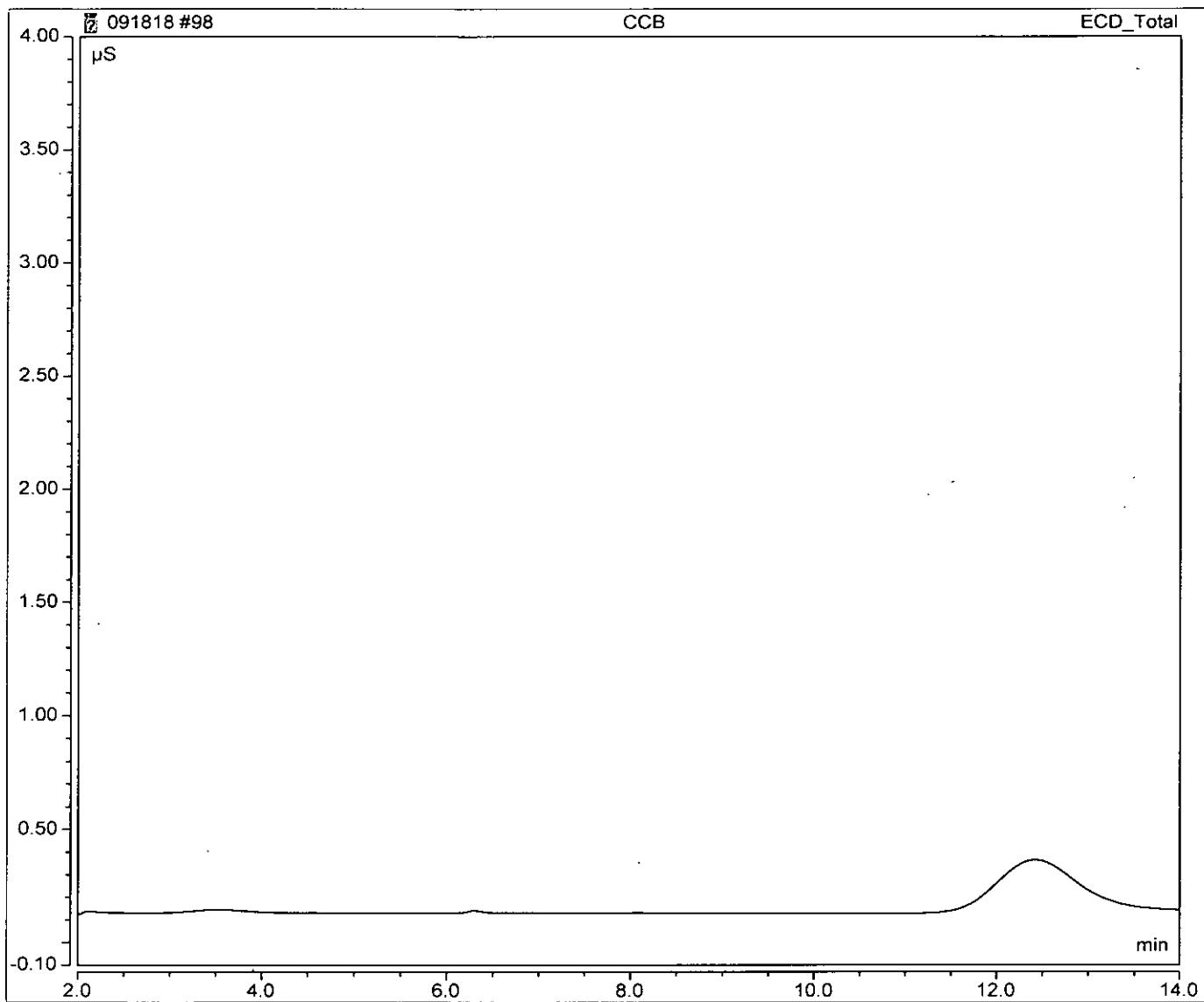
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.563	2.258	1.07924
TOTAL:				0.56	2.26	1.08



Peak Integration Report

<u>Sample Name:</u>	CCB	<u>Inj. No.:</u>	98
<u>File ID:</u>	Instrument Data\IC9\Data\2018\09September2018		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	1.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	19-Sep-2018 / 06:02	<u>Comments:</u>	ASTM D6919-09 Ammonia

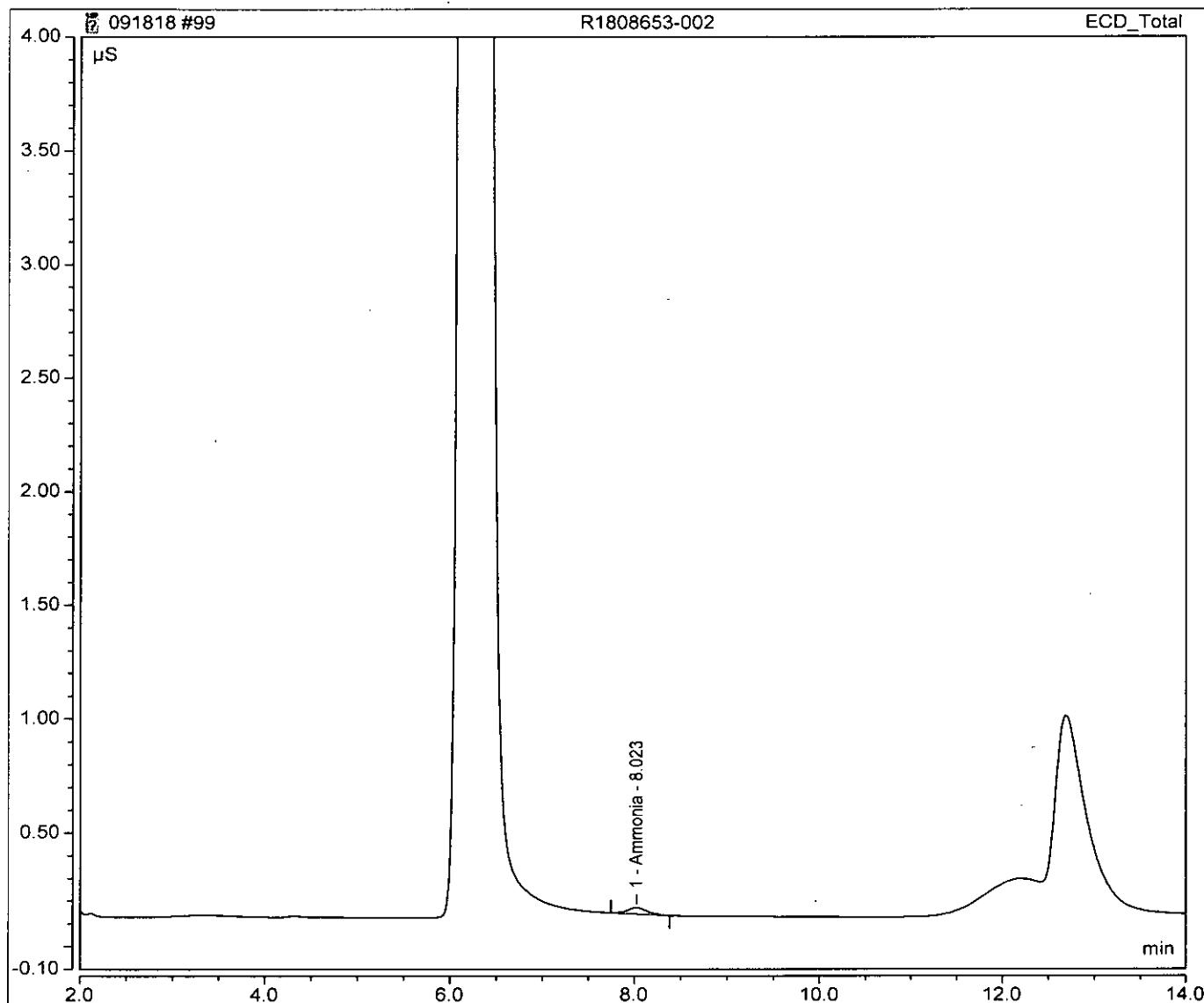
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	R1808653-002	Inj. No.:	99
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 06:18	Comments:	ASTM D6919-09 Ammonia LL

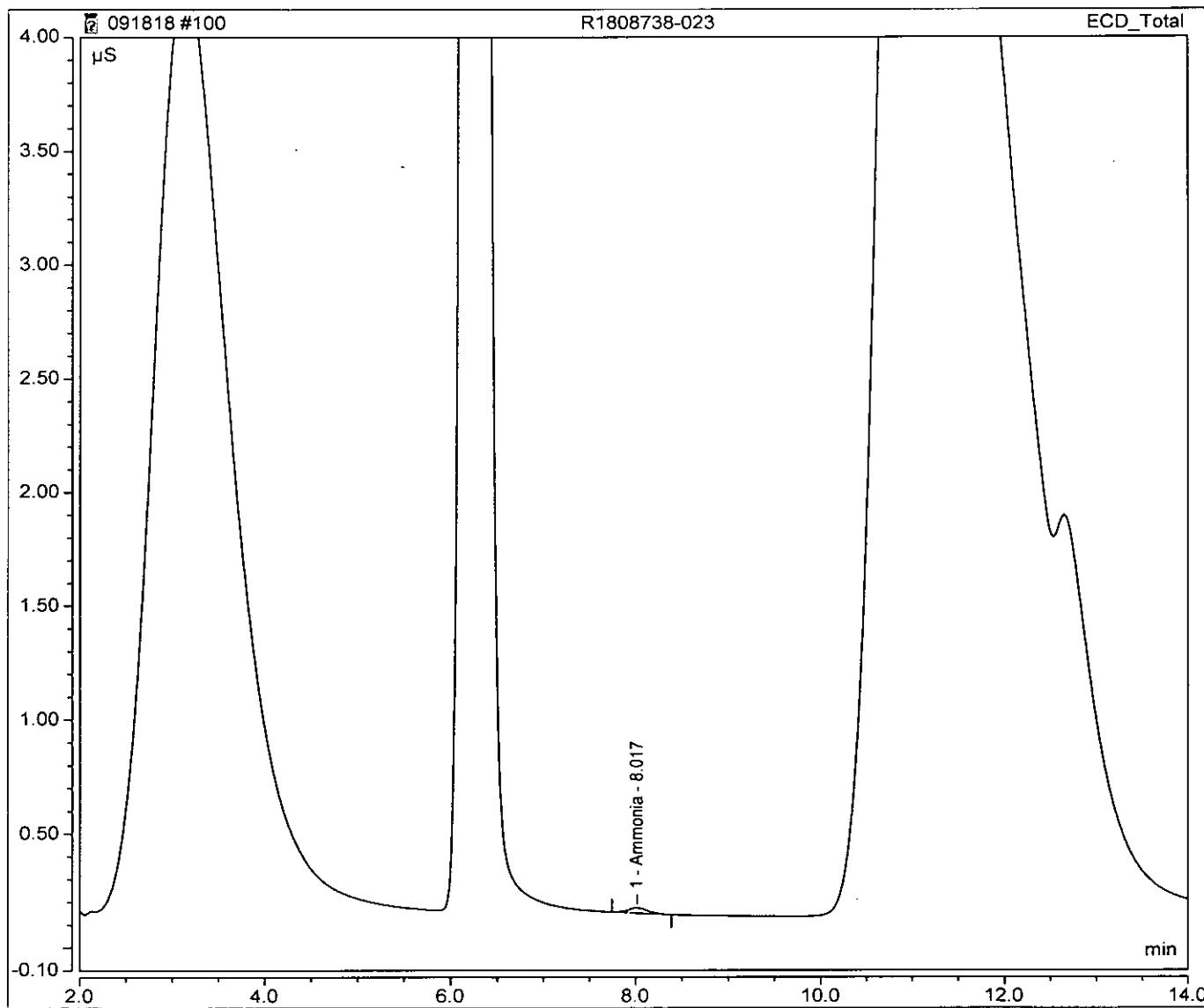
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.02	Ammonia	BMB	0.006	0.028	0.00727
TOTAL:				0.01	0.03	0.01



Peak Integration Report

Sample Name:	R1808738-023	Inj. No.:	100
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (µL):	50.00
Inj. Date / Time:	19-Sep-2018 / 06:34	Comments:	ASTM D6919-09 Ammonia LL

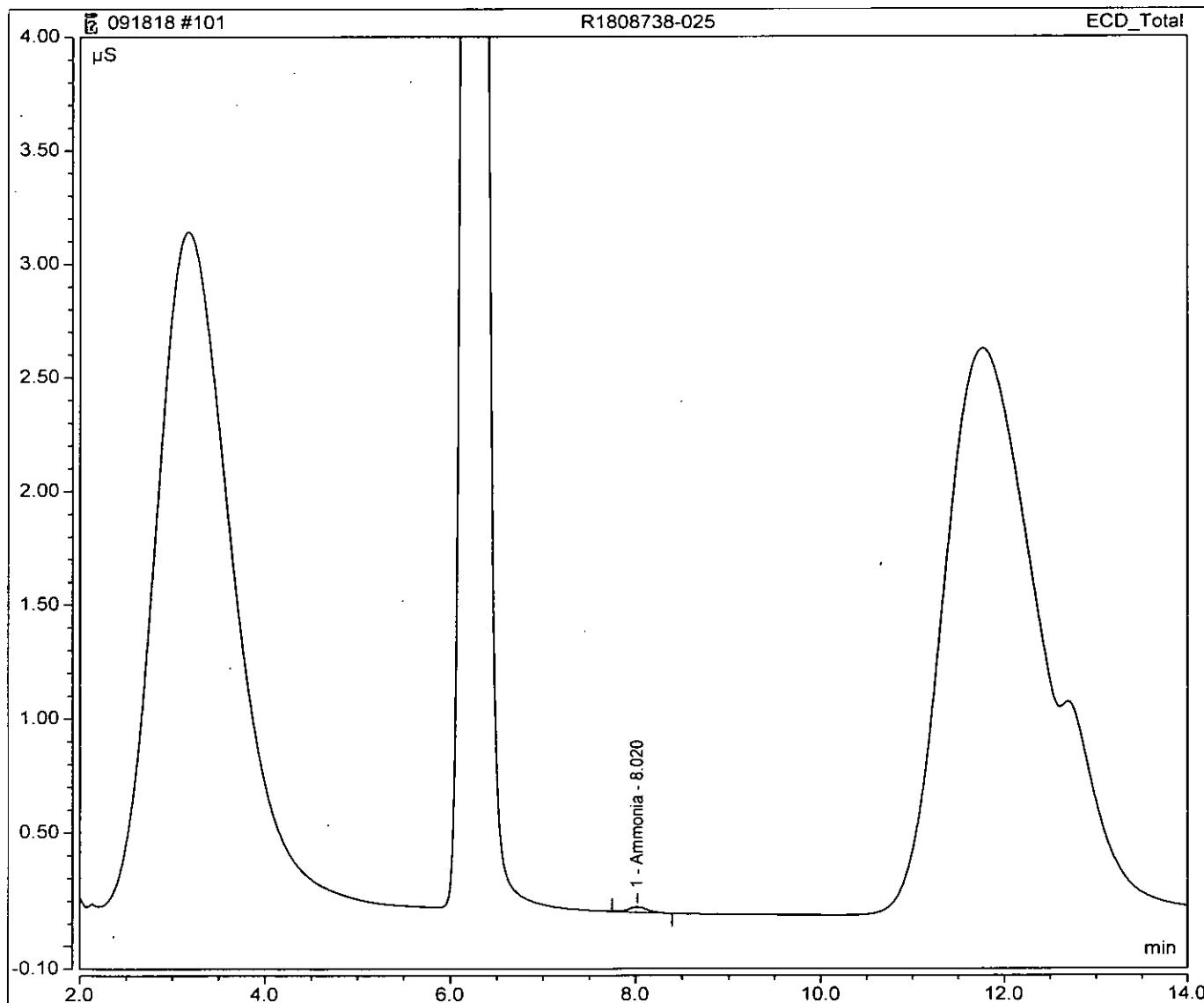
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount (mg/L)
1	8.02	Ammonia	BMB	0.005	0.023	0.00581
TOTAL:				0.01	0.02	0.01



Peak Integration Report

Sample Name:	R1808738-025	Inj. No.:	101
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 06:51	Comments:	ASTM D6919-09 Ammonia LL

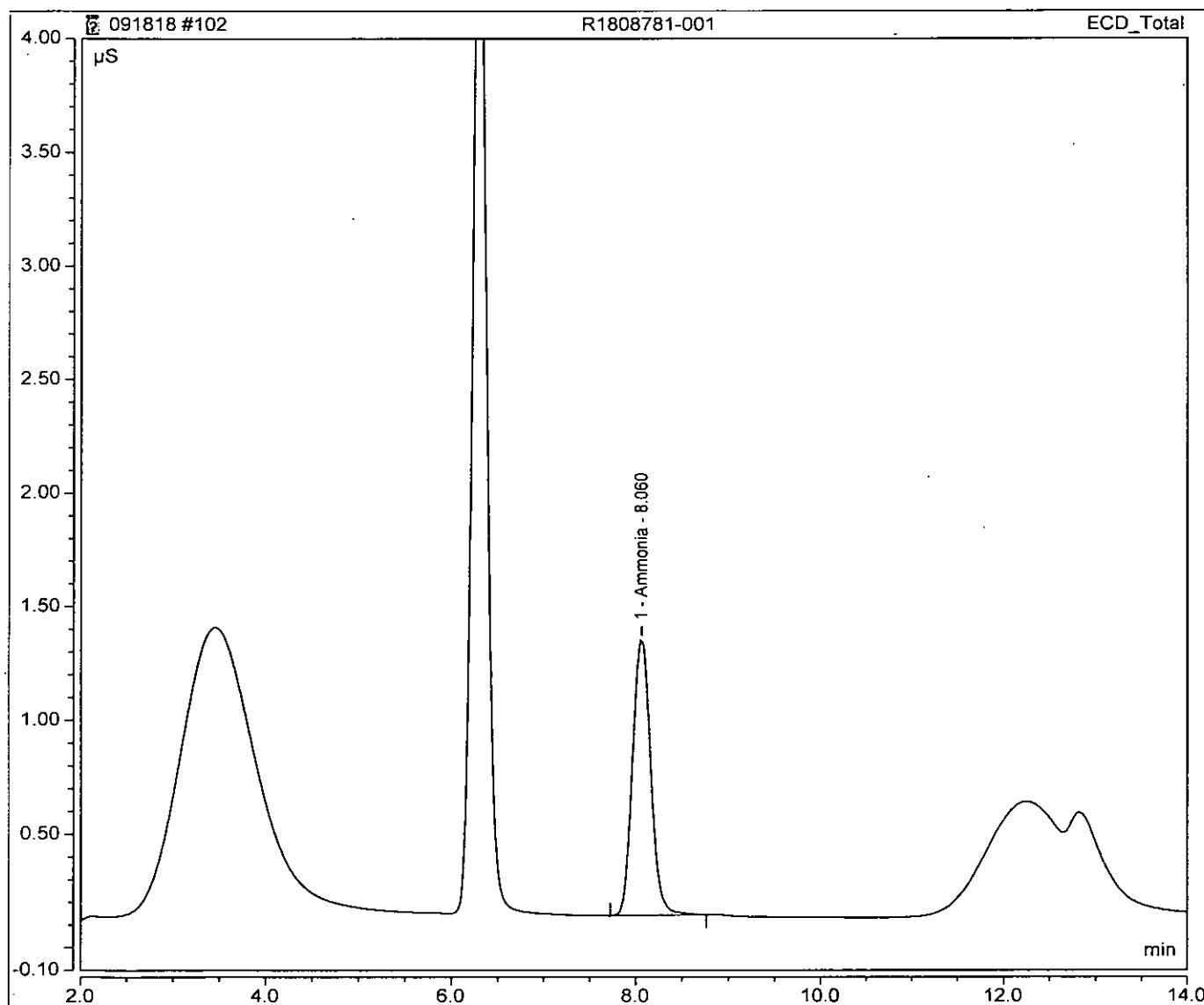
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.02	Ammonia	BMB	0.005	0.023	0.00567
TOTAL:				0.01	0.02	0.01



Peak Integration Report

<u>Sample Name:</u>	R1808781-001	<u>Inj. No.:</u>	102
<u>File ID:</u>	Instrument Data\IC9\Data\2018\09September2018		
<u>Injection Type:</u>	Unknown	<u>Dilution Factor:</u>	30.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	19-Sep-2018 / 07:07	<u>Comments:</u>	ASTM D6919-09 Ammonia

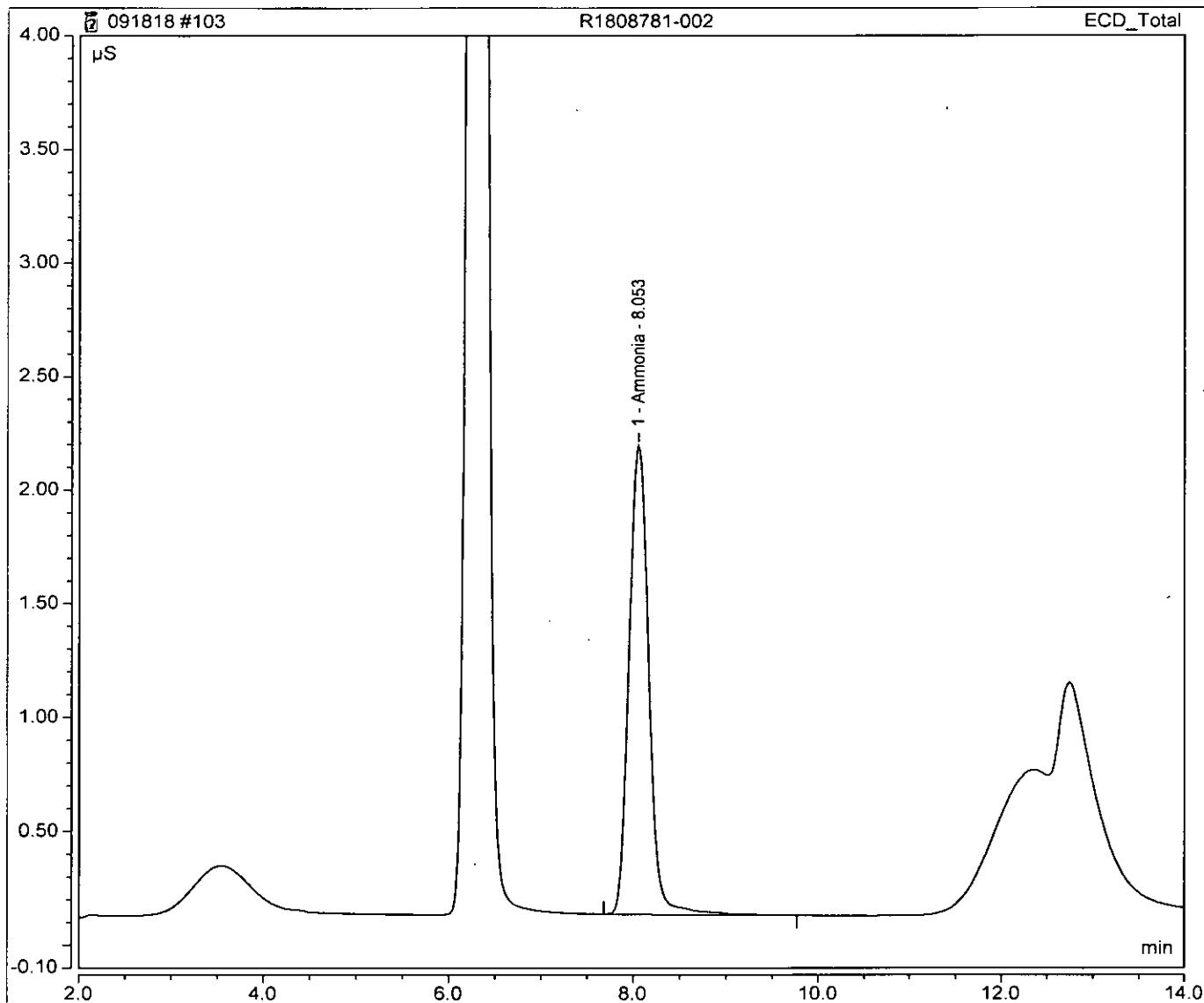
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.06	Ammonia	BMB	0.278	1.215	13.64618
TOTAL:				0.28	1.21	13.65



Peak Integration Report

Sample Name:	R1808781-002	Inj. No.:	103
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 07:23	Comments:	ASTM D6919-09 Ammonia

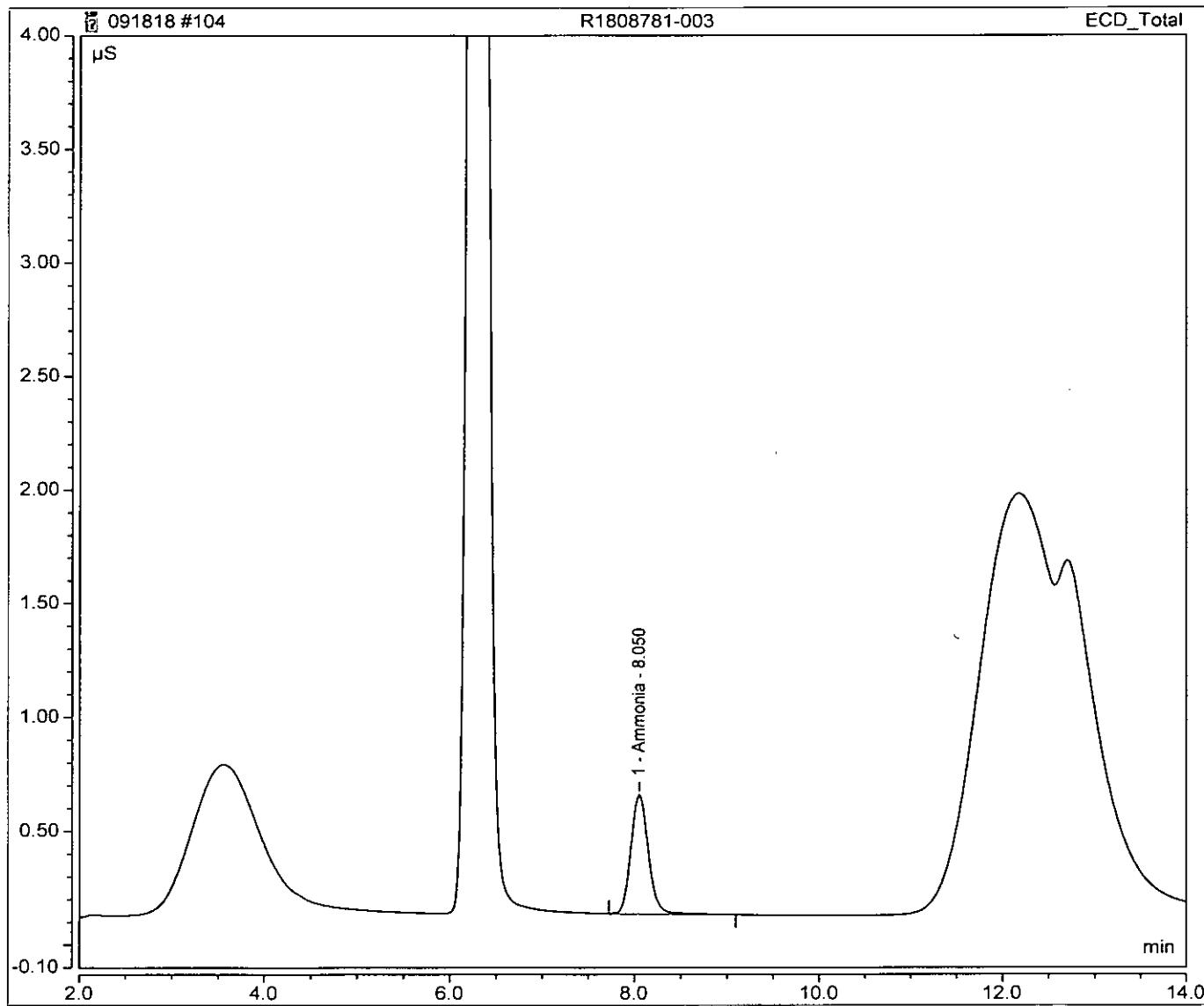
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.507	2.061	9.43843
TOTAL:				0.51	2.06	9.44



Peak Integration Report

Sample Name:	R1808781-003	Inj. No.:	104
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 07:39	Comments:	ASTM D6919-09 Ammonia

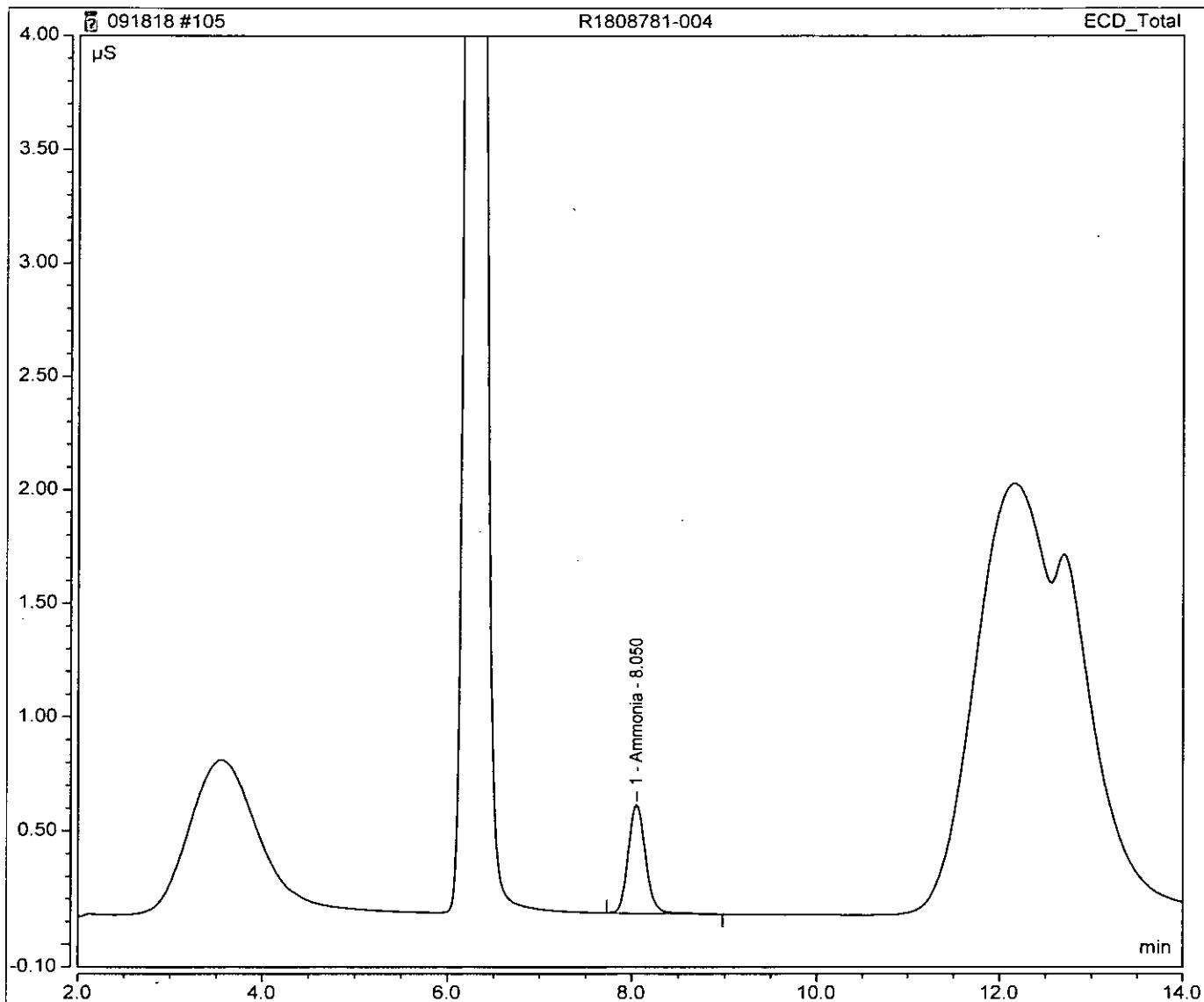
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.114	0.523	1.67523
TOTAL:				0.11	0.52	1.68



Peak Integration Report

Sample Name:	R1808781-004	Inj. No.:	105
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 07:55	Comments:	ASTM D6919-09 Ammonia

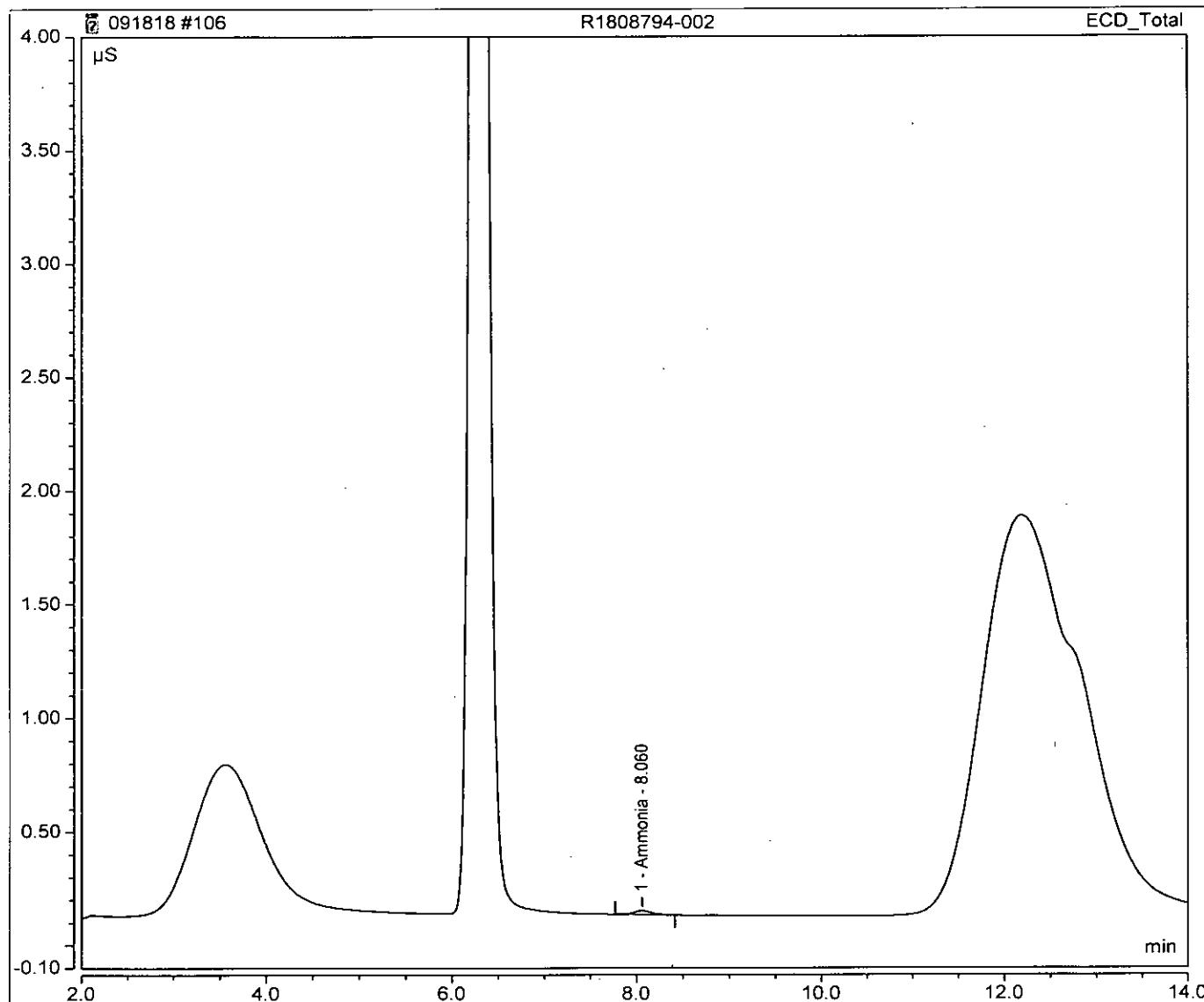
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.104	0.478	1.51035
TOTAL:				0.10	0.48	1.51



Peak Integration Report

Sample Name:	R1808794-002	Inj. No.:	106
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (µL):	50.00
Inj. Date / Time:	19-Sep-2018 / 08:11	Comments:	ASTM D6919-09 Ammonia

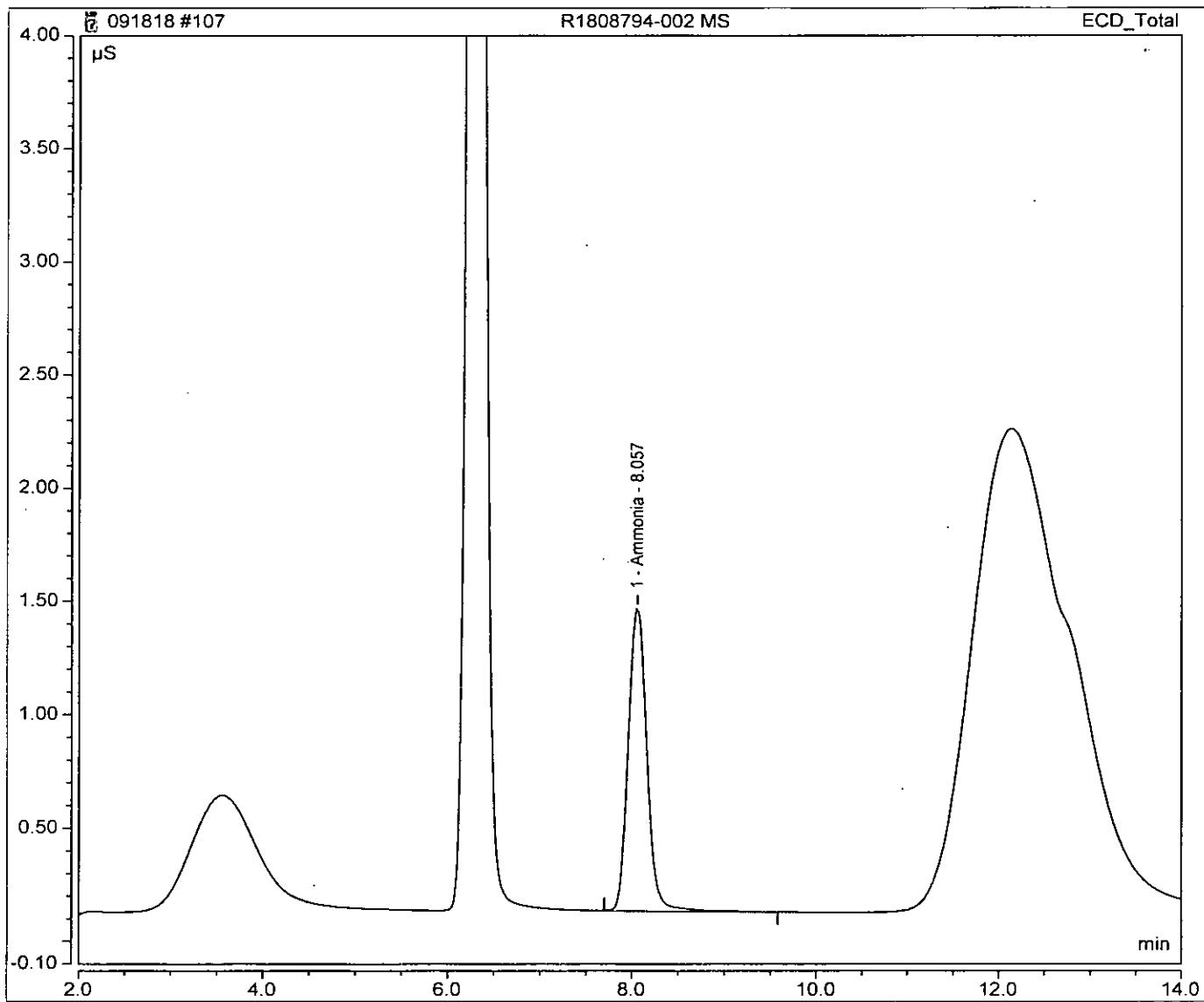
No.	Time min	Peak Name	Peak Type	Area µS*min	Height µS	Amount (mg/L)
1	8.06	Ammonia	BMB	0.004	0.018	0.03357
TOTAL:				0.00	0.02	0.03



Peak Integration Report

Sample Name:	R1808794-002 MS	Inj. No.:	107
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 08:27	Comments:	ASTM D6919-09 Ammonia

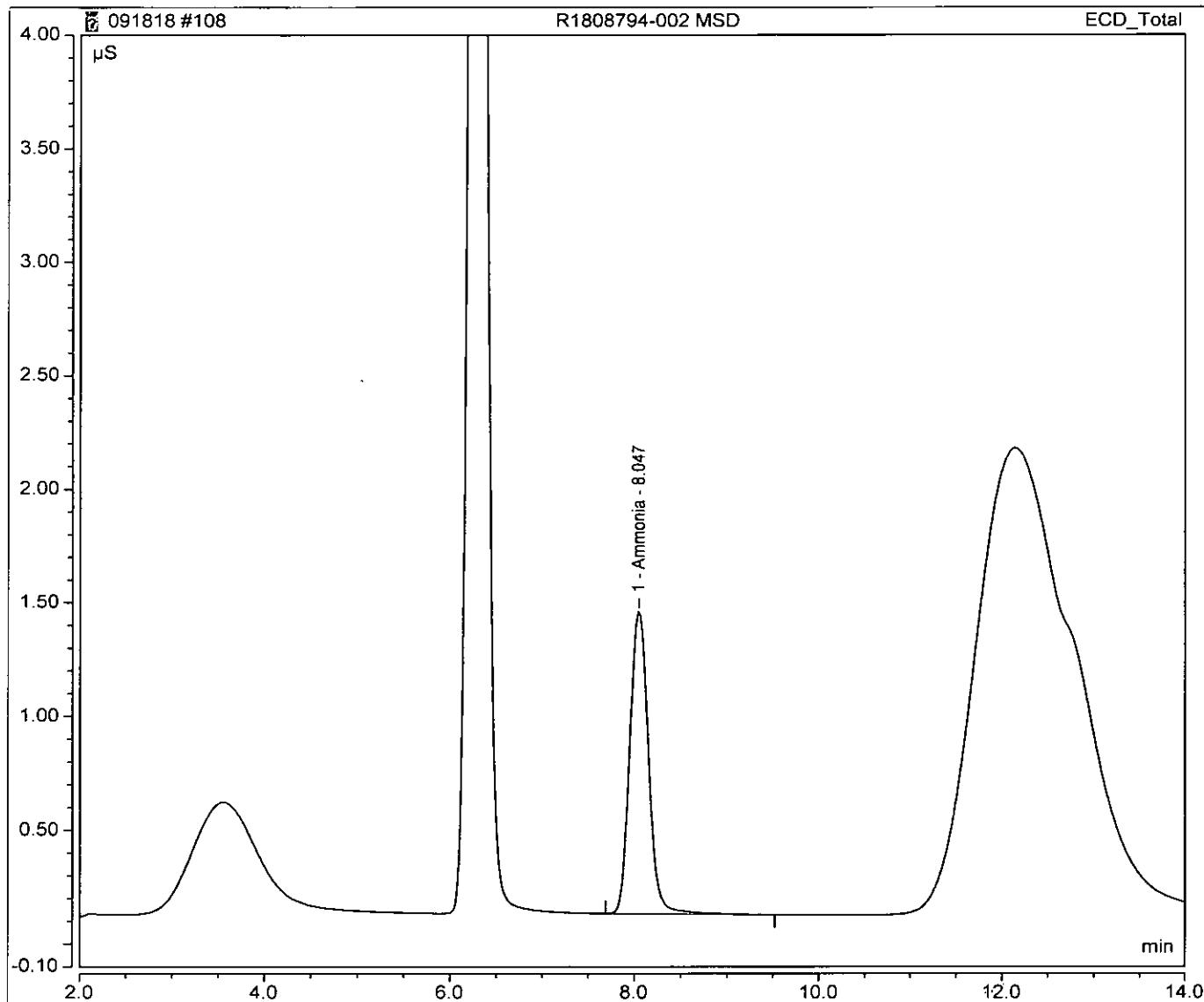
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.06	Ammonia	BMB	0.312	1.336	5.21839
TOTAL:				0.31	1.34	5.22



Peak Integration Report

Sample Name:	R1808794-002 MSD	Inj. No.:	108
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	10.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 08:43	Comments:	ASTM D6919-09 Ammonia

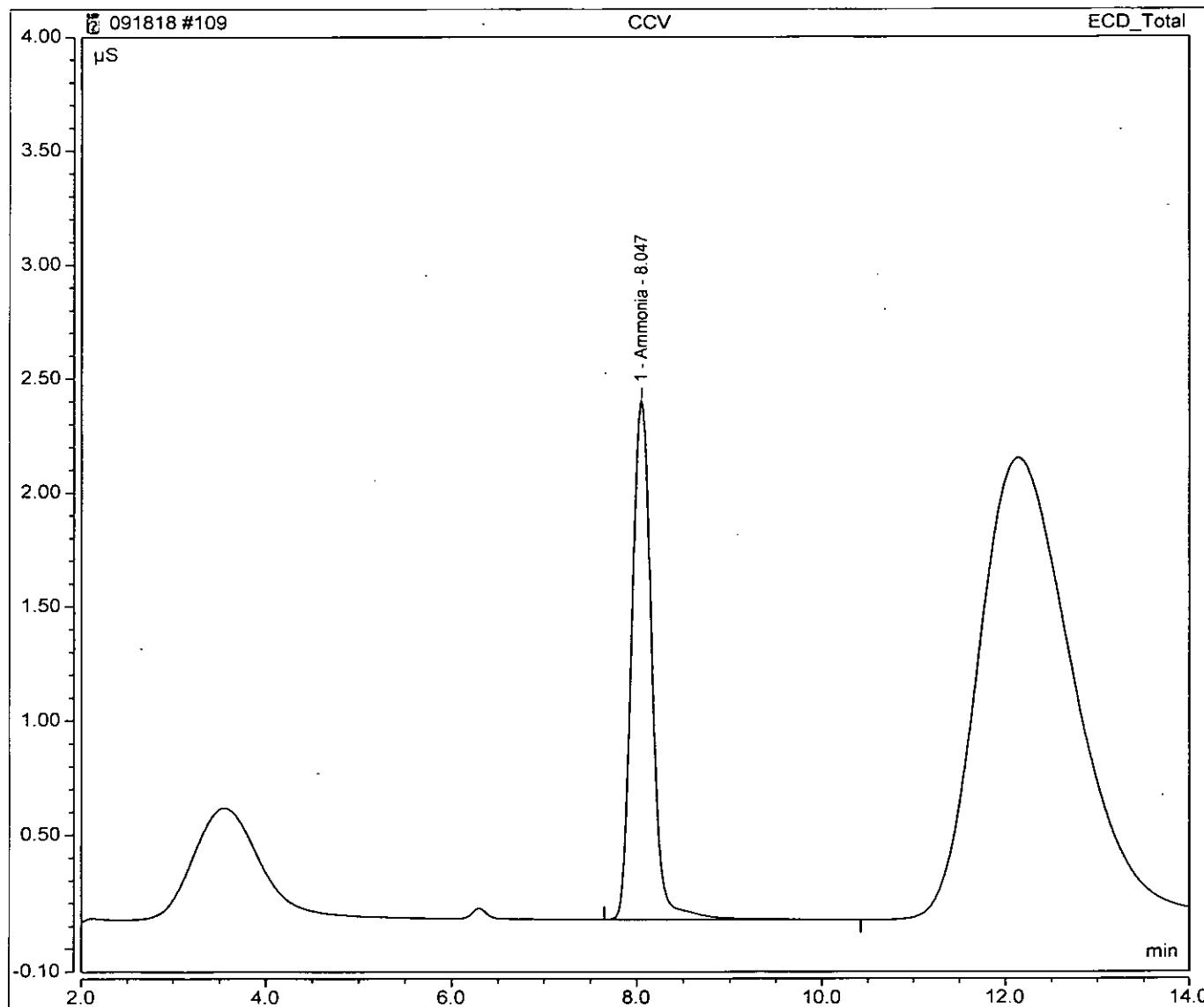
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.310	1.329	5.17402
TOTAL:				0.31	1.33	5.17



Peak Integration Report

Sample Name:	CCV	Inj. No.:	109
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	19-Sep-2018 / 08:59	Comments:	ASTM D6919-09 Ammonia

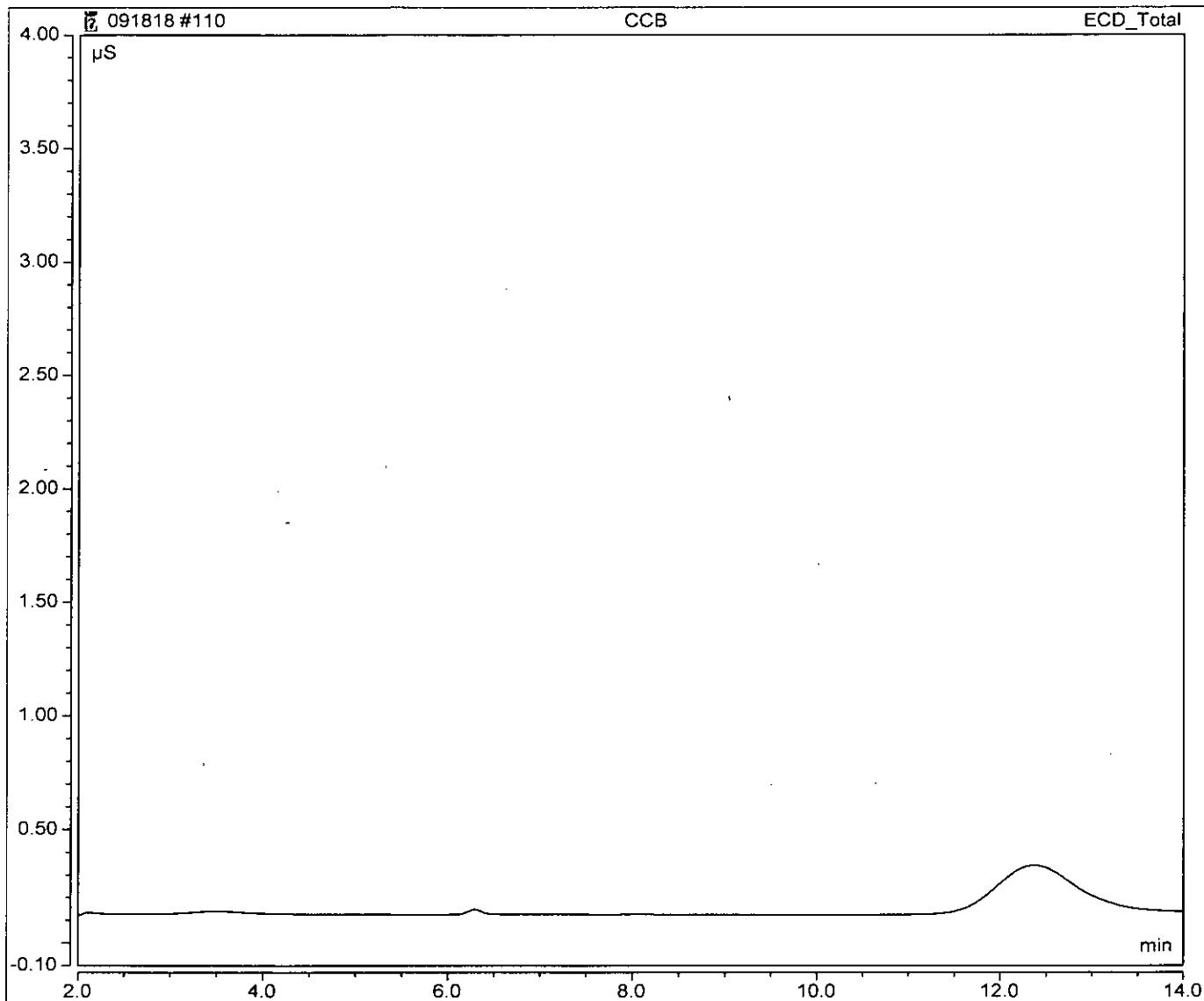
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount (mg/L)
1	8.05	Ammonia	BMB	0.566	2.272	1.08597
TOTAL:				0.57	2.27	1.09



Peak Integration Report

Sample Name:	CCB	Inj. No.:	110
File ID:	Instrument Data\IC9\Data\2018\09September2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (μ L):	50.00
Inj. Date / Time:	19-Sep-2018 / 09:15	Comments:	ASTM D6919-09 Ammonia

No.	Time min	Peak Name	Peak Type	Area μ S*min	Height μ S	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



ALS Environmental
1575 Jefferson Road, Building 300, Suite 360, Rochester, New York 14623

Ion Chromatography Cover Sheet

Method: **Ammonia (NH₃) by ASTM D6919-09**
Instrument: **Dionex ICS-2100 (IC#9)**
Column: **Dionex CS-16 (S/N 180723024) /CG-16 (S/N 170316176), Installed 02/23/2018**

Curve Date: 05/14/18 Loop size: 50 uL

Analyst: AM Analysis Date: 9/14

Method Filename: **9-051418**

Standards Prep Dates & Log ID's:

<i>Std Type</i>	<i>Prep Date</i>	<i>Log ID</i>	<i>Std Type</i>	<i>Prep Date</i>	<i>Log ID</i>
Calibration Intermediate	Purchased 7/11/17	182558	Working Calibration Stds	05/14/18	Same As WC161012C
LCS / MS Intermediate	Purchased 7/11/17	188275	Working LCS Standard	Fresh Daily	182558
ICV Intermediate	Purchased 3/21/17	185402	Working ICV Standard	Fresh Daily	185402
CCV Intermediate	Purchased 3/21/17	185402	Working CCV Standard	Fresh Daily	185402

Curve includes a 0.001ppm point, which is less than our MRL of 0.005ppm.

Original Retention Time for this method is 7.847 minutes, based on Standard 6.

Curve is Quadratic as per ASTM D6919-09 Method.

Additional Comments: 100 ppm MS Standard Made From: 188275, Prepared Fresh Daily

1000ppm Standard Stock Used: 188275 (Expires 02/28/2019)

1000ppm Reference Stock Used: 185402 (Expires 06/30/2019)

Analytical Results Summary

Instrument Name: R-FIA-05			Analyst: MROGERSON		Analysis Lot:		607038	Method/Testcode: 353.2/NO2 NO3 T							
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1809814-01	Nitrate+Nitrite as Nitrogen	CCV		Water	1.03 mg/L	10 mL	1.03 mg/L	1					9/17/18 18:15:55	N	I
RQ1809814-02	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L	U 1	0.0007	0.050			9/17/18 18:17:17	N	I
RQ1809814-04	Nitrate+Nitrite as Nitrogen	MB		Water	0.00 mg/L	10 mL	0.050 mg/L	U 1	0.001	0.050			9/17/18 18:17:17	N	I
RQ1809814-03	Nitrate+Nitrite as Nitrogen	LCS		Water	0.53 mg/L	10 mL	0.531 mg/L	1	0.0007	0.050	106		9/17/18 18:18:40	N	I
R1808308-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.96 mg/L	10 mL	47.9 mg/L	50	0.04	2.5			9/17/18 18:20:03	N	I
R1808614-003	Nitrate+Nitrite as Nitrogen	N/A		Water	0.83 mg/L	10 mL	4.16 mg/L	5	0.004	0.010			9/17/18 18:21:25	N	IV
R1808614-005	Nitrate+Nitrite as Nitrogen	N/A		Water	0.69 mg/L	10 mL	34.4 mg/L	50	0.04	0.10			9/17/18 18:22:48	N	IV
R1808740-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.34 mg/L	10 mL	1.70 mg/L	5	0.004	0.25			9/17/18 18:28:17	N	II
R1808740-002	Nitrate+Nitrite as Nitrogen	N/A		Water	1.11 mg/L	10 mL	11.1 mg/L	10	0.007	0.50			9/17/18 18:29:38	N	II
R1808566-014	Nitrate+Nitrite as Nitrogen	N/A		Water	0.68 mg/L	10 mL	13.6 mg/L	20	0.013	0.040			9/17/18 18:31:00	Y	IV
RQ1809814-05	Nitrate+Nitrite as Nitrogen	CCV		Water	1.03 mg/L	10 mL	1.03 mg/L	1					9/17/18 18:32:22	N	I
RQ1809814-06	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L	U 1	0.0007	0.050			9/17/18 18:33:44	N	I
RQ1809814-17	Nitrate+Nitrite as Nitrogen	MS	R1808566-014	Water	1.14 mg/L	10 mL	22.7 mg/L	20	0.02	1.0	92		9/17/18 18:35:06	N	IV
RQ1809814-18	Nitrate+Nitrite as Nitrogen	DMS	R1808566-014	Water	1.14 mg/L	10 mL	22.8 mg/L	20	0.02	1.0	92	<1	9/17/18 18:36:27	N	IV
R1808647-002	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.99 mg/L	10 mL	4.95 mg/L	5	0.004	0.25			9/17/18 18:37:49	N	II
R1808647-004	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.00 mg/L	10 mL	0.002 mg/L	J 1	0.0007	0.050			9/17/18 18:39:10	N	II
R1808653-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0020 mg/L	U 1	0.0007	0.0020			9/17/18 18:40:32	N	IV
R1808653-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0020 mg/L	U 1	0.0007	0.0020			9/17/18 18:41:54	N	IV
R1808653-003	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.0060 mg/L	1	0.0007	0.0020			9/17/18 18:43:17	N	IV
R1808692-002	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.00 mg/L	10 mL	0.001 mg/L	J 1	0.0007	0.050			9/17/18 18:44:40	N	I
R1808699-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.050 mg/L	U 1	0.0007	0.050			9/17/18 18:46:03	N	I
R1808699-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.050 mg/L	U 1	0.0007	0.050			9/17/18 18:47:25	N	I
RQ1809814-07	Nitrate+Nitrite as Nitrogen	CCV		Water	1.00 mg/L	10 mL	1.00 mg/L	1					9/17/18 18:48:47	N	I
RQ1809814-08	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L	U 1	0.0007	0.050			9/17/18 18:50:09	N	I
R1808699-003	Nitrate+Nitrite as Nitrogen	N/A		Water	0.47 mg/L	10 mL	0.469 mg/L	1	0.0007	0.050			9/17/18 18:51:31	N	I
R1808699-004	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.050 mg/L	U 1	0.0007	0.050			9/17/18 18:52:54	N	I
R1808699-005	Nitrate+Nitrite as Nitrogen	N/A		Water	0.02 mg/L	10 mL	0.050 mg/L	U 1	0.0007	0.050			9/17/18 18:54:16	N	I
R1808699-007	Nitrate+Nitrite as Nitrogen	N/A		Water	0.03 mg/L	10 mL	0.050 mg/L	U 1	0.0007	0.050			9/17/18 18:57:00	N	I
RQ1809814-10	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	1					9/17/18 19:05:09	N	I
RQ1809814-09	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L	U 1	0.0007	0.050			9/17/18 19:06:31	N	I
RQ1809814-12	Nitrate+Nitrite as Nitrogen	CCV		Water	1.03 mg/L	10 mL	1.03 mg/L	1					9/17/18 20:17:40	N	I
RQ1809814-11	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L	U 1	0.0007	0.050			9/17/18 20:19:03	N	I
R1808614-007	Nitrate+Nitrite as Nitrogen	N/A		Water	0.68 mg/L	10 mL	33.8 mg/L	50	0.04	0.10			9/17/18 20:23:08	Y	IV
RQ1809814-19	Nitrate+Nitrite as Nitrogen	MS	R1808614-007	Water	1.13 mg/L	10 mL	56.7 mg/L	50	0.04	2.5	92		9/17/18 20:24:29	N	IV
RQ1809814-20	Nitrate+Nitrite as Nitrogen	DMS	R1808614-007	Water	1.13 mg/L	10 mL	56.7 mg/L	50	0.04	2.5	92	<1	9/17/18 20:25:51	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: MROGERSON

Analysis Lot:

607038

Method/Testcode: 353.2/NO2 NO3 T

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC?</u>	<u>Tier</u>
R1808699-006	Nitrate+Nitrite as Nitrogen	N/A		Water	1.08 mg/L	10 mL	21.5 mg/L	20	0.02	1.0			9/17/18 20:32:43	N	I
RQ1809814-14	Nitrate+Nitrite as Nitrogen	CCV		Water	1.05 mg/L	10 mL	1.05 mg/L	1					9/17/18 20:34:04	N	I
RQ1809814-13	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L	U	0.0007	0.050			9/17/18 20:35:26	N	I

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: MROGERSON

Analysis Lot:

607039

Method/Testcode: 353.2/NO2 NO3 T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier	
RQ1809815-01	Nitrate+Nitrite as Nitrogen	CCV		Water	1.00 mg/L	10 mL	1.00 mg/L	1					9/17/18 18:48:47	N	II	
RQ1809815-02	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.0007	0.050		9/17/18 18:50:09	N	II	
RQ1809815-04	Nitrate+Nitrite as Nitrogen	MB		Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.001	0.050		9/17/18 18:50:09	N	II	
RQ1809815-03	Nitrate+Nitrite as Nitrogen	LCS		Water	0.52 mg/L	10 mL	0.522 mg/L	J	1	0.0007	0.050	104	9/17/18 18:58:21	N	II	
R1808719-001	Nitrate+Nitrite as Nitrogen	N/A		Water	1.90 mg/L	10 mL	379 mg/L	200		0.2	10		9/17/18 18:59:43	N	II	
R1808719-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.03 mg/L	10 mL	0.050 mg/L	U	1	0.0007	0.050		9/17/18 19:01:05	N	II	
R1808725-015	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.004 mg/L	J	1	0.0007	0.050		9/17/18 19:02:26	N	IV	
R1808725-017	Nitrate+Nitrite as Nitrogen	N/A		Water	0.36 mg/L	10 mL	0.357 mg/L	J	1	0.0007	0.050		9/17/18 19:03:47	N	IV	
RQ1809815-05	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	J	1				9/17/18 19:05:09	N	IV	
RQ1809815-06	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.0007	0.050		9/17/18 19:06:31	N	IV	
R1808738-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.0078 mg/L	J	1	0.0007	0.0020		9/17/18 19:07:54	N	IV	
RQ1809815-15	Nitrate+Nitrite as Nitrogen	MS	R1808738-001	Water	0.52 mg/L	10 mL	0.521 mg/L	J	1	0.0007	0.050	103	9/17/18 19:09:17	N	IV	
RQ1809815-16	Nitrate+Nitrite as Nitrogen	DMS	R1808738-001	Water	0.52 mg/L	10 mL	0.524 mg/L	J	1	0.0007	0.050	103	<1	9/17/18 19:10:39	N	IV
R1808738-003	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.0129 mg/L	J	1	0.0007	0.0020		9/17/18 19:12:02	N	IV	
R1808738-005	Nitrate+Nitrite as Nitrogen	N/A		Water	0.02 mg/L	10 mL	0.0160 mg/L	J	1	0.0007	0.0020		9/17/18 19:13:24	N	IV	
R1808738-007	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0036 mg/L	J	1	0.0007	0.0020		9/17/18 19:14:47	N	IV	
R1808738-009	Nitrate+Nitrite as Nitrogen	N/A		Water	0.11 mg/L	10 mL	0.109 mg/L	J	1	0.0007	0.0020		9/17/18 19:16:09	N	IV	
R1808738-011	Nitrate+Nitrite as Nitrogen	N/A		Water	0.02 mg/L	10 mL	0.0197 mg/L	J	1	0.0007	0.0020		9/17/18 19:17:31	N	IV	
R1808738-013	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.0074 mg/L	J	1	0.0007	0.0020		9/17/18 19:18:53	N	IV	
R1808738-015	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0020 mg/L	U	1	0.0007	0.0020		9/17/18 19:20:14	N	IV	
RQ1809815-07	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	J	1				9/17/18 19:21:36	N	IV	
RQ1809815-08	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.0007	0.050		9/17/18 19:22:57	N	IV	
R1808738-017	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0035 mg/L	J	1	0.0007	0.0020		9/17/18 19:24:19	N	IV	
R1808738-019	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0040 mg/L	J	1	0.0007	0.0020		9/17/18 19:25:41	N	IV	
R1808738-021	Nitrate+Nitrite as Nitrogen	N/A		Water	0.01 mg/L	10 mL	0.0073 mg/L	J	1	0.0007	0.0020		9/17/18 19:27:02	N	IV	
R1808738-023	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0020 mg/L	U	1	0.0007	0.0020		9/17/18 19:28:23	N	IV	
R1808738-025	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.0020 mg/L	U	1	0.0007	0.0020		9/17/18 19:29:45	N	IV	
RQ1809815-17	Nitrate+Nitrite as Nitrogen	MS	R1808738-025	Water	0.52 mg/L	10 mL	0.523 mg/L	J	1	0.0007	0.050	105	9/17/18 19:31:08	N	IV	
RQ1809815-18	Nitrate+Nitrite as Nitrogen	DMS	R1808738-025	Water	0.52 mg/L	10 mL	0.520 mg/L	J	1	0.0007	0.050	104	<1	9/17/18 19:32:30	N	IV
R1808772-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.0007	0.050		9/17/18 19:35:16	N	I	
R1808773-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.02 mg/L	10 mL	0.025 mg/L	J	1	0.0007	0.050		9/17/18 19:36:38	N	I	
RQ1809815-10	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.04 mg/L	10 mL	1.04 mg/L	J	1				9/17/18 19:37:59	N	I	
RQ1809815-09	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.0007	0.050		9/17/18 19:39:22	N	I	
RQ1809815-12	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.03 mg/L	10 mL	1.03 mg/L	J	1				9/17/18 20:17:40	N	I	

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05			Analyst: MROGERSON		Analysis Lot: 607039		Method/Testcode: 353.2/NO2 NO3 T								
<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC?</u>	<u>Tier</u>
RQ1809815-11	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			9/17/18 20:19:03	N	I
R1808745-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.73 mg/L	10 mL	7.26 mg/L	10	0.007	0.50			9/17/18 20:28:36	N	I
RQ1809815-14	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.05 mg/L	10 mL	1.05 mg/L	1					9/17/18 20:34:04	N	I
RQ1809815-13	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L U	1	0.0007	0.050			9/17/18 20:35:26	N	I

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: MROGERSON

Analysis Lot:

607040

Method/Testcode: 353.2/NO2 NO3 T

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier	
RQ1809816-01	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	1					9/17/18 19:44:51	N	I	
RQ1809816-02	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.0007	0.050		9/17/18 19:46:14	N	I	
RQ1809816-04	Nitrate+Nitrite as Nitrogen	MB		Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.001	0.050		9/17/18 19:46:14	N	I	
RQ1809816-03	Nitrate+Nitrite as Nitrogen	LCS		Water	0.54 mg/L	10 mL	0.538 mg/L	1	0.0007	0.050	108		9/17/18 19:47:36	N	I	
R1808775-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.0007	0.050		9/17/18 19:48:59	N	I	
RQ1809816-13	Nitrate+Nitrite as Nitrogen	MS	R1808775-001	Water	0.52 mg/L	10 mL	0.517 mg/L	1	0.0007	0.050	103		9/17/18 19:50:21	N	I	
RQ1809816-14	Nitrate+Nitrite as Nitrogen	DMS	R1808775-001	Water	0.52 mg/L	10 mL	0.516 mg/L	1	0.0007	0.050	103	<1	9/17/18 19:51:43	N	I	
R1808776-001	Nitrate+Nitrite as Nitrogen	N/A		Water	0.97 mg/L	10 mL	0.966 mg/L	1	0.0007	0.050			9/17/18 19:53:04	N	I	
R1808776-004	Nitrate+Nitrite as Nitrogen	N/A		Water	0.91 mg/L	10 mL	0.907 mg/L	1	0.0007	0.050			9/17/18 19:54:26	N	I	
R1808777-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.00 mg/L	10 mL	0.003 mg/L	J	1	0.0007	0.050		9/17/18 19:55:47	N	I	
R1808778-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.00 mg/L	10 mL	0.002 mg/L	J	1	0.0007	0.050		9/17/18 19:57:09	N	I	
R1808779-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.60 mg/L	10 mL	0.596 mg/L	1	0.0007	0.050			9/17/18 19:58:46	N	I	
R1808780-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.04 mg/L	10 mL	0.037 mg/L	J	1	0.0007	0.050			9/17/18 19:59:52	N	I
RQ1809816-05	Nitrate+Nitrite as Nitrogen	CCV		Water	1.04 mg/L	10 mL	1.04 mg/L	1					9/17/18 20:01:13	N	I	
RQ1809816-06	Nitrate+Nitrite as Nitrogen	CCB		Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.0007	0.050		9/17/18 20:02:35	N	I	
R1808788-002	Nitrate+Nitrite as Nitrogen	N/A		Water	0.21 mg/L	10 mL	0.208 mg/L	1	0.0007	0.050			9/17/18 20:03:58	N	I	
RQ1809816-11	Nitrate+Nitrite as Nitrogen	MS	R1808788-002	Water	0.72 mg/L	10 mL	0.720 mg/L	1	0.0007	0.050	102		9/17/18 20:05:21	N	I	
RQ1809816-12	Nitrate+Nitrite as Nitrogen	DMS	R1808788-002	Water	0.72 mg/L	10 mL	0.721 mg/L	1	0.0007	0.050	103	<1	9/17/18 20:06:44	N	I	
R1808793-002	Nitrate+Nitrite as Nitrogen	N/A		Water	1.05 mg/L	10 mL	105 mg/L	100	0.07	5.0			9/17/18 20:09:28	N	I	
R1808811-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.28 mg/L	10 mL	0.276 mg/L	1	0.0007	0.050			9/17/18 20:10:51	N	I	
R1808812-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.00 mg/L	10 mL	0.001 mg/L	J	1	0.0007	0.050			9/17/18 20:12:13	N	I
R1808838-016	Nitrate+Nitrite as Nitrogen	N/A		Water	0.68 mg/L	10 mL	0.684 mg/L	1	0.0007	0.050			9/17/18 20:13:35	N	IV	
R1808838-019	Nitrate+Nitrite as Nitrogen	N/A		Water	0.69 mg/L	10 mL	0.689 mg/L	1	0.0007	0.050			9/17/18 20:14:57	N	IV	
R1808847-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.03 mg/L	10 mL	0.034 mg/L	J	1	0.0007	0.050			9/17/18 20:16:19	N	I
RQ1809816-07	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.03 mg/L	10 mL	1.03 mg/L	1					9/17/18 20:17:40	N	I	
RQ1809816-08	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.0007	0.050		9/17/18 20:19:03	N	I	
R1808856-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	1.11 mg/L	10 mL	1.11 mg/L	1	0.0007	0.050			9/17/18 20:21:46	N	I	
R1808793-001	Nitrate+Nitrite as Nitrogen	N/A		Water	1.95 mg/L	10 mL	19.5 mg/L	10	0.007	0.50			9/17/18 20:29:58	N	I	
R1808855-001	Nitrate+Nitrite as Nitrogen	N/A		Drinking Water	0.39 mg/L	10 mL	3.86 mg/L	10	0.007	0.50			9/17/18 20:31:20	N	I	
RQ1809816-10	Nitrate+Nitrite as Nitrogen	CCV		Drinking Water	1.05 mg/L	10 mL	1.05 mg/L	1					9/17/18 20:34:04	N	I	
RQ1809816-09	Nitrate+Nitrite as Nitrogen	CCB		Drinking Water	0.00 mg/L	10 mL	0.050 mg/L	U	1	0.0007	0.050			9/17/18 20:35:26	N	I

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analyst: MAR
Instrument: Lachat 8000

Date 9/17/18
Analysis TOTN

Common Dilutions

Dilution	Matrix of Diluent	Common Dilutions											
		1st Dilution		2nd Dilution		3rd Dilution		4th Dilution		5th Dilution			
		mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor
1/2	DT	4	4	1/2									
1/3		3	6	1/3									
1/4		2	6	1/4									
1/5		2	8	1/5									
1/10		1	9	1/10									
1/20		1	1	1/2	1	9	1/20						
1/30		3	6	1/3	1	9	1/30						
1/40		1	3	1/4	1	9	1/40						
1/50		1	4	1/5	1	9	1/50						
1/100		1	9	1/10	1	9	1/100						
1/200		1	1	1/2	1	9	1/200	1	9	1/200			
1/300		3	6	1/3	1	9	1/300	1	9	1/300			
1/400		1	3	1/4	1	9	1/400	1	9	1/400			
1/500		1	4	1/5	1	9	1/500	1	9	1/500			
1/1000		1	9	1/10	1	9	1/1000	1	9	1/1000			
1/2000		1	1	1/2	1	9	1/2000	1	9	1/2000			
1/3000		3	6	1/3	1	9	1/3000	1	9	1/3000			
1/4000		1	3	1/4	1	9	1/4000	1	9	1/4000			
1/10000		1	9	1/10	1	9	1/10000	1	9	1/10000			
1/20000		1	1	1/2	1	9	1/20000	1	9	1/20000			
1/30000		3	6	1/3	1	9	1/30000	1	9	1/30000			
1/40000		1	3	1/4	1	9	1/40000	1	9	1/40000			
1/100000		1	9	1/10	1	9	1/100000	1	9	1/100000			
1/200000		1	1	1/2	1	9	1/200000	1	9	1/200000			
1/400000		1	3	1/4	1	9	1/400000	1	9	1/400000			
1/1000000		1	9	1/10	1	9	1/1000000	1	9	1/1000000			

Special Dilutions

Creator : GABRIELA NITA-JOUSSI

Creation Date : 9/17/2018 5:21:14 PM

Last Modified : 9/17/2018 6:08:40 PM

Description :

Cup	Sample ID	MDF	Weight	Sample Type	Comments
S1	STD 2.000			Calibration Standard	
S2	STD 1.000			Calibration Standard	
S3	STD 0.500			Calibration Standard	
S4	STD 0.200			Calibration Standard	
S5	STD 0.100			Calibration Standard	
S6	STD 0.050			Calibration Standard	
S7	STD 0.010			Calibration Standard	
S8	STD 0.005			Calibration Standard	
S9	STD 0.002			Calibration Standard	
S10	STD 0.000			Calibration Standard	
179	1.000 NO3			Unknown	
180	1.000 NO2			Unknown	
S1	ICV TV= 1.0			Unknown	
S10	ICB			Unknown	
S7	CRDL 0.01			Unknown	
S8	CRDL 0.005			Unknown	
S9	CRDL 0.002			Unknown	
S1	CCV			Unknown	
S10	CCB			Unknown	
1	LCS TV= 0.500			Unknown	
2	R1808308-002	50.0000		Unknown	
3	R1808614-003	5.00000		Unknown	
4	R1808614-005	10.0000		Unknown	
5	R1808614-007	20.0000		Unknown	R@ 2 SO
6	R1808614-007 MS	20.0000		Unknown	J
7	R1808614-007 DMS	20.0000		Unknown	
8	R1808740-001	5.00000		Unknown	
9	R1808740-002	10.0000		Unknown	
10	R1808566-014	20.0000		Unknown	
S1	CCV			Unknown	
S2	CCB			Unknown	
11	R1808566-014 MS	20.0000		Unknown	
12	R1808566-014 DMS	20.0000		Unknown	
13	R1808647-002	5.00000		Unknown	
14	R1808647-004			Unknown	
15	R1808653-001			Unknown	
16	R1808653-002			Unknown	
17	R1808653-003			Unknown	
18	R1808692-002			Unknown	
19	R1808699-001			Unknown	

20	R1808699-002			Unknown	
S1	CCV			Unknown	
S2	CCB			Unknown	
21	R1808699-003			Unknown	
22	R1808699-004			Unknown	
23	R1808699-005			Unknown	
24	R1808699-006			Unknown	Rpt @ 20
25	R1808699-007			Unknown	
26	LCS			Unknown	
27	R1808719-001	200.000		Unknown	
28	R1808719-002			Unknown	
29	R1808725-015			Unknown	
30	R1808725-017			Unknown	
S1	CCV			Unknown	
S2	CCB			Unknown	
31	R1808738-001			Unknown	
32	R1808738-001 MS			Unknown	
33	R1808738-001 DMS			Unknown	
34	R1808738-003			Unknown	
35	R1808738-005			Unknown	
36	R1808738-007			Unknown	
37	R1808738-009			Unknown	
38	R1808738-011			Unknown	
39	R1808738-013			Unknown	-----
40	R1808738-015			Unknown	
S1	CCV			Unknown	
S10	CCB			Unknown	
41	R1808738-017			Unknown	
42	R1808738-019			Unknown	
43	R1808738-021			Unknown	
44	R1808738-023			Unknown	
45	R1808738-025			Unknown	
46	R1808738-025 MS			Unknown	
47	R1808738-025 DMS			Unknown	
48	R1808745-001			Unknown	Rpt @ 10
49	R1808772-001			Unknown	
50	R1808773-001			Unknown	
S1	CCV			Unknown	
S2	CCB			Unknown	

Analyte Table

QC8500 353.2 NO3+N	
	(mg/L)
STD 2.000	2.00000
STD 1.000	1.00000
STD 0.500	0.50000
STD 0.200	0.20000
STD 0.100	0.10000
STD 0.050	0.05000
STD 0.010	0.01000
STD 0.005	0.00500
STD 0.002	0.00200
STD 0.000	0.00000

Creator : GABRIELA NITA-JOUSSI

Creation Date : 9/17/2018 7:43:51 PM

Last Modified : 9/17/2018 8:37:44 PM

Description :

Cup	Sample ID	MDF	Weight	Sample Type	Comments
S1	CCV			Unknown	
S10	CCB			Unknown	
51	LCS			Unknown	
52	R1808775-001			Unknown	
53	R1808775-001 MS			Unknown	
54	R1808775-001 DMS			Unknown	
55	R1808776-001			Unknown	
56	R1808776-004			Unknown	
57	R1808777-001			Unknown	
58	R1808778-001			Unknown	
59	R1808779-001			Unknown	
60	R1808780-001			Unknown	
S1	CCV			Unknown	
S10	CCB			Unknown	
61	R1808788-002			Unknown	
62	R1808788-002 MS			Unknown	
63	R1808788-002 DMS			Unknown	
64	R1808793-001	5.00000		Unknown	Rpt @ 10
65	R1808793-002	100.000		Unknown	
66	R1808811-001			Unknown	
67	R1808812-001			Unknown	
68	R1808838-016			Unknown	
69	R1808838-019			Unknown	
70	R1808847-001			Unknown	
S1	CCV			Unknown	
S10	CCB			Unknown	
71	R1808855-001			Unknown	Rpt @ 10
72	R1808856-001			Unknown	
73	R1808614-007 RPT	50.0000		Unknown	
74	R1808614-007 MS RT	50.0000		Unknown	
75	R1808614-007 DMS RPT	50.0000		Unknown	
76	R1808699-006 RPT	10.0000		Unknown	
77	R1808745-001 RPT	10.0000		Unknown	
78	R1808793-001 RPT	10.0000		Unknown	
79	R1808855-001 RPT	10.0000		Unknown	
80	R1808699-006 RPT	20.0000		Unknown	
S1	CCV			Unknown	
S10	CCB			Unknown	

Analyte Table

QC8500 353.2 NO3+N
(mg/L)

Original Run Filename: OM_9-17-2018_05-21-14PM.OMN Created: 9/17/2018 5:21:14 PM

Original Run Author's Signature: [GABRIELA NITA-JOUSSI]

Current Run Filename: OM_9-17-2018_05-21-14PM.OMN Last Modified: 9/17/2018 6:08:40 PM

Current Run Author's Signature: [GABRIELA NITA-JOUSSI]

Description: Default New Run

Sample	Cup No.	Channel 1		Detection Time	MDF		
		QC8500 353.2 NO3+NO2 (TOTN)					
		Conc. (mg/L)	Area (V.s)				
STD 2.000	S1	2.00000	65.65810	9/17/2018@5:22:17 PM			
STD 1.000	S2	1.00000	34.81995	9/17/2018@5:23:42 PM			
STD 0.500	S3	0.50000	17.69340	9/17/2018@5:25:05 PM			
STD 0.200	S4	0.20000	7.13340	9/17/2018@5:26:29 PM			
STD 0.100	S5	0.10000	3.54688	9/17/2018@5:27:54 PM			
STD 0.050	S6	0.05000	1.77690	9/17/2018@5:29:16 PM			
STD 0.010	S7	0.01000	0.36133	9/17/2018@5:30:38 PM			
STD 0.005	S8	0.00500	0.18876	9/17/2018@5:32:01 PM			
STD 0.002	S9	0.00200	0.09115	9/17/2018@5:33:24 PM			
STD 0.000	S10	0.00000	0.01656	9/17/2018@5:34:46 PM			
DQM Test: Minimum Correlation Coefficient							
Result:	0.99999 > 0.99700						
Message	Pass						
Action	Continue						
1.000 NO3	179	1.01999	34.63062	9/17/2018@5:38:04 PM			
Calibration:	Table/Fig.: 1						
1.000 NO2	180	1.06580	36.18510	9/17/2018@5:39:26 PM			
ICV TV= 1.0	S1	1.01587	34.49080	9/17/2018@5:40:48 PM			
ICB	S10	-0.00123	-0.01780	9/17/2018@5:42:10 PM			
CRDL 0.01	S7	0.01014	0.36797	9/17/2018@5:43:31 PM			
CRDL 0.005	S8	0.00472	0.18401	9/17/2018@5:44:53 PM			
CRDL 0.002	S9	0.00186	0.08698	9/17/2018@5:46:15 PM			
CCV	S1	1.01769	34.55269	9/17/2018@5:47:37 PM			
CCB	S10	-0.00082	-0.00370	9/17/2018@5:48:59 PM			
LCS TV= 0.500	1	0.52519	17.84283	9/17/2018@5:50:22 PM			
R1808308-002	2	46.98877	31.90919	9/17/2018@5:51:45 PM	50.00		
R1808614-003	3	3.65378	24.81746	9/17/2018@5:53:08 PM	5.00		
R1808614-005	4	27.89218	94.65807	9/17/2018@5:54:30 PM	10.00		
R1808614-007	5	30.78338	52.24574	9/17/2018@5:55:52 PM	20.00		
R1808614-007 MS	6	37.83765	64.21278	9/17/2018@5:57:14 PM	20.00		
R1808614-007 DMS	7	37.96557	64.42979	9/17/2018@5:58:36 PM	20.00		
R1808740-001	8	1.68510	11.45861	9/17/2018@5:59:59 PM	5.00		
R1808740-002	9	11.01719	37.40369	9/17/2018@6:01:21 PM	10.00		
R1808566-014	10	13.43356	22.81303	9/17/2018@6:02:43 PM	20.00		
CCV	S1	1.02165	34.68724	9/17/2018@6:04:04 PM			
CCB	S2	1.04051	35.32679	9/17/2018@6:05:26 PM			

Analyte Properties Table for : OM_9-17-2018_05-21-14PM.OMN

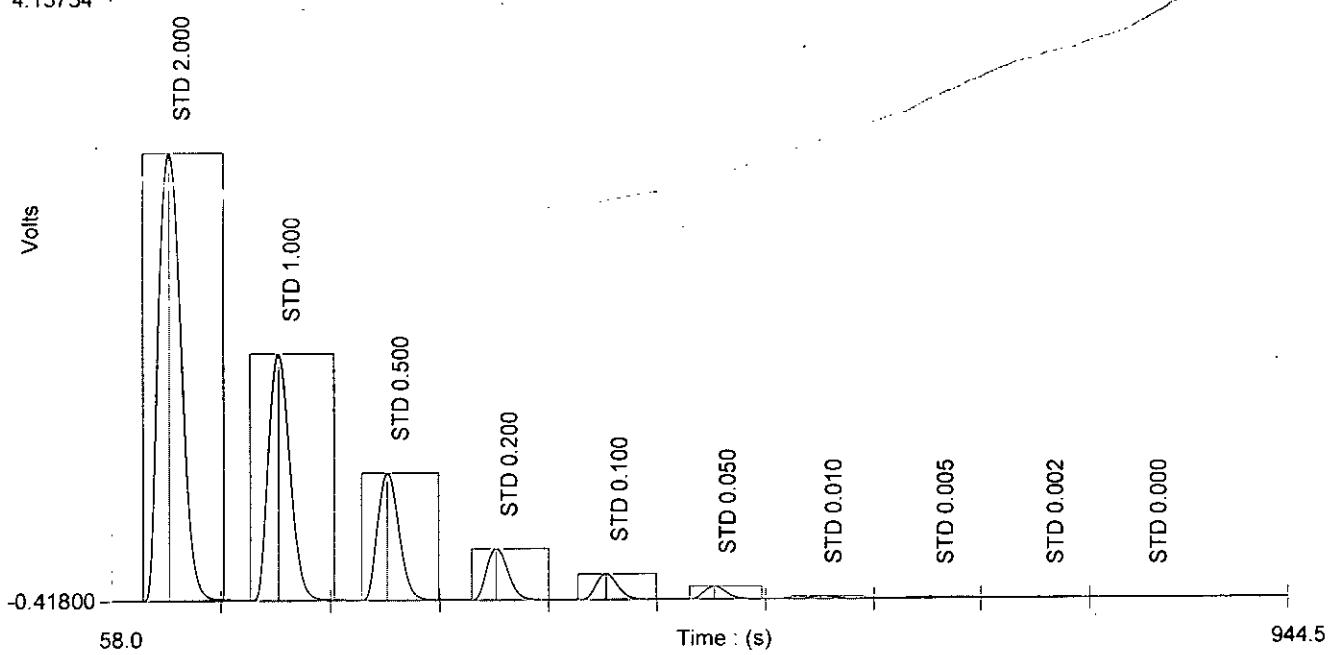
Property	Channel 1
	QC8500
	353.2
Concentration Units	mg/L
Calibration Fit Type	First Order
Clear Calibration	Yes
Force through Zero	No
Calibration Weighting	1/x
Auto Dilution Trigger	No
% of High Standard	110
Quik Chem Method	10-107-04-1-C
Chemistry	Direct/Bipolar
Calibration by Height	No
Inject to Peak Start	17
Peak Base Width	68

Channel 1 - Set: 1 / 4

5.21569

4.13754

Volts



Channel 1 - Set: 2 / 4

5.21569

4.13754

Volts

-0.41800

944.0

Time : (s)

1820.5

1.000 NO₃
1.000 NO₂

ICV TV= 1.0

ICB

CRDL 0.01

CRDL 0.005

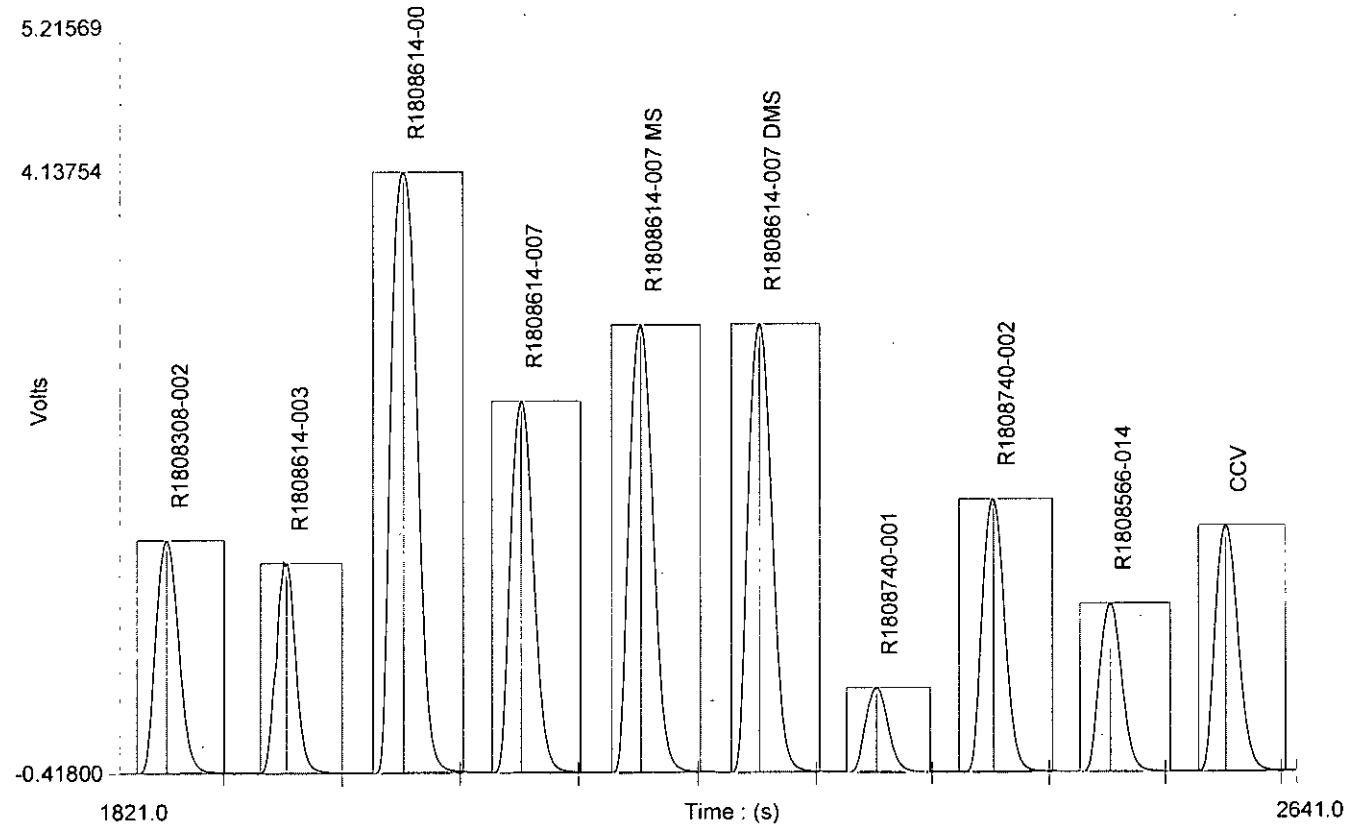
CRDL 0.002

CCV

CCB

LCS TV= 0.500

Channel 1 - Set: 3 / 4

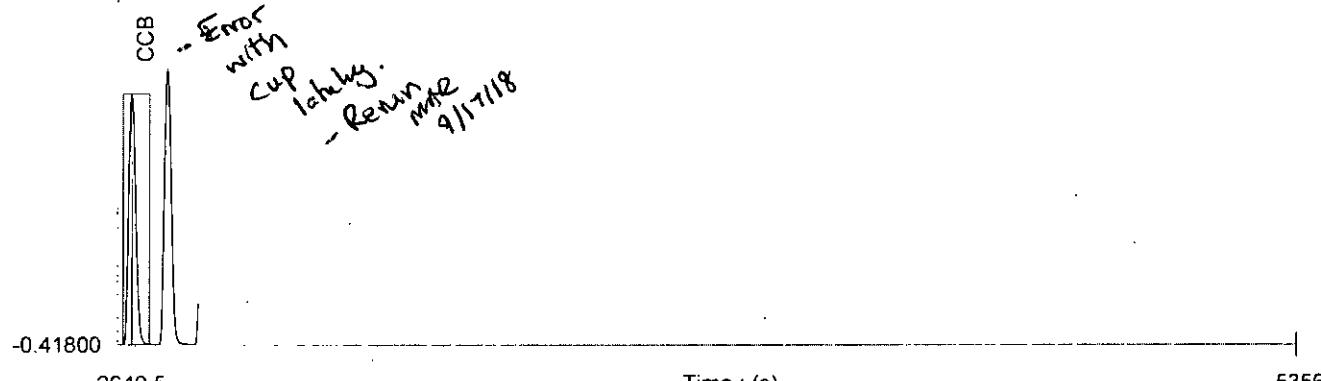


Channel 1 - Set: 4 / 4

5.21569

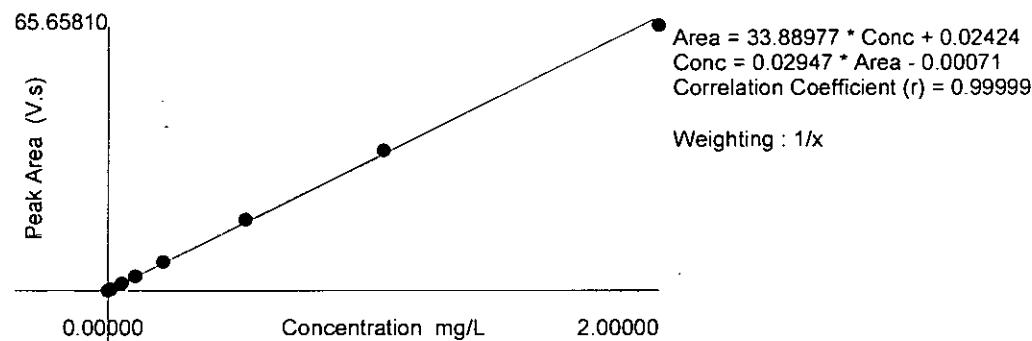
4.13754

Volts

Table : 1 (QC8500 353.2 NO₃+NO₂ (TOTN))

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	2.00000	1	65.65810	3.38798	0.0	3.2	1.93448	9/17/2018	5:22:17 PM
2	1.00000	1	34.81995	1.87004	0.0	-2.7	1.02557	9/17/2018	5:23:42 PM
3	0.50000	1	17.69340	0.96087	0.0	-4.3	0.52078	9/17/2018	5:25:05 PM
4	0.20000	1	7.13340	0.38765	0.0	-4.9	0.20954	9/17/2018	5:26:29 PM
5	0.10000	1	3.54688	0.19224	0.0	-3.9	0.10383	9/17/2018	5:27:54 PM
6	0.05000	1	1.77690	0.09580	0.0	-3.4	0.05167	9/17/2018	5:29:16 PM
7	0.01000	1	0.36133	0.01911	0.0	0.5	0.00994	9/17/2018	5:30:38 PM
8	0.00500	1	0.18876	0.00963	0.0	2.5	0.00486	9/17/2018	5:32:01 PM
9	0.00200	1	0.09115	0.00470	0.0	0.9	0.00198	9/17/2018	5:33:24 PM
10	0.00000	1	0.01656	0.00085			-0.00022	9/17/2018	5:34:46 PM

Figure : 1 (QC8500 353.2 NO₃+NO₂ (TOTN))



Original Run Filename: OM_9-17-2018_06-14-54PM.OMN Created: 9/17/2018 6:14:54 PM

Original Run Author's Signature: [GABRIELA NITA-JOUUPPI]

Current Run Filename: OM_9-17-2018_06-14-54PM.OMN Last Modified: 9/17/2018 7:41:43 PM

Current Run Author's Signature: [GABRIELA NITA-JOUUPPI]

Description: Default New Run

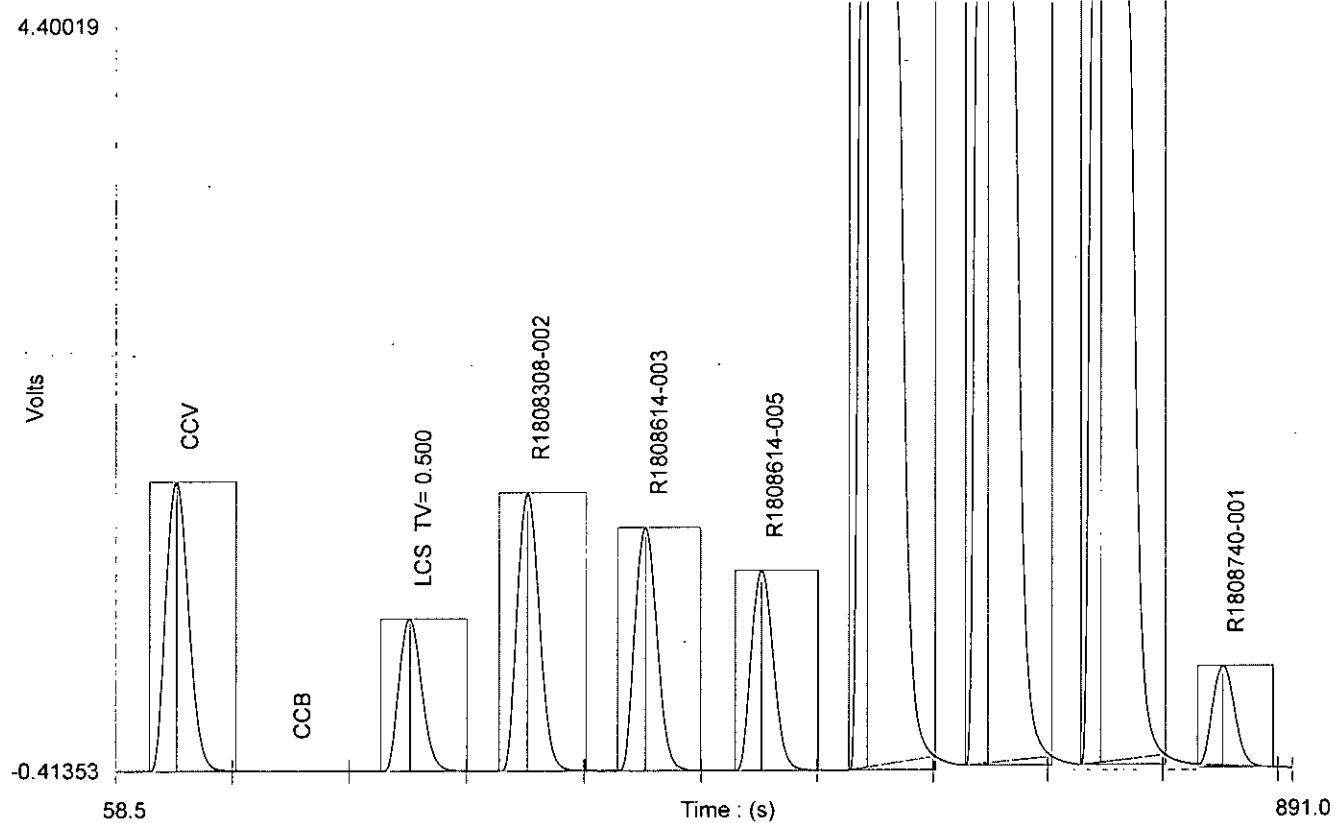
Sample	Cup No.	Channel 1		Detection Time	MDF		
		QC8500 353.2 NO3+NO2 (TOTN)					
		Conc. (mg/L)	Area (V.s)				
CCV	S1	1.02592	34.83190	9/17/2018@6:15:55 PM			
CCB	S10	-0.00037	0.01154	9/17/2018@6:17:17 PM			
LCS TV= 0.500	1	0.53141	18.05400	9/17/2018@6:18:40 PM			
R1808308-002	2	47.86692	32.50507	9/17/2018@6:20:03 PM	50.00		
R1808614-003	3	4.15858	28.24289	9/17/2018@6:21:25 PM	5.00		
R1808614-005	4	34.38889	23.35927	9/17/2018@6:22:48 PM	50.00		
R1808614-007	5	257.82385	174.97571	9/17/2018@6:24:10 PM	50.00		
R1808614-007 MS	6	256.22461	173.89052	9/17/2018@6:25:33 PM	50.00		
R1808614-007 DMS	7	255.78267	173.59064	9/17/2018@6:26:55 PM	50.00		
R1808740-001	8	1.69644	11.53552	9/17/2018@6:28:17 PM	5.00		
R1808740-002	9	11.09192	37.65725	9/17/2018@6:29:38 PM	10.00		
R1808566-014	10	13.56053	23.02843	9/17/2018@6:31:00 PM	20.00		
CCV	S1	1.02793	34.90007	9/17/2018@6:32:22 PM			
CCB	S10	-0.00128	-0.01938	9/17/2018@6:33:44 PM			
R1808566-014 MS	11	22.74903	38.61605	9/17/2018@6:36:06 PM	20.00		
R1808566-014 DMS	12	22.78787	38.68193	9/17/2018@6:36:27 PM	20.00		
R1808647-002	13	4.94731	33.59498	9/17/2018@6:37:49 PM	5.00		
R1808647-004	14	0.00202	0.09254	9/17/2018@6:39:10 PM			
R1808653-001	15	0.00094	0.05603	9/17/2018@6:40:32 PM			
R1808653-002	16	0.00016	0.02951	9/17/2018@6:41:54 PM			
R1808653-003	17	0.00599	0.22719	9/17/2018@6:43:17 PM			
R1808692-002	18	0.00095	0.05627	9/17/2018@6:44:40 PM			
R1808699-001	19	0.00885	0.32414	9/17/2018@6:46:03 PM			
R1808699-002	20	-0.00345	-0.09300	9/17/2018@6:47:25 PM			
CCV	S1	1.00052	33.97006	9/17/2018@6:48:47 PM			
CCB	S10	-0.00096	-0.00869	9/17/2018@6:50:09 PM			
R1808699-003	21	0.46897	15.93561	9/17/2018@6:51:31 PM			
R1808699-004	22	0.00739	0.27474	9/17/2018@6:52:54 PM			
R1808699-005	23	0.02056	0.72171	9/17/2018@6:54:16 PM			
R1808699-006	24	4.81574	163.41495	9/17/2018@6:55:38 PM			
R1808699-007	25	0.03103	1.07668	9/17/2018@6:57:00 PM			
LCS	26	0.52165	17.72285	9/17/2018@6:58:21 PM			
R1808719-001	27	379.01147	64.32051	9/17/2018@6:59:43 PM	200.00		
R1808719-002	28	0.02690	0.93680	9/17/2018@7:01:05 PM			
R1808725-015	29	0.00382	0.15372	9/17/2018@7:02:26 PM			
R1808725-017	30	0.35685	12.13148	9/17/2018@7:03:47 PM			
CCV	S1	1.03626	35.18272	9/17/2018@7:05:09 PM			
CCB	S10	-0.00122	-0.01740	9/17/2018@7:06:31 PM			
R1808738-001	31	0.00779	0.28834	9/17/2018@7:07:54 PM			
R1808738-001 MS	32	0.52137	17.71334	9/17/2018@7:09:17 PM			
R1808738-001 DMS	33	0.52441	17.81649	9/17/2018@7:10:39 PM			
R1808738-003	34	0.01294	0.46310	9/17/2018@7:12:02 PM			
R1808738-005	35	0.01600	0.56694	9/17/2018@7:13:24 PM			
R1808738-007	36	0.00363	0.14714	9/17/2018@7:14:47 PM			
R1808738-009	37	0.10872	3.71272	9/17/2018@7:16:09 PM			
R1808738-011	38	0.01970	0.69252	9/17/2018@7:17:31 PM			
R1808738-013	39	0.00740	0.27507	9/17/2018@7:18:53 PM			
R1808738-015	40	0.00122	0.06523	9/17/2018@7:20:14 PM			
CCV	S1	1.04350	35.42855	9/17/2018@7:21:36 PM			
CCB	S10	-0.00086	-0.00536	9/17/2018@7:22:57 PM			
R1808738-017	41	0.00352	0.14326	9/17/2018@7:24:19 PM			
Calibration:		Table/Fig. : 1					
R1808738-019	42	0.00402	0.16037	9/17/2018@7:25:41 PM			
R1808738-021	43	0.00726	0.27032	9/17/2018@7:27:02 PM			
R1808738-023	44	0.00133	0.06905	9/17/2018@7:28:23 PM			
R1808738-025	45	0.00161	0.07849	9/17/2018@7:29:45 PM			
R1808738-025 MS	46	0.52267	17.75730	9/17/2018@7:31:08 PM			
R1808738-025 DMS	47	0.51975	17.65818	9/17/2018@7:32:30 PM			

R1808745-001	48	3.83706	130.20970	9/17/2018@7:33:53 PM
R1808772-001	49	-0.00076	-0.00169	9/17/2018@7:35:16 PM
R1808773-001	50	0.02451	0.85558	9/17/2018@7:36:38 PM
CCV	S1	1.03884	35.27020	9/17/2018@7:37:59 PM
CCB	S10	-0.00083	-0.00418	9/17/2018@7:39:22 PM

Analyte Properties Table for : OM_9-17-2018_06-14-54PM.OMN

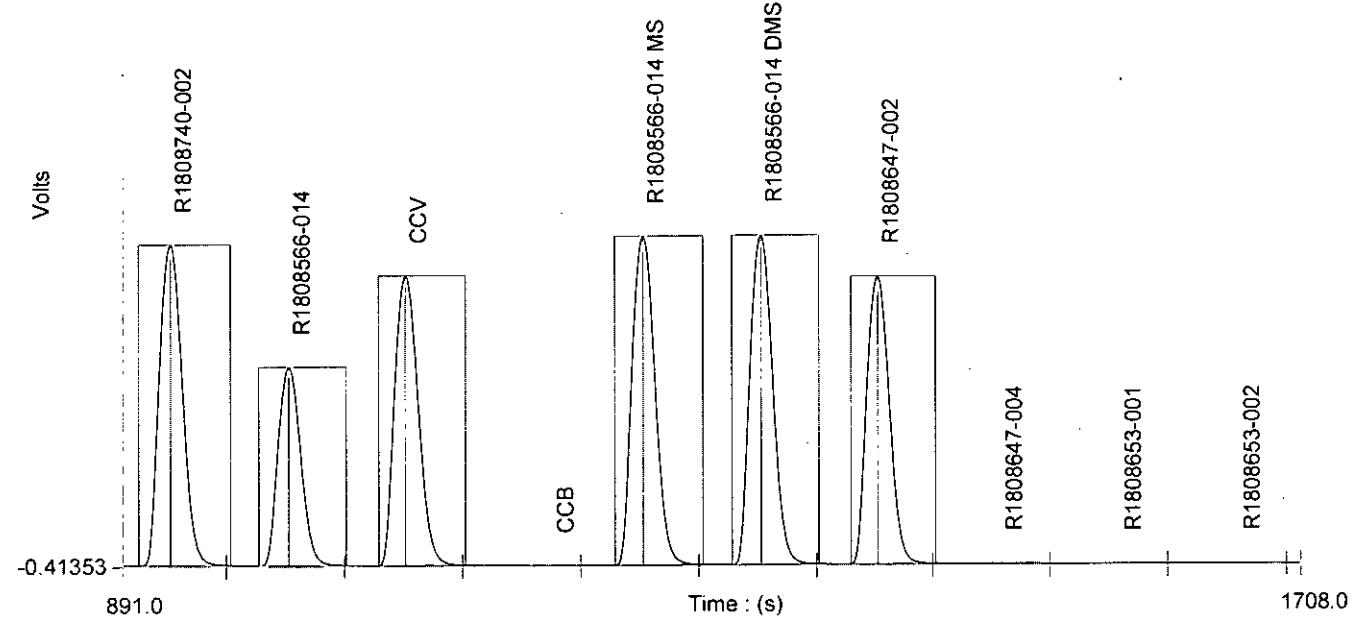
Property	Channel 1
	QC8500 353.2 NO3+NO2 (TOTN)
Concentration Units	mg/L
Calibration Fit Type	First Order
Clear Calibration	Yes
Force through Zero	No
Calibration Weighting	1/x
Auto Dilution Trigger	No
% of High Standard	110
Quik Chem Method	10-107-04-1-C
Chemistry	Direct/Bipolar
Calibration by Height	No
Inject to Peak Start	17
Peak Base Width	68

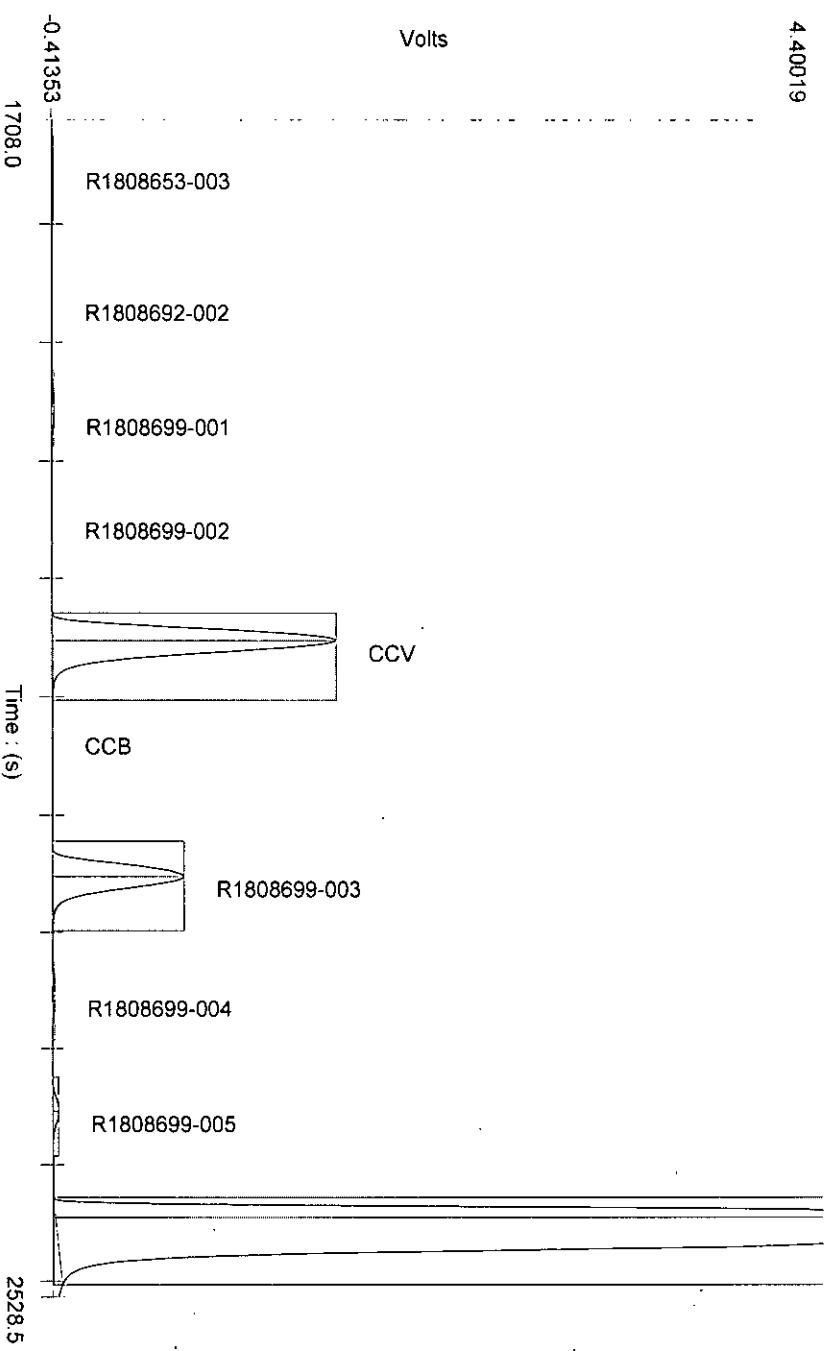
Channel 1 - Set 1 / 7



Channel 1 - Set: 2 / 7

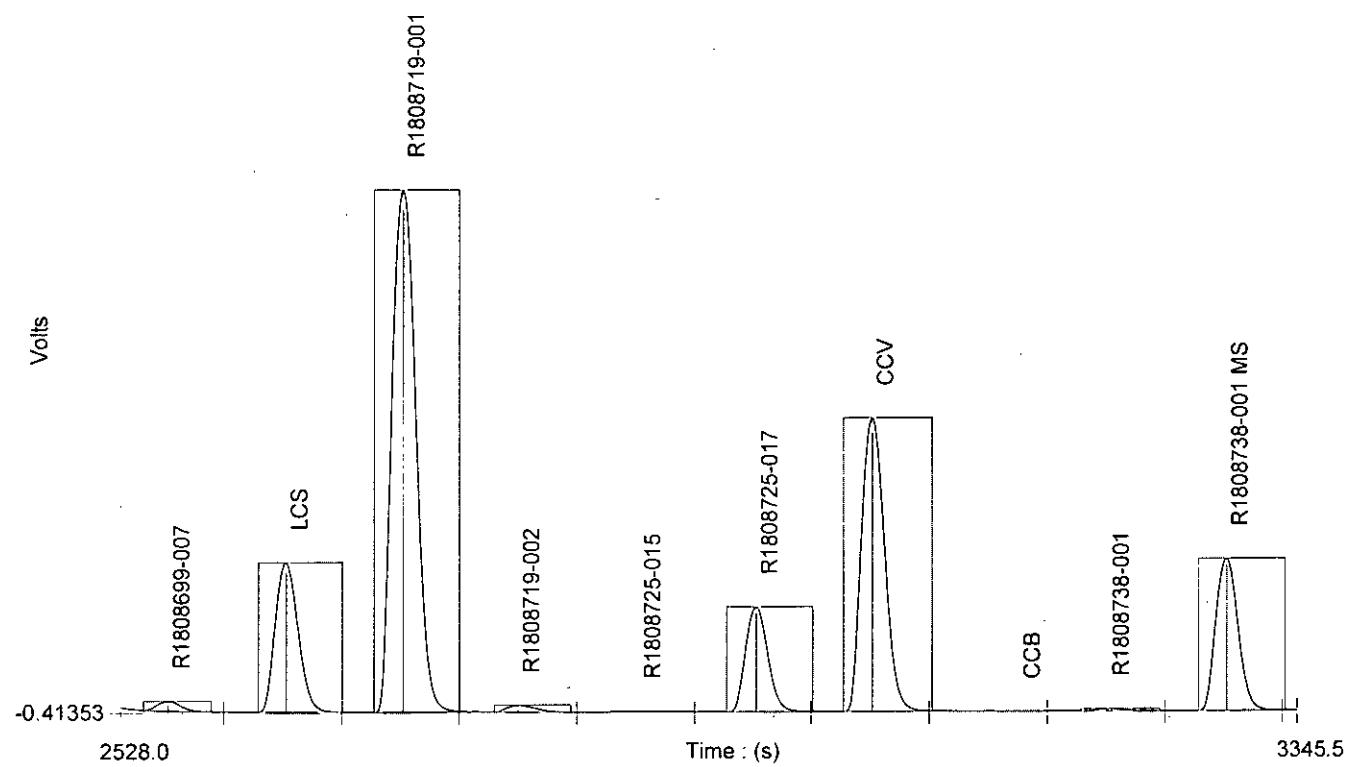
4.40019





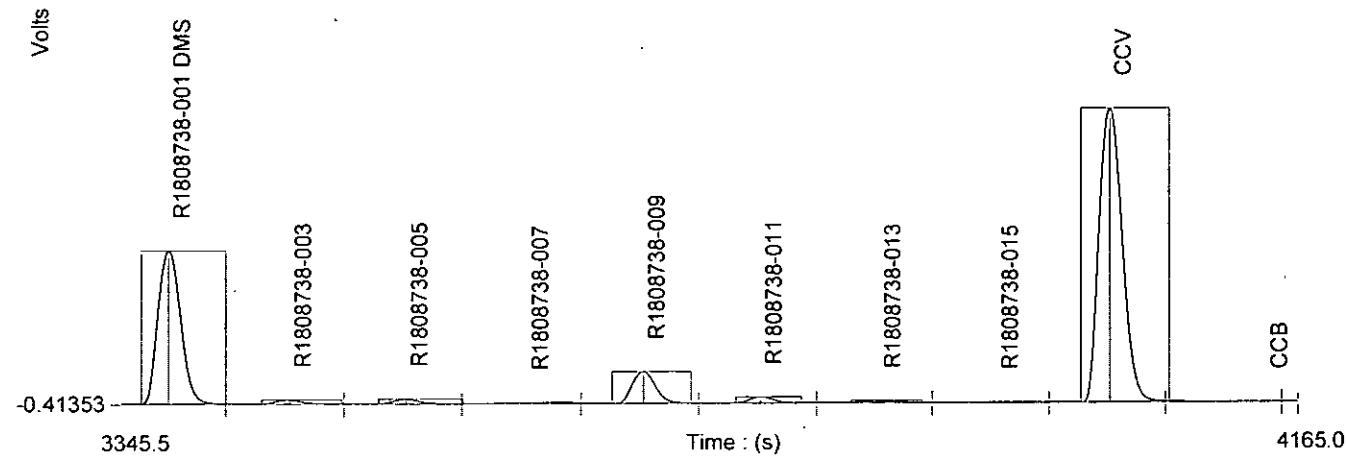
Channel 1 - Set: 4 / 7

4.40019



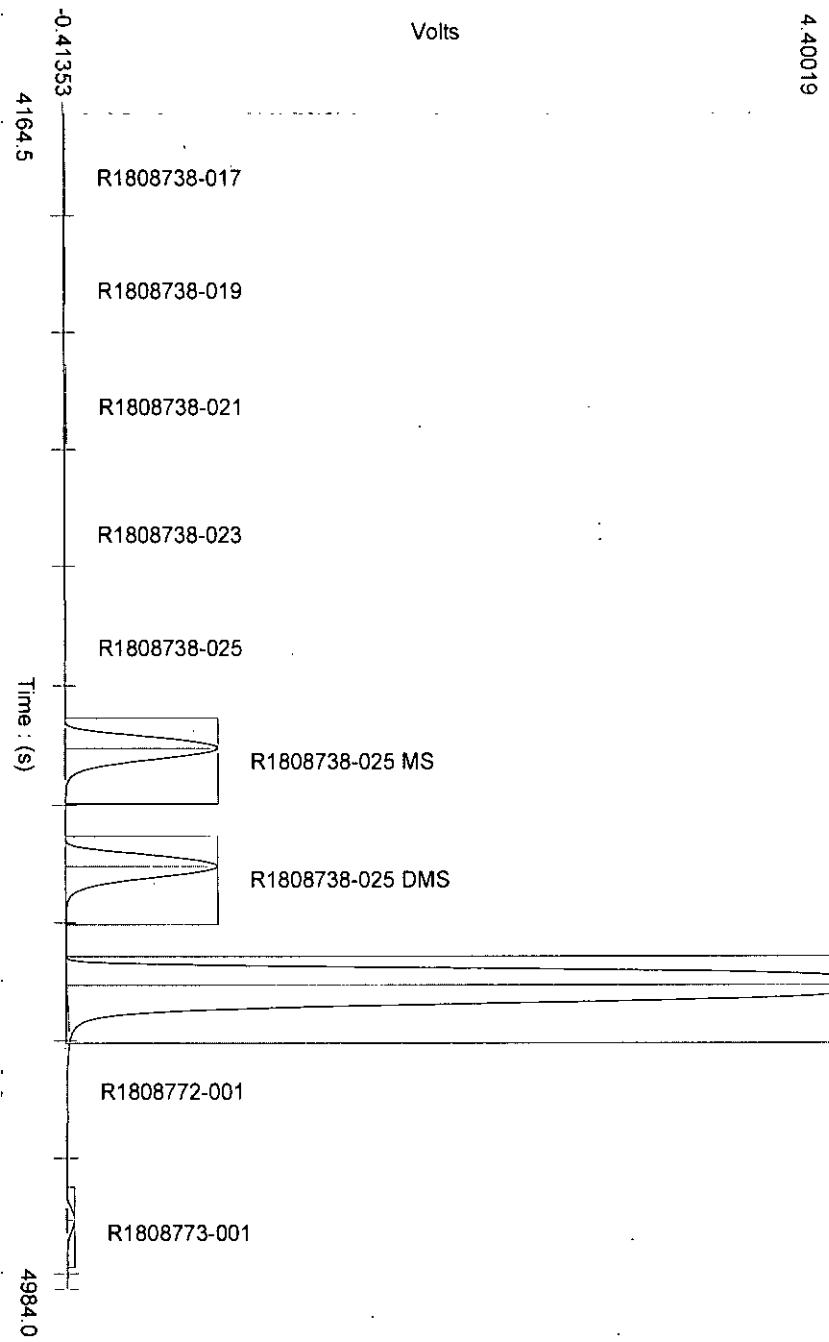
Channel 1 - Set: 5 / 7

4.40019



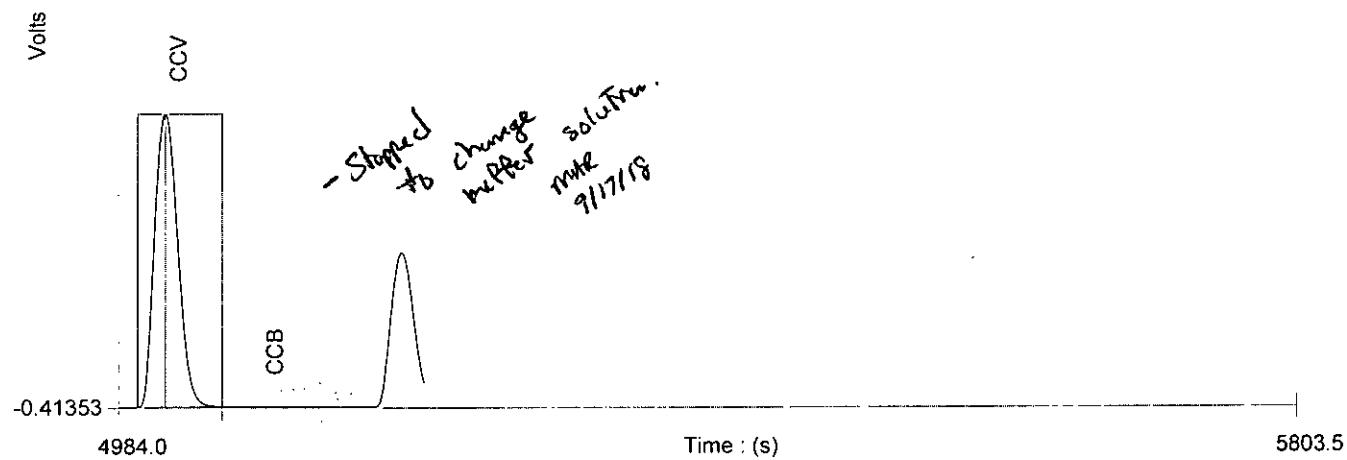
Channel 1 - Set: 6 / 7

4.40019

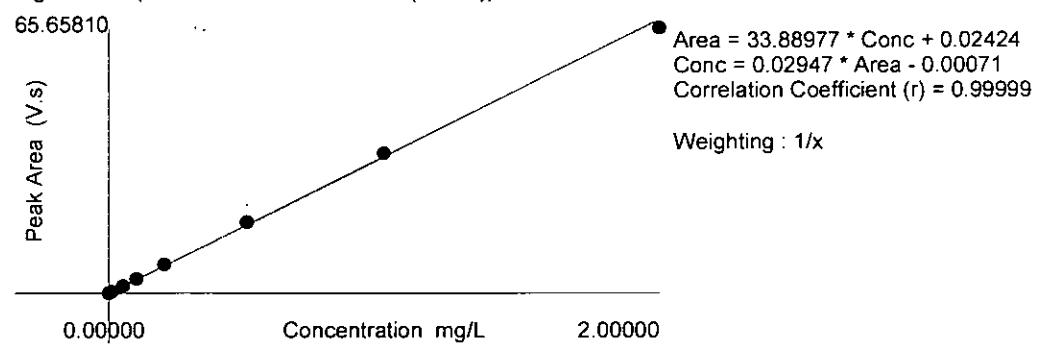


Channel 1 - Set: 7 / 7

4.40019

Table : 1 (QC8500 353.2 NO₃+NO₂ (TOTN))

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	2.00000	1	65.65810	3.38798	0.0	3.2	1.93448	9/17/2018	5:22:17 PM
2	1.00000	1	34.81995	1.87004	0.0	-2.7	1.02557	9/17/2018	5:23:42 PM
3	0.50000	1	17.69340	0.96087	0.0	-4.3	0.52078	9/17/2018	5:25:05 PM
4	0.20000	1	7.13340	0.38765	0.0	-4.9	0.20954	9/17/2018	5:26:29 PM
5	0.10000	1	3.54688	0.19224	0.0	-3.9	0.10383	9/17/2018	5:27:54 PM
6	0.05000	1	1.77690	0.09580	0.0	-3.4	0.05167	9/17/2018	5:29:16 PM
7	0.01000	1	0.36133	0.01911	0.0	0.5	0.00994	9/17/2018	5:30:38 PM
8	0.00500	1	0.18876	0.00963	0.0	2.5	0.00486	9/17/2018	5:32:01 PM
9	0.00200	1	0.09115	0.00470	0.0	0.9	0.00198	9/17/2018	5:33:24 PM
10	0.00000	1	0.01656	0.00085			-0.00022	9/17/2018	5:34:46 PM

Figure : 1 (QC8500 353.2 NO₃+NO₂ (TOTN))

Original Run Filename: OM_9-17-2018_07-43-51PM.OMN Created: 9/17/2018 7:43:51 PM

Original Run Author's Signature: [GABRIELA NITA-JOUUPPI]

Current Run Filename: OM_9-17-2018_07-43-51PM.OMN Last Modified: 9/17/2018 8:37:44 PM

Current Run Author's Signature: [GABRIELA NITA-JOUUPPI]

Description: Default New Run

Sample	Cup No.	Channel 1		Detection Time	MDF		
		QC8500 353.2					
		NO3+NO2 (TOTN)					
		Conc. (mg/L)	Area (V.s)				
CCV	S1	1.04399	35.44520	9/17/2018@7:44:51 PM			
CCB	S10	-0.00035	0.01221	9/17/2018@7:46:14 PM			
Calibration:		Table/Fig. : 1					
LCS	51	0.53828	18.28715	9/17/2018@7:47:36 PM			
R1808775-001	52	0.00146	0.07359	9/17/2018@7:48:59 PM			
R1808775-001 MS	53	0.51650	17.54823	9/17/2018@7:50:21 PM			
R1808775-001 DMS	54	0.51570	17.52085	9/17/2018@7:51:43 PM			
R1808776-001	55	0.96556	32.78386	9/17/2018@7:53:04 PM			
R1808776-004	56	0.90748	30.81347	9/17/2018@7:54:26 PM			
R1808777-001	57	0.00343	0.14024	9/17/2018@7:55:47 PM			
R1808778-001	58	0.00154	0.07608	9/17/2018@7:57:09 PM			
R1808779-001	59	0.59619	20.25176	9/17/2018@7:58:46 PM			
R1808780-001	60	0.03668	1.26849	9/17/2018@7:59:52 PM			
CCV	S1	1.03751	35.22519	9/17/2018@8:01:13 PM			
CCB	S10	-0.00093	-0.00758	9/17/2018@8:02:35 PM			
R1808788-002	61	0.20778	7.07353	9/17/2018@8:03:58 PM			
R1808788-002 MS	62	0.72026	24.46135	9/17/2018@8:05:21 PM			
R1808788-002 DMS	63	0.72090	24.48316	9/17/2018@8:06:44 PM			
R1808793-001	64	15.42816	104.71498	9/17/2018@8:08:06 PM	5.00		
R1808793-002	65	105.27321	35.74164	9/17/2018@8:09:28 PM	100.00		
R1808811-001	66	0.27643	9.40269	9/17/2018@8:10:51 PM			
R1808812-001	67	0.00143	0.07252	9/17/2018@8:12:13 PM			
R1808838-016	68	0.68383	23.22545	9/17/2018@8:13:35 PM			
R1808838-019	69	0.68863	23.38823	9/17/2018@8:14:57 PM			
R1808847-001	70	0.03385	1.17238	9/17/2018@8:16:19 PM			
CCV	S1	1.03110	35.00782	9/17/2018@8:17:40 PM			
CCB	S10	-0.00160	-0.03023	9/17/2018@8:19:03 PM			
R1808855-001	71	2.92405	99.23280	9/17/2018@8:20:25 PM			
R1808856-001	72	1.11101	37.71901	9/17/2018@8:21:46 PM			
R1808614-007 RPT	73	33.77701	22.94407	9/17/2018@8:23:08 PM	50.00		
R1808614-007 MS RT	74	56.74638	38.53041	9/17/2018@8:24:29 PM	50.00		
R1808614-007 DMS RPT	75	56.71721	38.51062	9/17/2018@8:25:51 PM	50.00		
R1808699-006 RPT	76	20.10798	68.24741	9/17/2018@8:27:13 PM	10.00		
R1808745-001 RPT	77	7.26260	24.66492	9/17/2018@8:28:36 PM	10.00		
R1808793-001 RPT	78	19.49218	66.15809	9/17/2018@8:29:58 PM	10.00		
R1808855-001 RPT	79	3.86080	13.12312	9/17/2018@8:31:20 PM	10.00		
R1808699-006 RPT	80	21.52864	36.54575	9/17/2018@8:32:43 PM	20.00		
CCV	S1	1.04592	35.51059	9/17/2018@8:34:04 PM			
CCB	S10	-0.00084	-0.00438	9/17/2018@8:35:26 PM			

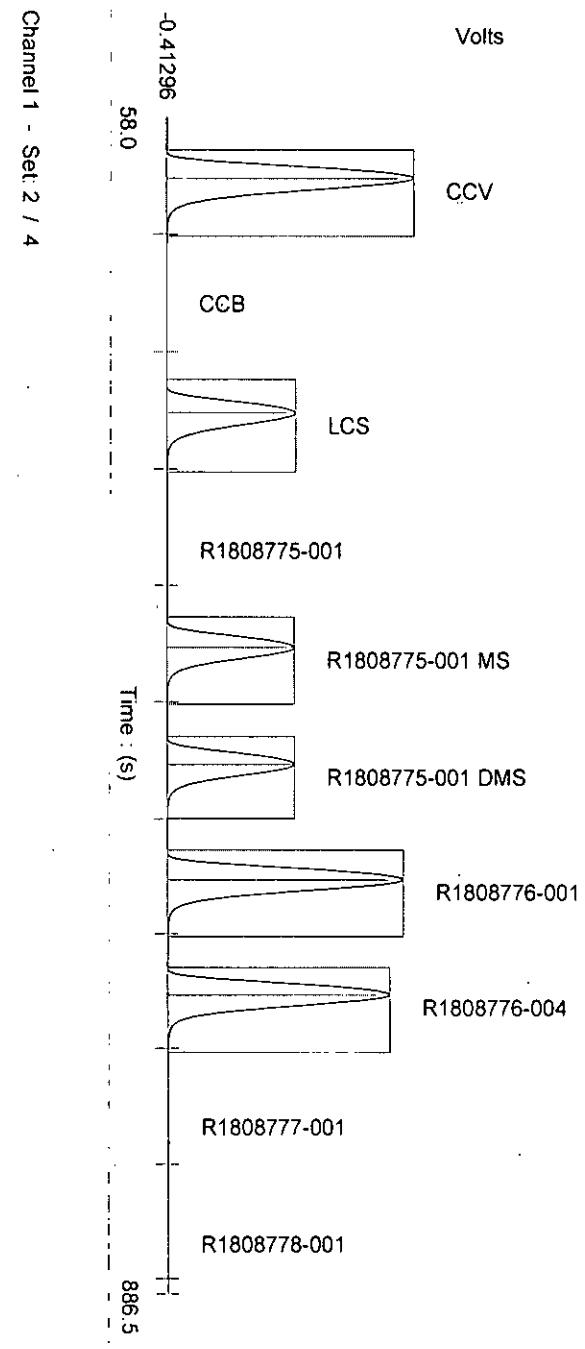
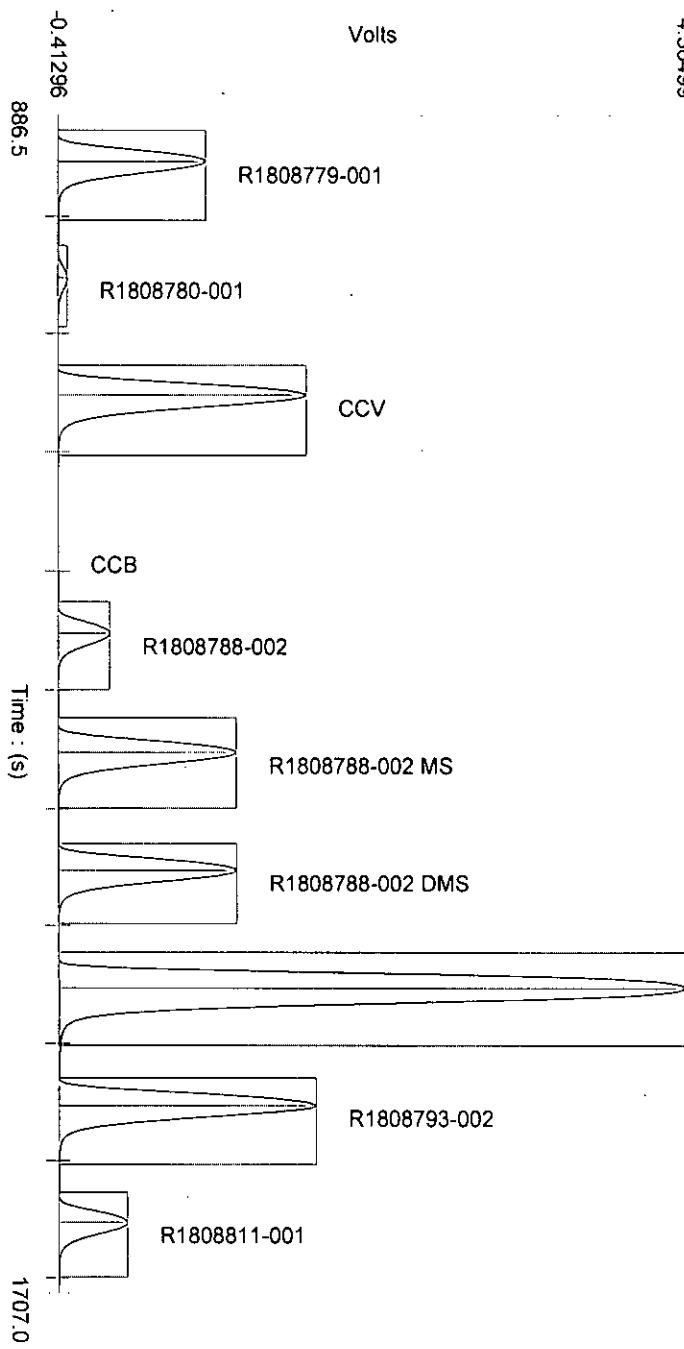
Analyte Properties Table for : OM_9-17-2018_07-43-51PM.OMN

Property	Channel 1
	QC8500
	353.2
Concentration Units	mg/L
Calibration Fit Type	First Order
Clear Calibration	Yes
Force through Zero	No
Calibration Weighting	1/x
Auto Dilution Trigger	No
% of High Standard	110
Quik Chem Method	10-107-04-1-C
Chemistry	Direct/Bipolar
Calibration by Height	No
Inject to Peak Start	17

Peak Base Width

Channel 1 - Set: 1 / 4

4.36499 —



Channel 1 - Set: 3 / 4

4.36499

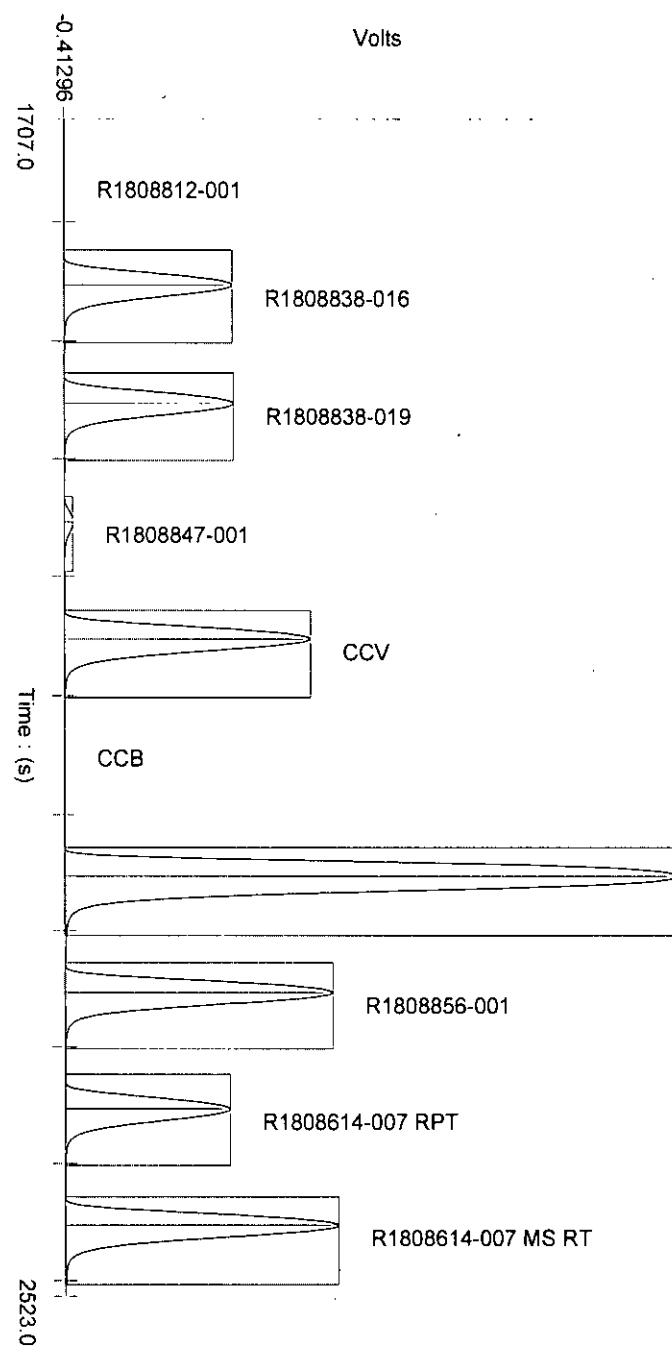
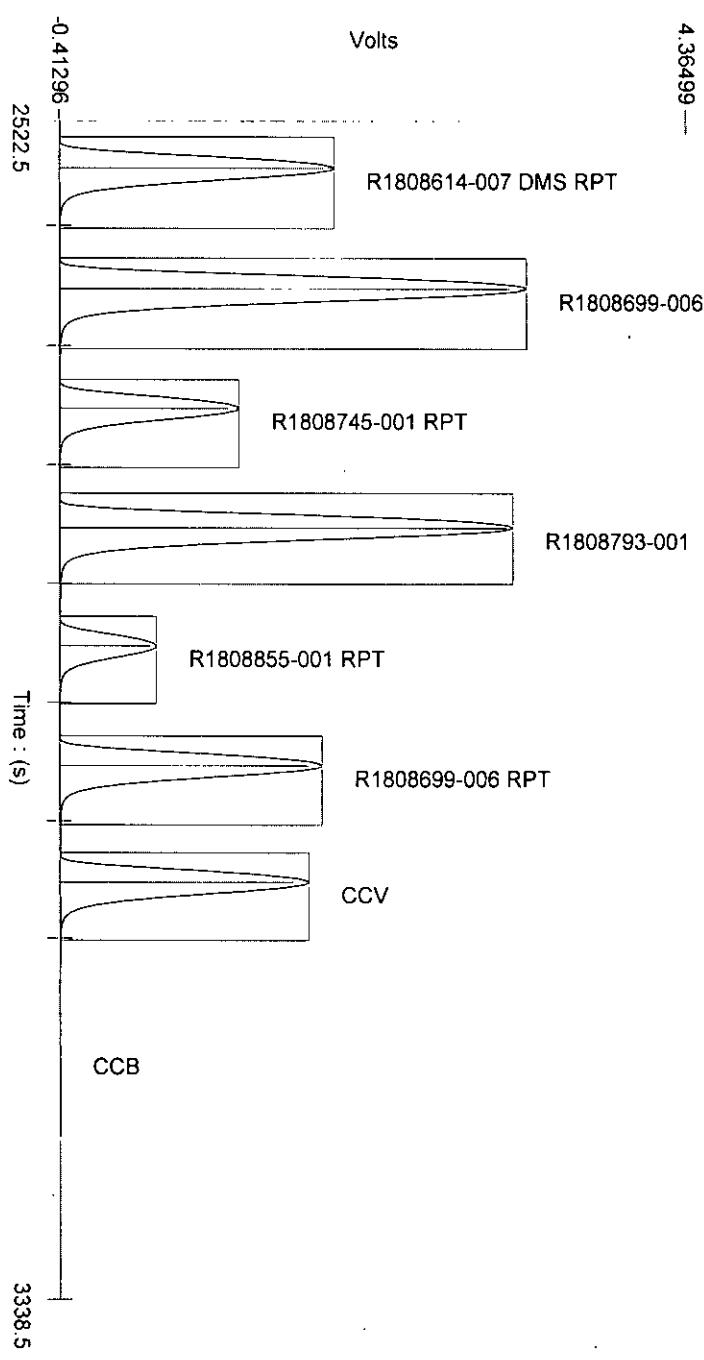
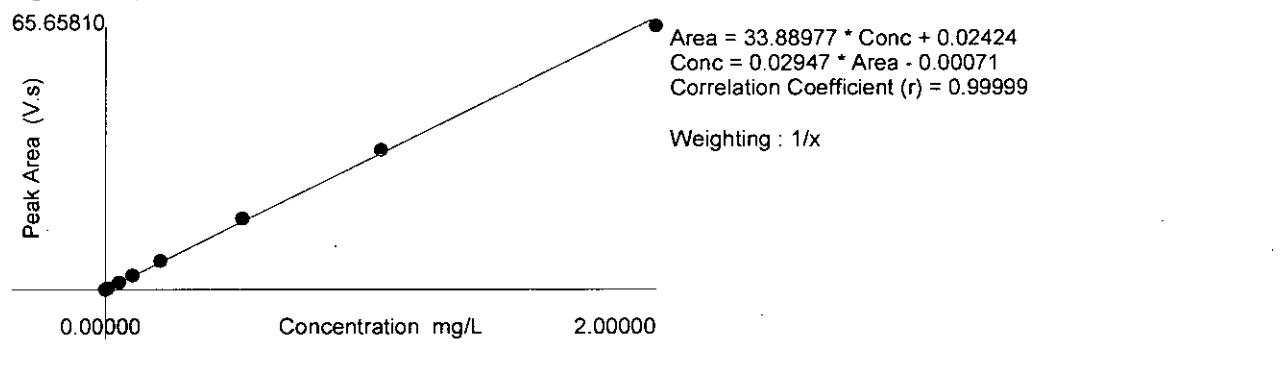


Table : 1 (QC8500 353.2 NO₃+NO₂ (TOTN))

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	2.00000	1	65.65810	3.38798	0.0	3.2	1.93448	9/17/2018	5:22:17 PM
2	1.00000	1	34.81995	1.87004	0.0	-2.7	1.02557	9/17/2018	5:23:42 PM
3	0.50000	1	17.69340	0.96087	0.0	-4.3	0.52078	9/17/2018	5:25:05 PM
4	0.20000	1	7.13340	0.38765	0.0	-4.9	0.20954	9/17/2018	5:26:29 PM
5	0.10000	1	3.54688	0.19224	0.0	-3.9	0.10383	9/17/2018	5:27:54 PM
6	0.05000	1	1.77690	0.09580	0.0	-3.4	0.05167	9/17/2018	5:29:16 PM
7	0.01000	1	0.36133	0.01911	0.0	0.5	0.00994	9/17/2018	5:30:38 PM
8	0.00500	1	0.18876	0.00963	0.0	2.5	0.00486	9/17/2018	5:32:01 PM
9	0.00200	1	0.09115	0.00470	0.0	0.9	0.00198	9/17/2018	5:33:24 PM
10	0.00000	1	0.01656	0.00085			-0.00022	9/17/2018	5:34:46 PM

Figure : 1 (QC8500 353.2 NO₃+NO₂ (TOTN))

ALS Environmental
1565 Jefferson Rd., Rochester, NY 14623

General Chemistry Analytical Run Cover Sheet

Analyst: MAR

Date: 9/17/18

Analysis: NO₃ + NO₂ (Combined Levels 0.002 - 2.0ppm)

Instrument: Lachat 8500

		Working Stock Prep, Serial Dilutions			
PRIMARY STOCKS	Log ID Receipt/Exp. Dates	Stock Soln (mLs)	Stock Soln (mg/L)	Final Volume (mLs)	True Value (mg/L)
Standards	ID: 193242	1.0	1000	10	100 (A)
	Received: 09/17/2018	1.0	100	10	10 (B)
	Expires: 05/31/2020				
Reference	ID: 177787	1.0	1000	10	100
	Received: 12/06/2016	1.0	100	10	10 (C)
	Expires: 11/30/2019				
Column Check, NO ₂	ID: 193307	1.0	1000	10	100 (D)
	Received: 09/17/18	1.0	100	10	10 (E)
	Expires: 03/31/19				
Quality Control					
Column Check, NO ₃	(1.0 mg/L Std.)	1.0	10 (B)	10	1.00
Column Check, NO ₂	(1.0 mg/L Ref.)	1.0	10 (E)	10	1.00
I/CCV		1.00	10.0 (C)	10	1.00
LCS/MS		0.05	100 (A)	10	0.50

Standard Curve Prep

	Concentration (mg/L)	mLs UPDI	mLs 10 mg/L Working Stock (B)
	2.00	8.00	2.00
	1.00	9.00	1.00
	0.50	9.50	0.50
	0.20	9.80	0.20
	0.10	1/10 dil'n of 1.00	
	0.050	1/10 dil'n of 0.50	
	0.010	1/10 dil'n of 0.10	
	0.005	1/10 dil'n of 0.050	
	0.002	1/100 dil'n of 0.20	
	0.000	10.00	0.00

REAGENTS	Log ID	Expiration Date
Ammonium Hydroxide Buff.	192966	7/27/2019
Sulfanilamide Color Rgt.	193226	9/30/2018

COMMENTS

Instrument Log filled in? (Y) (N)

Analytical Results Summary

Instrument Name: R-FIA-01 Analyst: CWOODS Analysis Lot: 608069 Method/Testcode: 351.2/TKN

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1810162-01	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.87 mg/L	20 mL	3.87 mg/L	1					9/24/18 17:58:55	N	II
RQ1810162-07	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.05 mg/L	20 mL	0.20 mg/L	U 1	0.08	0.20			9/24/18 17:59:37	N	II
RQ1810056-01	Nitrogen, Total Kjeldahl (TKN)	MB		Water	0.08 mg/L	20 mL	0.08 mg/L	J 1	0.08	0.20			9/24/18 18:05:17	N	IV
RQ1810056-02	Nitrogen, Total Kjeldahl (TKN)	LCS		Water	2.31 mg/L	20 mL	2.31 mg/L	1	0.08	0.20	92		9/24/18 18:05:58	N	IV
RQ1810162-02	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.86 mg/L	20 mL	3.86 mg/L	1					9/24/18 18:07:21	N	II
RQ1810162-08	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.03 mg/L	20 mL	0.20 mg/L	U 1	0.08	0.20			9/24/18 18:08:03	N	II
R1808568-015	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.75 mg/L	20 mL	0.75 mg/L	1	0.08	0.10			9/24/18 18:08:45	N	IV
RQ1810056-03	Nitrogen, Total Kjeldahl (TKN)	MS	R1808568-015	Water	2.97 mg/L	20 mL	2.97 mg/L	1	0.08	0.20	89*		9/24/18 18:09:26	N	IV
RQ1810056-04	Nitrogen, Total Kjeldahl (TKN)	DMS	R1808568-015	Water	3.04 mg/L	20 mL	3.04 mg/L	1	0.08	0.20	92	2	9/24/18 18:10:09	N	IV
R1808568-016	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.61 mg/L	20 mL	0.61 mg/L	1	0.08	0.10			9/24/18 18:10:51	N	IV
R1808669-007	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	1.64 mg/L	20 mL	1.64 mg/L	1	0.08	0.20			9/24/18 18:12:17	N	II
R1808701-002	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	2.89 mg/L	20 mL	2.89 mg/L	1	0.08	0.20			9/24/18 18:12:59	N	I
R1808696-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.40 mg/L	20 mL	0.40 mg/L	1	0.08	0.20			9/24/18 18:13:42	N	II
R1808697-002	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.77 mg/L	20 mL	0.77 mg/L	1	0.08	0.20			9/24/18 18:15:07	N	II
RQ1810162-03	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.89 mg/L	20 mL	3.89 mg/L	1					9/24/18 18:15:49	N	II
RQ1810162-09	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.05 mg/L	20 mL	0.20 mg/L	U 1	0.08	0.20			9/24/18 18:16:31	N	II
R1808702-002	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	1.38 mg/L	20 mL	1.38 mg/L	1	0.08	0.20			9/24/18 18:17:54	N	II
R1808708-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.20 mg/L	20 mL	0.20 mg/L	U 1	0.08	0.20			9/24/18 18:18:35	N	II
R1808708-002	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.20 mg/L	20 mL	0.20 mg/L	U 1	0.08	0.20			9/24/18 18:19:17	N	II
R1808708-003	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.27 mg/L	20 mL	0.27 mg/L	1	0.08	0.20			9/24/18 18:19:58	N	II
R1808708-004	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.26 mg/L	20 mL	0.26 mg/L	1	0.08	0.20			9/24/18 18:20:42	N	II
R1808708-005	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.12 mg/L	20 mL	0.20 mg/L	U 1	0.08	0.20			9/24/18 18:21:26	N	II
R1808708-006	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.34 mg/L	20 mL	0.33 mg/L	1	0.08	0.20			9/24/18 18:22:08	N	II

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-01

Analyst: CWOODS

Analysis Lot:

608069

Method/Testcode: 351.2/TKN

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>POL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC?</u>	<u>Tier</u>
RQ1810056-05	Nitrogen, Total Kjeldahl (TKN)	MS	R1808708-006	Water	2.45 mg/L	20 mL	2.45 mg/L	1	0.08	0.20	85*	<1	9/24/18 18:22:51	N	II
RQ1810056-06	Nitrogen, Total Kjeldahl (TKN)	DMS	R1808708-006	Water	2.46 mg/L	20 mL	2.46 mg/L	1	0.08	0.20	85*				
RQ1810162-04	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.95 mg/L	20 mL	3.95 mg/L	1					9/24/18 18:24:16	N	II
RQ1810162-10	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.01 mg/L	20 mL	0.20 mg/L	U 1	0.08	0.20			9/24/18 18:24:58	N	II
RQ1810162-05	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.88 mg/L	20 mL	3.88 mg/L	1					9/24/18 19:06:14	N	II
RQ1810162-11	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.02 mg/L	20 mL	0.20 mg/L	U 1	0.08	0.20			9/24/18 19:06:58	N	II
R1808662-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	5.54 mg/L	20 mL	55.4 mg/L	10	0.8	2.0			9/24/18 19:07:41	N	II
R1808697-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	5.26 mg/L	20 mL	21.1 mg/L	4	0.30	0.80			9/24/18 19:09:06	N	II
R1808702-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	5.24 mg/L	20 mL	10.5 mg/L	2	0.15	0.40			9/24/18 19:09:49	N	II
RQ1810162-06	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.94 mg/L	20 mL	3.94 mg/L	1					9/24/18 19:14:49	N	II
RQ1810162-12	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.03 mg/L	20 mL	0.20 mg/L	U 1	0.08	0.20			9/24/18 19:15:32	N	II

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-01 Analyst: CWOODS Analysis Lot: 608070 Method/Testcode: 351.2/TKN

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1810163-01	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.88 mg/L	20 mL	3.88 mg/L	1					9/24/18 17:42:16	N	IV
RQ1810163-07	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.01 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 17:42:57	N	IV
RQ1810055-01	Nitrogen, Total Kjeldahl (TKN)	MB		Water	0.06 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 17:43:39	N	IV
RQ1810055-02	Nitrogen, Total Kjeldahl (TKN)	LCS		Water	2.32 mg/L	20 mL	2.32 mg/L	1	0.08	0.20	93		9/24/18 17:44:20	N	IV
R1808568-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.90 mg/L	20 mL	0.90 mg/L	1	0.08	0.10			9/24/18 17:45:43	N	IV
RQ1810055-03	Nitrogen, Total Kjeldahl (TKN)	MS	R1808568-001	Water	3.22 mg/L	20 mL	3.22 mg/L	1	0.08	0.20	93		9/24/18 17:46:25	N	IV
RQ1810055-04	Nitrogen, Total Kjeldahl (TKN)	DMS	R1808568-001	Water	3.11 mg/L	20 mL	3.11 mg/L	1	0.08	0.20	88*	3	9/24/18 17:47:05	N	IV
R1808568-002	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.42 mg/L	20 mL	0.42 mg/L	1	0.08	0.10			9/24/18 17:47:46	N	IV
R1808568-003	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.51 mg/L	20 mL	0.51 mg/L	1	0.08	0.10			9/24/18 17:48:26	N	IV
R1808568-004	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.78 mg/L	20 mL	0.78 mg/L	1	0.08	0.10			9/24/18 17:49:09	N	IV
R1808568-005	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.79 mg/L	20 mL	0.79 mg/L	1	0.08	0.10			9/24/18 17:49:52	N	IV
RQ1810163-02	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.87 mg/L	20 mL	3.87 mg/L	1					9/24/18 17:50:34	N	IV
RQ1810163-08	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.05 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 17:51:17	N	IV
R1808568-006	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	1.01 mg/L	20 mL	1.01 mg/L	1	0.08	0.10			9/24/18 17:51:59	N	IV
R1808568-007	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.52 mg/L	20 mL	0.52 mg/L	1	0.08	0.10			9/24/18 17:52:42	N	IV
R1808568-008	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.43 mg/L	20 mL	0.43 mg/L	1	0.08	0.10			9/24/18 17:53:23	N	IV
R1808568-009	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.12 mg/L	20 mL	0.12 mg/L	1	0.08	0.10			9/24/18 17:54:05	N	IV
R1808568-010	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.40 mg/L	20 mL	0.40 mg/L	1	0.08	0.10			9/24/18 17:54:46	N	IV
R1808568-011	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.52 mg/L	20 mL	0.52 mg/L	1	0.08	0.10			9/24/18 17:55:28	N	IV
R1808568-012	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.71 mg/L	20 mL	0.71 mg/L	1	0.08	0.10			9/24/18 17:56:09	N	IV
R1808568-013	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.63 mg/L	20 mL	0.63 mg/L	1	0.08	0.10			9/24/18 17:56:51	N	IV
R1808568-014	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.69 mg/L	20 mL	0.69 mg/L	1	0.08	0.10			9/24/18 17:57:32	N	IV
RQ1810055-05	Nitrogen, Total Kjeldahl (TKN)	MS	R1808568-014	Water	2.93 mg/L	20 mL	2.93 mg/L	1	0.08	0.20	90		9/24/18 17:58:14	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-01 Analyst: CWOODS Analysis Lot: 608070 Method/Testcode: 351.2/TKN

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC?</u>	<u>Tier</u>
RQ1810163-03	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.87 mg/L	20 mL	3.87 mg/L	1					9/24/18 17:58:55	N	IV
RQ1810163-09	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.05 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 17:59:37	N	IV
RQ1810055-06	Nitrogen, Total Kjeldahl (TKN)	DMS	R1808568-014	Water	2.91 mg/L	20 mL	2.91 mg/L	1	0.08	0.20	89*	<1	9/24/18 18:00:20	N	IV
R1808936-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.72 mg/L	20 mL	0.72 mg/L	1	0.08	0.10			9/24/18 18:01:02	N	II
R1808982-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.51 mg/L	20 mL	0.51 mg/L	1	0.08	0.10			9/24/18 18:01:45	N	II
R1808982-005	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.52 mg/L	20 mL	0.52 mg/L	1	0.08	0.10			9/24/18 18:02:27	N	II
R1809002-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.42 mg/L	20 mL	0.42 mg/L	1	0.08	0.10			9/24/18 18:03:10	N	II
R1809002-005	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.65 mg/L	20 mL	0.65 mg/L	1	0.08	0.10			9/24/18 18:03:53	N	II
R1809053-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	1.06 mg/L	20 mL	1.06 mg/L	1	0.08	0.20			9/24/18 18:04:35	N	II
RQ1810163-04	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.86 mg/L	20 mL	3.86 mg/L	1					9/24/18 18:07:21	N	IV
RQ1810163-10	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.03 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 18:08:03	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-01			Analyst: CWOODS		Analysis Lot:		608071	Method/Testcode: 351.2/TKN							
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1810164-01	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.95 mg/L	20 mL	3.95 mg/L	1					9/24/18 18:24:16	N	IV
RQ1810164-07	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.01 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 18:24:58	N	IV
RQ1810058-01	Nitrogen, Total Kjeldahl (TKN)	MB		Water	0.03 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 18:25:41	N	I
R1808845-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	1.26 mg/L	20 mL	1.26 mg/L	1	0.08	0.20			9/24/18 18:27:48	N	I
R1808880-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	5.57 mg/L	5.0000 mL	22.3 mg/L	1	0.30	0.80			9/24/18 18:28:29	N	II
R1808653-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.81 mg/L	20 mL	0.81 mg/L	1	0.08	0.10			9/24/18 18:29:11	N	IV
R1808653-002	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.80 mg/L	20 mL	0.80 mg/L	1	0.08	0.10			9/24/18 18:29:52	N	IV
R1808653-003	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	5.57 mg/L	20 mL	5.57 mg/L	1	0.08	0.10			9/24/18 18:30:34	N	IV
R1808708-007	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.08 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 18:31:17	N	II
RQ1810058-03	Nitrogen, Total Kjeldahl (TKN)	MS	R1808708-007	Water	2.41 mg/L	20 mL	2.41 mg/L	1	0.08	0.20	96		9/24/18 18:32:01	N	II
RQ1810164-02	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.91 mg/L	20 mL	3.91 mg/L	1					9/24/18 18:32:45	N	IV
RQ1810164-08	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.05 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 18:33:27	N	IV
RQ1810058-04	Nitrogen, Total Kjeldahl (TKN)	DMS	R1808708-007	Water	2.37 mg/L	20 mL	2.37 mg/L	1	0.08	0.20	95	2	9/24/18 18:34:10	N	II
R1808708-008	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.16 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 18:34:52	N	II
R1808708-009	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.15 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 18:35:35	N	II
R1808719-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	3.36 mg/L	10.0000 mL	6.71 mg/L	1	0.15	0.40			9/24/18 18:36:17	N	II
R1808738-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	1.54 mg/L	20 mL	1.54 mg/L	1	0.08	0.10			9/24/18 18:39:05	N	IV
R1808738-003	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.95 mg/L	20 mL	0.95 mg/L	1	0.08	0.10			9/24/18 18:39:47	N	IV
R1808738-005	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.82 mg/L	20 mL	0.82 mg/L	1	0.08	0.10			9/24/18 18:40:28	N	IV
RQ1810164-03	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.94 mg/L	20 mL	3.94 mg/L	1					9/24/18 18:41:10	N	IV
RQ1810164-09	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	0.00 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 18:41:54	N	IV
R1808738-007	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	1.37 mg/L	20 mL	1.37 mg/L	1	0.08	0.10			9/24/18 18:42:37	N	IV
R1808738-009	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.83 mg/L	20 mL	0.83 mg/L	1	0.08	0.10			9/24/18 18:43:21	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-01

Analyst: CWOODS

Analysis Lot:

608071

Method/Testcode: 351.2/TKN

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC?</u>	<u>Tier</u>
R1808738-011	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.69 mg/L	20 mL	0.69 mg/L	1	0.08	0.10			9/24/18 18:44:04	N	IV
R1808741-002	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	4.93 mg/L	20 mL	4.93 mg/L	1	0.08	0.20			9/24/18 18:45:30	N	II
RQ1810058-05	Nitrogen, Total Kjeldahl (TKN)	MS	R1808741-002	Water	6.99 mg/L	20 mL	6.99 mg/L	1	0.08	0.20	82*		9/24/18 18:46:14	N	II
RQ1810058-06	Nitrogen, Total Kjeldahl (TKN)	DMS	R1808741-002	Water	7.17 mg/L	20 mL	7.17 mg/L	1	0.08	0.20	90	3	9/24/18 18:46:56	N	II
RQ1810164-04	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.94 mg/L	20 mL	3.94 mg/L	1					9/24/18 18:49:47	N	IV
RQ1810164-10	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.03 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 18:50:29	N	IV
RQ1810164-05	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.88 mg/L	20 mL	3.88 mg/L	1					9/24/18 19:06:14	N	IV
RQ1810164-11	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.02 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 19:06:58	N	IV
RQ1810058-02	Nitrogen, Total Kjeldahl (TKN)	LCS		Water	2.31 mg/L	20 mL	2.31 mg/L	1	0.08	0.20	92		9/24/18 19:10:31	N	I
R1808719-002	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	5.82 mg/L	10.0000 mL	465 mg/L	40	6	16			9/24/18 19:11:14	N	II
R1808721-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.75 mg/L	20 mL	0.75 mg/L	1	0.08	0.20			9/24/18 19:11:56	N	I
R1808721-002	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	6.96 mg/L	1.0000 mL	278 mg/L	2	3.0	8.0			9/24/18 19:12:39	N	I
R1808741-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	4.69 mg/L	10.0000 mL	28.1 mg/L	3	0.5	1.2			9/24/18 19:13:21	N	II
RQ1810164-06	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.94 mg/L	20 mL	3.94 mg/L	1					9/24/18 19:14:49	N	IV
RQ1810164-12	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.03 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 19:15:32	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-01

Analyst: CWOODS

Analysis Lot:

608072

Method/Testcode: 351.2/TKN

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1810165-01	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.94 mg/L	20 mL	3.94 mg/L	1					9/24/18 18:41:10	N	IV
RQ1810165-07	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	0.00 mg/L	20 mL	0.20 mg/L U	1	0.08	0.20			9/24/18 18:41:54	N	IV
RQ1810059-01	Nitrogen, Total Kjeldahl (TKN)	MB		Water	0.04 mg/L	20 mL	0.20 mg/L U	1	0.08	0.20			9/24/18 18:47:39	N	IV
RQ1810059-02	Nitrogen, Total Kjeldahl (TKN)	LCS		Water	2.34 mg/L	20 mL	2.34 mg/L	1	0.08	0.20	94		9/24/18 18:48:22	N	IV
RQ1810165-02	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.94 mg/L	20 mL	3.94 mg/L	1					9/24/18 18:49:47	N	IV
RQ1810165-08	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.03 mg/L	20 mL	0.20 mg/L U	1	0.08	0.20			9/24/18 18:50:29	N	IV
R1808738-013	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	1.87 mg/L	20 mL	1.87 mg/L	1	0.08	0.10			9/24/18 18:51:12	N	IV
RQ1810059-03	Nitrogen, Total Kjeldahl (TKN)	MS	R1808738-013	Water	4.23 mg/L	20 mL	4.23 mg/L	1	0.08	0.20	95		9/24/18 18:51:53	N	IV
RQ1810059-04	Nitrogen, Total Kjeldahl (TKN)	DMS	R1808738-013	Water	4.14 mg/L	20 mL	4.14 mg/L	1	0.08	0.20	91	2	9/24/18 18:52:37	N	IV
R1808738-015	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.51 mg/L	20 mL	0.51 mg/L	1	0.08	0.10			9/24/18 18:53:20	N	IV
R1808738-017	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.73 mg/L	20 mL	0.73 mg/L	1	0.08	0.10			9/24/18 18:54:04	N	IV
R1808738-019	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.91 mg/L	20 mL	0.91 mg/L	1	0.08	0.10			9/24/18 18:54:48	N	IV
RQ1810165-03	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.93 mg/L	20 mL	3.93 mg/L	1					9/24/18 18:58:23	N	IV
RQ1810165-09	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.01 mg/L	20 mL	0.20 mg/L U	1	0.08	0.20			9/24/18 18:59:05	N	IV
RQ1810165-04	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.88 mg/L	20 mL	3.88 mg/L	1					9/24/18 19:06:14	N	IV
RQ1810165-10	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.02 mg/L	20 mL	0.20 mg/L U	1	0.08	0.20			9/24/18 19:06:58	N	IV
R1808738-021	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.85 mg/L	20 mL	0.85 mg/L	1	0.08	0.10			9/24/18 19:14:05	N	IV
RQ1810165-05	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.94 mg/L	20 mL	3.94 mg/L	1					9/24/18 19:14:49	N	IV
RQ1810165-11	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.03 mg/L	20 mL	0.20 mg/L U	1	0.08	0.20			9/24/18 19:15:32	N	IV
RQ1810059-05	Nitrogen, Total Kjeldahl (TKN)	MS	R1808738-025	Water	2.77 mg/L	20 mL	2.77 mg/L	1	0.08	0.20	90		9/24/18 19:17:43	N	IV
RQ1810059-06	Nitrogen, Total Kjeldahl (TKN)	DMS	R1808738-025	Water	2.74 mg/L	20 mL	2.74 mg/L	1	0.08	0.20	89*	<1	9/24/18 19:18:27	N	IV
RQ1810165-06	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.91 mg/L	20 mL	3.91 mg/L	1					9/24/18 19:23:26	N	IV
RQ1810165-12	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	0.16 mg/L	20 mL	0.16 mg/L J	1	0.08	0.20			9/24/18 19:24:08	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-01

Analyst: CWOODS

Analysis Lot:

608072

Method/Testcode: 351.2/TKN

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC?</u>	<u>Tier</u>
R1808784-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	5.51 mg/L	10.0000 mL	44.1 mg/L	4	0.6	1.6			9/24/18 19:26:21	N	I
R1808784-002	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	7.31 mg/L	20 mL	29.2 mg/L	4	0.30	0.80			9/24/18 19:27:05	N	I
R1808791-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	6.09 mg/L	10.0000 mL	48.7 mg/L	4	0.6	1.6			9/24/18 19:27:48	N	I
R1808791-003	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	6.21 mg/L	10.0000 mL	49.7 mg/L	4	0.6	1.6			9/24/18 19:28:32	N	I
R1808791-005	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	5.31 mg/L	10.0000 mL	106 mg/L	10	1.5	4.0			9/24/18 19:29:15	N	I
R1808791-006	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	3.03 mg/L	20 mL	30.3 mg/L	10	0.8	2.0			9/24/18 19:29:59	N	I
R1808792-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	2.96 mg/L	10.0000 mL	59.1 mg/L	10	1.5	4.0			9/24/18 19:30:43	N	I
RQ1810165-13	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.98 mg/L	20 mL	3.98 mg/L	1					9/24/18 19:31:25	N	IV
RQ1810165-15	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.02 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 19:32:08	N	IV
R1808738-023	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	1.55 mg/L	20 mL	1.55 mg/L	1	0.08	0.10			9/24/18 19:32:50	N	IV
R1808738-025	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.53 mg/L	20 mL	0.53 mg/L	1	0.08	0.10			9/24/18 19:33:33	N	IV
R1808783-001	Nitrogen, Total Kjeldahl (TKN)	N/A		Water	0.72 mg/L	20 mL	0.72 mg/L	1	0.08	0.20			9/24/18 19:34:16	N	I
RQ1810165-14	Nitrogen, Total Kjeldahl (TKN)	CCV		Water	3.99 mg/L	20 mL	3.99 mg/L	1					9/24/18 19:34:58	N	IV
RQ1810165-16	Nitrogen, Total Kjeldahl (TKN)	CCB		Water	-0.05 mg/L	20 mL	0.20 mg/L	U	1	0.08	0.20		9/24/18 19:35:43	N	IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Preparation Information Benchsheet

Prep Run#: 322420

Team: GenChem/NSMITH

Prep WorkFlow: Gen Dist TKN

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/21/18 02:21 PM

#	Lab Code	Client ID	B#	Amt. Ext	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ1810055-01	MB		20mL	351.2/TKN				20.00mL			
2	RQ1810055-02	LCS		20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
3	R1808568-001	13-WALK-35.6-09052018-W	.06	20mL	351.2/TKN				20.00mL			
4	RQ1810055-03	R1808568-001 MS	.06	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
5	RQ1810055-04	R1808568-001 DMS	.06	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
6	R1808568-002	13-MONH-4.1-09052018-W	.06	20mL	351.2/TKN				20.00mL			
7	R1808568-003	13-LGUN-6.0-09052018-W	.06	20mL	351.2/TKN				20.00mL			
8	R1808568-004	13-WALK-29.9-09052018-W	.06	20mL	351.2/TKN				20.00mL			
9	R1808568-005	13-WALK-29.9-09052018-W-DUP	.06	20mL	351.2/TKN				20.00mL			
10	R1808568-006	13-GUNK-37.7-09052018-W	.06	20mL	351.2/TKN				20.00mL			
11	R1808568-007	13-GUNK_T35-0.2-09052018-W	.06	20mL	351.2/TKN				20.00mL			
12	R1808568-008	13-GUNK-40.3-09052018-W	.06	20mL	351.2/TKN				20.00mL			
13	R1808568-009	13-TINW-0.5-09062018-W-FB	.06	20mL	351.2/TKN				20.00mL			
14	R1808568-010	13-PKIL-0.4-09062018-W	.06	20mL	351.2/TKN				20.00mL			
15	R1808568-011	13-WALK-19.0-09062018-W	.06	20mL	351.2/TKN				20.00mL			
16	R1808568-012	13-GUNK-0.4-09062018-W	.06	20mL	351.2/TKN				20.00mL			
17	R1808568-013	13-WALK-22.8-09062018-W	.06	20mL	351.2/TKN				20.00mL			
18	R1808568-014	13-DWAR-2.0-09062018-W	.06	20mL	351.2/TKN				20.00mL			
19	RQ1810055-05	R1808568-014 MS	.06	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
20	RQ1810055-06	R1808568-014 DMS	.06	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
21	R1808936-001	020 Comp	.01	20mL	351.2/TKN				20.00mL			
22	R1808982-001	020 Comp	.02	20mL	351.2/TKN				20.00mL			

Preparation Information Benchsheet

Prep Run#: 322420

Team: GenChem/NSMITH

Prep WorkFlow: Gen Dist TKN

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/21/18 02:21 PM

23	R1808982-005	RIV	.01	20mL	351.2/TKN			20.00mL			
24	R1809002-001	O2O Comp	.02	20mL	351.2/TKN			20.00mL			
25	R1809002-005	RIV	.01	20mL	351.2/TKN			20.00mL			
26	R1809053-001	B325 Final Eff 24 Hour Comp	.03	20mL	351.2/TKN			20.00mL			

Spiking Solutions

Name: Ammonia 1000 ppm N (1.0 mg/mL N) Inventory ID 188275 Logbook Ref: 188275 Expires On: 02/28/2019 Lot #: 1726833

Preparation Steps

Step: Distillation

Started: 9/21/18 14:21

Finished: 9/21/18 17:23

By: NSMITH

Comments

Comments: _____

Reviewed By: _____ Date: _____

Spike Witness: AFELSER Date: _____

Chain of Custody

Relinquished By: _____ Date: _____

Date: _____

Extracts Examined

Received By: _____ Date: _____

Date: _____

Yes No

Preparation Information Benchsheet

Prep Run#: 322421

Team: GenChem/NSMITH

Prep WorkFlow: Gen Dist TKN

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/21/18 02:24 PM

#	Lab Code	Client ID	B#	Amt. Ext	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	Spike Amt./Inv. ID	Comments
1	RQ1810056-01	MB		20mL	351.2/TKN				20.00mL			
2	RQ1810056-02	LCS		20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
3	R1808568-015	13-WALK-26.9-09062018-W	.06	20mL	351.2/TKN				20.00mL			
4	RQ1810056-03	R1808568-015 MS	.06	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
5	RQ1810056-04	R1808568-015 DMS	.06	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
6	R1808568-016	13-TINW-0.5-09062018-W	.06	20mL	351.2/TKN				20.00mL			
7	R1808662-001	Influent	.03	20mL	351.2/TKN				20.00mL			
8	R1808669-007	Final Effluent	.05	20mL	351.2/TKN				20.00mL			
9	R1808701-002	Plant Effluent	.01	20mL	351.2/TKN				20.00mL			
10	R1808696-001	WRF Final Effluent	.03	20mL	351.2/TKN				20.00mL			
11	R1808697-001	Influent	.03	20mL	351.2/TKN				20.00mL			
12	R1808697-002	Effluent	.04	20mL	351.2/TKN				20.00mL			
13	R1808702-001	Influent	.01	20mL	351.2/TKN				20.00mL			
14	R1808702-002	Effluent	.01	20mL	351.2/TKN				20.00mL			
15	R1808708-001	MW-14A	.04	20mL	351.2/TKN				20.00mL			
16	R1808708-002	MW-14B	.01	20mL	351.2/TKN				20.00mL			
17	R1808708-003	MW-15B	.01	20mL	351.2/TKN				20.00mL			
18	R1808708-004	MW-6A2	.01	20mL	351.2/TKN				20.00mL			
19	R1808708-005	MW-6B	.01	20mL	351.2/TKN				20.00mL			
20	R1808708-006	MW-13A	.01	20mL	351.2/TKN				20.00mL			
21	RQ1810056-05	R1808708-006 MS	.01	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
22	RQ1810056-06	R1808708-006 DMS	.01	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	

Spiking Solutions

Name: Ammonia 1000 ppm N (1.0 mg/mL N) NI Inventory ID 188275

Logbook Ref: 188275

Expires On: 02/28/2019

Lot #: 1726833

Preparation Steps

Step: Distillation

Started: 9/21/18 14:24

Finished: 9/21/18 17:24

By: GNITAJOUUPPI

Comments:

Comments: _____

Preparation Information Benchsheet

Prep Run#: 322421

Team: GenChem/NSMITH

Prep WorkFlow: Gen Dist TKN

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/21/18 02:24 PM

Reviewed By: _____ Date: _____

Spike Witness: AFELSER Date: _____

Chain of Custody

Relinquished By: _____

Date: _____

Extracts Examined

Received By: _____

Date: _____

Yes No

Preparation Information Benchsheet

Prep Run#: 322427

Team: GenChem/NSMITH

Prep WorkFlow: Gen Dist TKN

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/21/18 03:15 PM

#	Lab Code	Client ID	B#	Amt. Ext	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	Spike Amt./Inv. ID	Comments
1	RQ1810058-01	MB		20mL	351.2/TKN				20.00mL			
2	RQ1810058-02	LCS		20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
3	R1808845-001	CWC Effluent	.03	20mL	351.2/TKN				20.00mL			
4	R1808880-001	Effluent/Discharge	.01	5mL	351.2/TKN				20.00mL			
5	R1808653-001	19PKTP19FW	.01	20mL	351.2/TKN				20.00mL			
6	R1808653-002	19PKTP18DS	.01	20mL	351.2/TKN				20.00mL			
7	R1808653-003	19PKTP18DD	.01	20mL	351.2/TKN				20.00mL			
8	R1808708-007	MW-13B	.01	20mL	351.2/TKN				20.00mL			
9	RQ1810058-03	R1808708-007 MS	.01	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
10	RQ1810058-04	R1808708-007 DMS	.01	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
11	R1808708-008	MW-9B	.01	20mL	351.2/TKN				20.00mL			
12	R1808708-009	DUPE	.01	20mL	351.2/TKN				20.00mL			
13	R1808719-001	Outfall 001	.11	10mL	351.2/TKN				20.00mL			
14	R1808719-002	Influent	.11	10mL	351.2/TKN				20.00mL			
15	R1808721-001	Outfall 013 Comp	.06	20mL	351.2/TKN				20.00mL			
16	R1808721-002	EQ Feed	.04	1mL	351.2/TKN				20.00mL			
17	R1808738-001	18LHB309	.02	20mL	351.2/TKN				20.00mL			
18	R1808738-003	18LHB317	.02	20mL	351.2/TKN				20.00mL			
19	R1808738-005	18LHB318	.02	20mL	351.2/TKN				20.00mL			
20	R1808738-007	18LHB305	.02	20mL	351.2/TKN				20.00mL			
21	R1808738-009	18LHB323	.02	20mL	351.2/TKN				20.00mL			
22	R1808738-011	18LHB321	.02	20mL	351.2/TKN				20.00mL			
23	R1808741-001	Influent	.01	10mL	351.2/TKN				20.00mL			
24	R1808741-002	Effluent	.02	20mL	351.2/TKN				20.00mL			
25	RQ1810058-05	R1808741-002 MS	.02	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
26	RQ1810058-06	R1808741-002 DMS	.02	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	

Spiking Solutions

Name: Ammonia 1000 ppm N (1.0 mg/mL N) Inv. Inventory ID 188275

Logbook Ref: 188275

Expires On: 02/28/2019

Lot #: 1726833

Preparation Steps

Step: Distillation

Started: 9/21/18 15:15

Finished: 9/21/18 18:02

By: GNITAJOUSSI

Comments

Preparation Information Benchsheet

Prep Run#: 322427

Team: GenChem/NSMITH

Prep WorkFlow: Gen Dist TKN

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/21/18 03:15 PM

Comments: _____

Reviewed By: _____ Date: _____

Spike Witness: AFELSER Date: _____

Chain of Custody

Relinquished By: _____

Date: _____

Extracts Examined

Received By: _____

Date: _____

Yes No

Preparation Information Benchsheet

Prep Run#: 322429

Team: GenChem/NSMITH

Prep WorkFlow: Gen Dist TKN

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/21/18 03:18 PM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	Spike Amt./Inv. ID	Comments
1	RQ1810059-01	MB		20mL	351.2/TKN				20.00mL			
2	RQ1810059-02	LCS		20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
3	R1808738-013	I8LHB322	.02	20mL	351.2/TKN				20.00mL			
4	RQ1810059-03	R1808738-013 MS	.02	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
5	RQ1810059-04	R1808738-013 DMS	.02	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
6	R1808738-015	I8LHB319	.02	20mL	351.2/TKN				20.00mL			
7	R1808738-017	I8LHB320	.02	20mL	351.2/TKN				20.00mL			
8	R1808738-019	I8LHB311	.02	20mL	351.2/TKN				20.00mL			
9	R1808738-021	I8LHB312	.02	20mL	351.2/TKN				20.00mL			
10	R1808738-023	I8LISO60	.02	20mL	351.2/TKN				20.00mL			
11	R1808738-025	I8LISO62	.02	20mL	351.2/TKN				20.00mL			
12	RQ1810059-05	R1808738-025 MS	.02	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
13	RQ1810059-06	R1808738-025 DMS	.02	20mL	351.2/TKN				20.00mL		0.0500 mL/188275	
14	R1808784-001	Influent	.01	10mL	351.2/TKN				20.00mL			
15	R1808784-002	Effluent	.01	20mL	351.2/TKN				20.00mL			
16	R1808783-001	001	.02	20mL	351.2/TKN				20.00mL			
17	R1808783-002	002	.01	20mL	351.2/TKN				20.00mL			<i>Valid</i>
18	R1808791-001	Upper Lagoon	.03	10mL	351.2/TKN				20.00mL			
19	R1808791-003	Lower Lagoon	.03	10mL	351.2/TKN				20.00mL			
20	R1808791-005	DAF Influent	.01	10mL	351.2/TKN				20.00mL			
21	R1808791-006	DAF Effluent Composite	.02	20mL	351.2/TKN				20.00mL			
22	R1808792-001	CCE	.01	10mL	351.2/TKN				20.00mL			

Spiking Solutions

Name: Ammonia 1000 ppm N (1.0 mg/mL N) Inventory ID 188275

Logbook Ref: 188275

Expires On: 02/28/2019

Lot #: 1726833

Preparation Steps

Step: Distillation

Started: 9/21/18 15:18

Finished: 9/21/18 18:03

By: GNITAJQUPPI

Comments:

Comments:

Reviewed By: _____

Date: _____

Spike Witness: AFELSER

Date: _____

Preparation Information Benchsheet

Prep Run#: 322429
Team: GenChem/NSMITH

• 228351

Prep WorkFlow: Gen Dist TKN
Prep Method: Method

Status: Prepped
Prep Date/Time: 9/21/18 03:18 PM

0

Chain of Custody

Relinquished By:	Date:	<u>Extracts Examined</u>	
Received By:	Date:	Yes	No

Analyst: NS

Pipet ID:

Method: EPA 351.2

TKN Digest

Date: 9/21/2018 DOD Pip Cal:

Temp 1: 160

Temp 2: 380

Spk Witness: AFelser

Org LCS ID: 184987

Start Time:

Start Time:

Balance (S/Naq):

Prep: 10/24/2017

End Time:

End Time:

Rgt Dispenser ID: KILO

Exp.: 10/23/2018

Block ID:

OLD

Dispenser cal wt: 9.8726

*Dispenser is calibrated daily against the weight of 8 mL of digest reagent measured via pipet.
Sample Amt

#	Misc.	Order #	(mL/g)	Dilution	Spk (mL)	Comments
1		PB 1 LL	20	1		
2	X	LCS 1 INORG LL	20	1	0.050	1000 ppm
3	X	LCS 1 ORG LL	20	1	0.100	500 ppm
4		R1808568-001	20	1		
5	X	R1808568-001 MS	20	1	0.050	1000 ppm
6	X	R1808568-001 MSD	20	1	0.050	1000 ppm
7		R1808568-002	20	1		
8		R1808568-003	20	1		
9		R1808568-004	20	1		
10		R1808568-005	20	1		
11		R1808568-006	20	1		
12		R1808568-007	20	1		
13		R1808568-008	20	1		
14		R1808568-009	20	1		
15		R1808568-010	20	1		
16		R1808568-011	20	1		
17		R1808568-012	20	1		
18		R1808568-013	20	1		
19		R1808568-014	20	1		
20	X	R1808568-014 MS	20	1	0.050	1000 ppm
21	X	R1808568-014 MSD	20	1	0.050	1000 ppm
22		R1808936-001	20	1		
23		R1808982-001	20	1		
24		R1808982-005	20	1		
25		R1809002-001	20	1		
26		R1809002-005	20	1		
27		R1809053-001	20	1		
28		PB 2 LL	20	1		
29	X	LCS 2 INORG LL	20	1	0.050	1000 ppm
30	X	LCS 2 ORG LL	20	1	0.100	500 ppm
31		R1808568-015	20	1		
32	X	R1808568-015 MSD	20	1	0.050	1000 ppm
33	X	R1808568-015 MSD	20	1	0.050	1000 ppm
34		R1808568-016	20	1		
35		R1808662-001	10 20	2 1		
36		R1808669-007	20	1		
37		R1808701-002	20	1		
38		R1808696-001	20	1		
39		R1808697-001	10 20	2 1		
40		R1808697-002	20	1		
41		R1808702-001	10 20	2 1		
42		R1808702-002	20	1		
43		R1808708-001	20	1		
44		R1808708-002	20	1		
45		R1808708-003	20	1		
46		R1808708-004	20	1		
47		R1808708-005	20	1		
48		R1808708-006	20	1		
49	X	R1808708-006 MS	20	1	0.050	1000 ppm
50	X	R1808708-006 MSD	20	1	0.050	1000 ppm

Analyst: NS

Date: 9/21/2018 DOD Pip Cal:

Pipet ID:

Method: EPA 351.2

TKN Digest

Temp 1: 160

Temp 2: 380

Spk Witness: J.T.Q.

Org LCS ID: 184987

Start Time:

Start Time:

Balance (S/Naq):

Prep: 10/24/2017

End Time:

End Time:

Rgt Dispenser ID: KILO

Exp.: 10/23/2018

Block ID: NEW

Dispenser cal wt:

*Dispenser is calibrated daily against the weight of 8 mL of digest reagent measured via pipet.

#	Misc.	Order #	Sample Amt (mL/g)	Dilution	Spk (mL)	Comments
1		PB 3 LL	20	1		
2		LCS 3 INORG LL	20	1	0.050	1000 ppm
3		LCS 3 ORG LL	20	1	0.100	500 ppm
4		R1808845-001	20	1		
5		R1808880-001	20	4 1/4		
6		R1808653-001	20	1		
7		R1808653-002	20	1		
8		R1808653-003	20	1		
9		R1808708-007	20	1		
10		R1808708-007 MS	20	1	0.050	1000 ppm
11		R1808708-007 MSD	20	1	0.050	1000 ppm
12		R1808708-008	20	1		
13		R1808708-009	20	1		
14		R1808719-001	10 20	2 1/4		
15		R1808719-002	10 20	2 1/4		
16		R1808721-001	20	1		
17		R1808721-002	1 20	2 1/4		
18		R1808738-001	20	1		
19		R1808738-003	20	1		
20		R1808738-005	20	1		
21		R1808738-007	20	1		
22		R1808738-009	20	1		
23		R1808738-011	20	1		
24		R1808741-001	10 20	2 1/4		
25		R1808741-002	20	1		
26		R1808741-002 MS	20	1	0.050	1000 ppm
27		R1808741-002 MSD	20	1	0.050	1000 ppm
28	1	PB 4 LL	20	1		
29	2	LCS 4 INORG LL	20	1	0.050	1000 ppm
30	3	LCS 4 ORG LL	20	1	0.100	500 ppm
31	4	R1808738-013	20	1		
32	5	R1808738-013 MS	20	1	0.050	1000 ppm
33	6	R1808738-013 MSD	20	1	0.050	1000 ppm
34	7	R1808738-015	20	1		
35	8	R1808738-017	20	1		
36	9	R1808738-019	20	1		
37	10	R1808738-021	20	1		
38	11	R1808738-023	20	1		
39	12	R1808738-025	20	1		
40	13	R1808738-025 MS	20	1	0.050	1000 ppm
41	14	R1808738-025 MSD	20	1	0.050	1000 ppm
42	15	R1808784-001	10 20	2 1/4		
43	16	R1808784-002	20	1		
44	17	R1808783-001	20	1		
45	18	R1808792-002	20	1		
46	19	R1808791-001	10 20	2 1/4		
47	20	R1808791-003	10 20	10 1/2		
48	21	R1808791-005	10 20	2 1/4		
49	22	R1808791-006	20	1		
50	23	R1808792-001	10 20	2 1/4		

Creator: CHRISWOODS
 Creation Date: Sep 24, 2018 17:31:59
 Last Modified: Sep 24, 2018 19:34:44
 Description: QC 8000 351.2 TKN - RUN LOG - 180924A1

Cup #	Sample ID	Manual Dilution	Sample Type
1	Standard A - 10.000	1.0000	CalStd
2	Standard B - 5.000	1.0000	CalStd
3	Standard C - 2.000	1.0000	CalStd
4	Standard D - 1.000	1.0000	CalStd
5	Standard E - 0.500	1.0000	CalStd
6	Standard F - 0.200	1.0000	CalStd
7	Standard G - 0.100	1.0000	CalStd
8	Standard H - 0.050	1.0000	CalStd
9	Standard I - 0.000	1.0000	CalStd
1	ICV TV = 4.00	1.0000	Unknown
2	ICB	1.0000	Unknown
3	CRDL - 0.200	1.0000	Unknown
4	CRDL - 0.100	1.0000	Unknown
5	LRC TV = 10.000	1.0000	Unknown
6	CCV	1.0000	Unknown
7	CCB	1.0000	Unknown
8	PB1 RL/LL	1.0000	Unknown
9	LCS 1 INORG RL/LL	1.0000	Unknown
10	LCS 1 ORG RL/LL	1.0000	Unknown
11	R1808568-001	1.0000	Unknown
12	R1808568-001 MS	1.0000	Unknown
13	R1808568-001 MSD	1.0000	Unknown
14	R1808568-002	1.0000	Unknown
15	R1808568-003	1.0000	Unknown
16	R1808568-004	1.0000	Unknown
17	R1808568-005	1.0000	Unknown
18	CCV	1.0000	Unknown
19	CCB	1.0000	Unknown
20	R1808568-006	1.0000	Unknown
21	R1808568-007	1.0000	Unknown
22	R1808568-008	1.0000	Unknown
23	R1808568-009	1.0000	Unknown
24	R1808568-010	1.0000	Unknown
25	R1808568-011	1.0000	Unknown
26	R1808568-012	1.0000	Unknown
27	R1808568-013	1.0000	Unknown
28	R1808568-014	1.0000	Unknown
29	R1808568-014 MS	1.0000	Unknown
30	CCV	1.0000	Unknown
31	CCB	1.0000	Unknown

Cup #	Sample ID	Manual Dilution	Sample Type
32	R1808568-014 MSD	1.0000	Unknown
33	R1808936-001	1.0000	Unknown
34	R1808982-001	1.0000	Unknown
35	R1808982-002	1.0000	Unknown
36	R1809002-001	1.0000	Unknown
37	R1809002-002	1.0000	Unknown
38	R1809053-001	1.0000	Unknown
39	PB 2 RL	1.0000	Unknown
40	LCS 2 INORG RL	1.0000	Unknown
41	LCS 2 ORG RL	1.0000	Unknown
42	CCV	1.0000	Unknown
43	CCB	1.0000	Unknown
44	R1808568-015	1.0000	Unknown
45	R1808568-015 MS	1.0000	Unknown
46	R1808568-015 MSD	1.0000	Unknown
47	R1808568-016	1.0000	Unknown
48	R1808662-001	1.0000	Unknown
49	R1808669-007	1.0000	Unknown
50	R1808701-002	1.0000	Unknown
51	R1808696-001	1.0000	Unknown
52	R1808697-001	1.0000	Unknown
53	R1808697-002	1.0000	Unknown
54	CCV	1.0000	Unknown
55	CCB	1.0000	Unknown
56	R1808702-001	1.0000	Unknown
57	R1808702-002	1.0000	Unknown
58	R1808708-001	1.0000	Unknown
59	R1808708-002	1.0000	Unknown
60	R1808708-003	1.0000	Unknown
61	R1808708-004	1.0000	Unknown
62	R1808708-005	1.0000	Unknown
63	R1808708-006	1.0000	Unknown
64	R1808708-006 MS	1.0000	Unknown
65	R1808708-006 MSD	1.0000	Unknown
66	CCV	1.0000	Unknown
67	CCB	1.0000	Unknown
68	PB 3 RL/LL	1.0000	Unknown
69	LCS 3 INORG RL/LL	1.0000	Unknown
70	LCS 3 ORG RL/LL	1.0000	Unknown
71	R1808845-001	1.0000	Unknown
72	R1808880-001	1.0000	Unknown
73	R1808653-001	1.0000	Unknown
74	R1808653-002	1.0000	Unknown
75	R1808653-003	1.0000	Unknown
76	R1808708-007	1.0000	Unknown

Cup #	Sample ID	Manual Dilution	Sample Type	
77	R1808708-007 MS	1.0000	Unknown	
78	CCV	1.0000	Unknown	
79	CCB	1.0000	Unknown	
80	R1808708-007 MSD	1.0000	Unknown	
81	R1808708-008	1.0000	Unknown	
82	R1808708-009	1.0000	Unknown	
83	R1808719-001	1.0000	Unknown	
84	R1808719-002	1.0000	Unknown	
85	R1808721-001	1.0000	Unknown	
86	R1808721-002	1.0000	Unknown	
87	R1808738-001	1.0000	Unknown	
88	R1808738-003	1.0000	Unknown	
89	R1808738-005	1.0000	Unknown	
90	CCV	1.0000	Unknown	
91	CCB	1.0000	Unknown	
92	R1808738-007	1.0000	Unknown	
93	R1808738-009	1.0000	Unknown	
94	R1808738-011	1.0000	Unknown	
95	R1808741-001	1.0000	Unknown	
96	R1808741-002	1.0000	Unknown	
97	R1808741-002 MS	1.0000	Unknown	
98	R1808741-002 MSD	1.0000	Unknown	
99	PB 4 RL/LL	1.0000	Unknown	
100	LCS 4 INORG RL/LL	1.0000	Unknown	
101	LCS 4 ORG RL/LL	1.0000	Unknown	
102	CCV	1.0000	Unknown	
103	CCB	1.0000	Unknown	
104	R1808738-013	1.0000	Unknown	
105	R1808738-013 MS	1.0000	Unknown	
106	R1808738-013 MSD	1.0000	Unknown	
107	R1808738-015	1.0000	Unknown	
108	R1808738-017	1.0000	Unknown	
109	R1808738-019	1.0000	Unknown	
110	R1808738-021	1.0000	Unknown	
111	R1808738-023	1.0000	Unknown	
112	R1808738-025	1.0000	Unknown	
113	R1808738-025 MS	1.0000	Unknown	
114	CCV	1.0000	Unknown	
115	CCB	1.0000	Unknown	
116	R1808738-025 MSD	1.0000	Unknown	
117	R1808784-001	1.0000	Unknown	
118	R1808784-002	1.0000	Unknown	
119	R1808783-001	1.0000	Unknown	
120	R1808791-001	1.0000	Unknown	
121	R1808791-003	1.0000	Unknown	

Cup #	Sample ID	Manual Dilution	Sample Type	
122	R1808791-005	1.0000	Unknown	
123	R1808791-006	1.0000	Unknown	
124	R1808792-001	1.0000	Unknown	
125	CCV	1.0000	Unknown	
126	CCB	1.0000	Unknown	
127	R1808662-001R @ 1/10	10.0000	Unknown	
128	R1808669-007R STR	1.0000	Unknown	
129	R1808697-001R @ 1/4	4.0000	Unknown	
130	R1808702-001R @ 1/2	2.0000	Unknown	
131	LCS INORG 3 REPEAT	1.0000	Unknown	
132	R1808719-002R @ 1/40	40.0000	Unknown	
133	R1808721-001R STR	1.0000	Unknown	
134	R1808721-002R @ 1/2	2.0000	Unknown	
135	R1808741-001R @ 1/3	3.0000	Unknown	
136	R1808738-021R	1.0000	Unknown	
137	CCV	1.0000	Unknown	
138	CCB	1.0000	Unknown	
139	R1808738-023R	1.0000	Unknown	
140	R1808738-025R	1.0000	Unknown	
141	R1808738-025 MS R	1.0000	Unknown	
142	R1808738-025 MSD R	1.0000	Unknown	
143	R1808784-001R	1.0000	Unknown	
144	R1808784-002R	1.0000	Unknown	
145	R1808783-001R	1.0000	Unknown	
146	R1808791-001R	1.0000	Unknown	
147	R1808791-003R	1.0000	Unknown	
148	R1808791-005R	1.0000	Unknown	
149	CCV	1.0000	Unknown	
150	CCB	1.0000	Unknown	
151	R1808791-006R	1.0000	Unknown	
152	R1808792-001R	1.0000	Unknown	
153	R1808784-001R @ 1/4	4.0000	Unknown	
154	R1808784-002R @ 1/4	4.0000	Unknown	
155	R1808791-001R @ 1/4	4.0000	Unknown	
156	R1808791-003R @ 1/4	4.0000	Unknown	
157	R1808791-005R @ 1/10	10.0000	Unknown	
158	R1808791-006R @ 1/10	10.0000	Unknown	
159	R1808792-001R @ 1/10	10.0000	Unknown	
160	CCV	1.0000	Unknown	
161	CCB	1.0000	Unknown	
162	R1808738-023R	1.0000	Unknown	
163	R1808738-025R	1.0000	Unknown	
164	R1808783-001R	1.0000	Unknown	
165	CCV	1.0000	Unknown	
166	CCB	1.0000	Unknown	

Cup #	Sample ID	Manual Dilution	Sample Type
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OPERATOR: GNITA
ACQ. TIME: Sep 24, 2018 17:38:42
DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

Multi-Channel Table
 Type: Unknowns
 Channel Range: 1 to 8 -- Cup Range: 1 to 25

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 351.2 TKN (mg/L)	Man Dil Factor	Auto Dil Factor
1	ICV TV= 4.00	24 Sep 2018	17:38:45	1	3.8641	1.0	1.00
2	ICB	24 Sep 2018	17:39:28	1	-0.0186	1.0	1.00
3	CRDL - 0.200	24 Sep 2018	17:40:10	1	0.0981	1.0	1.00
4	CRDL - 0.100	24 Sep 2018	17:40:53	1	0.1871	1.0	1.00
5	LRC TV = 10.000	24 Sep 2018	17:41:34	1	9.6959	1.0	1.00
6	CCV	24 Sep 2018	17:42:16	1	3.8828	1.0	1.00
7	CCB	24 Sep 2018	17:42:57	1	-0.0084	1.0	1.00
8	PB1 RL/LL	24 Sep 2018	17:43:39	1	0.0611	1.0	1.00
9	LCS 1 INORG RL/LL	24 Sep 2018	17:44:20	1	2.3179	1.0	1.00
10	LCS 1 ORG RL/LL	24 Sep 2018	17:45:02	1	2.2210	1.0	1.00
11	R1808568-001	24 Sep 2018	17:45:43	1	0.9014	1.0	1.00
12	R1808568-001 MS	24 Sep 2018	17:46:25	1	3.2162	1.0	1.00
13	R1808568-001 MSD	24 Sep 2018	17:47:05	1	3.1109	1.0	1.00
14	R1808568-002	24 Sep 2018	17:47:46	1	0.4235	1.0	1.00
15	R1808568-003	24 Sep 2018	17:48:26	1	0.5070	1.0	1.00
16	R1808568-004	24 Sep 2018	17:49:09	1	0.7769	1.0	1.00
17	R1808568-005	24 Sep 2018	17:49:52	1	0.7945	1.0	1.00
18	CCV	24 Sep 2018	17:50:34	1	3.8716	1.0	1.00
19	CCB	24 Sep 2018	17:51:17	1	-0.0478	1.0	1.00
20	R1808568-006	24 Sep 2018	17:51:59	1	1.0135	1.0	1.00
21	R1808568-007	24 Sep 2018	17:52:42	1	0.5209	1.0	1.00
22	R1808568-008	24 Sep 2018	17:53:23	1	0.4304	1.0	1.00
23	R1808568-009	24 Sep 2018	17:54:05	1	0.1184	1.0	1.00
24	R1808568-010	24 Sep 2018	17:54:46	1	0.3974	1.0	1.00
25	R1808568-011	24 Sep 2018	17:55:28	1	0.5170	1.0	1.00

OPERATOR: GNITA
 ACQ. TIME: Sep 24, 2018 17:38:42
 DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
 TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

Multi-Channel Table
 Type: Unknowns
 Channel Range: 1 to 8 -- Cup Range: 26 to 50

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 351.2 TKN (mg/L)	Man Dil Factor	Auto Dil Factor
26	R1808568-012	24 Sep 2018	17:56:09	1	0.7114	1.0	1.00
27	R1808568-013	24 Sep 2018	17:56:51	1	0.6329	1.0	1.00
28	R1808568-014	24 Sep 2018	17:57:32	1	0.6893	1.0	1.00
29	R1808568-014 MS	24 Sep 2018	17:58:14	1	2.9308	1.0	1.00
30	CCV	24 Sep 2018	17:58:55	1	3.8678	1.0	1.00
31	CCB	24 Sep 2018	17:59:37	1	-0.0478	1.0	1.00
32	R1808568-014 MSD	24 Sep 2018	18:00:20	1	2.9079	1.0	1.00
33	R1808936-001	24 Sep 2018	18:01:02	1	0.7245	1.0	1.00
34	R1808982-001	24 Sep 2018	18:01:45	1	0.5137	1.0	1.00
35	R1808982-002 005	24 Sep 2018	18:02:27	1	0.5239	1.0	1.00
36	R1809002-001 005	24 Sep 2018	18:03:10	1	0.4198	1.0	1.00
37	R1809002-002 005	24 Sep 2018	18:03:53	1	0.6494	1.0	1.00
38	R1809053-001	24 Sep 2018	18:04:35	1	1.0623	1.0	1.00
39	PB 2 RL	24 Sep 2018	18:05:17	1	0.0848	1.0	1.00
40	LCS 2 INORG RL	24 Sep 2018	18:05:58	1	2.3080	1.0	1.00
41	LCS 2 ORG RL	24 Sep 2018	18:06:40	1	2.2678	1.0	1.00
42	CCV	24 Sep 2018	18:07:21	1	3.8649	1.0	1.00
43	CCB	24 Sep 2018	18:08:03	1	-0.0294	1.0	1.00
44	R1808568-015	24 Sep 2018	18:08:45	1	0.7465	1.0	1.00
45	R1808568-015 MS	24 Sep 2018	18:09:26	1	2.9676	1.0	1.00
46	R1808568-015 MSD	24 Sep 2018	18:10:09	1	3.0368	1.0	1.00
47	R1808568-016	24 Sep 2018	18:10:51	1	0.6129	1.0	1.00
48	R1808662-001	24 Sep 2018	18:11:34	1	55.0169	1.0	1.00 Rpt @ 1/10
49	R1808669-007	24 Sep 2018	18:12:17	1	1.6423	1.0	1.00
50	R1808701-002	24 Sep 2018	18:12:59	1	2.8905	1.0	1.00

OPERATOR: GNITA
 ACQ. TIME: Sep 24, 2018 17:38:42
 DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
 TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

Multi-Channel Table
 Type: Unknowns
 Channel Range: 1 to 8 -- Cup Range: 51 to 75

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 351.2 TKN (mg/L)	Man Dil Factor	Auto Dil Factor
51	R1808696-001	24 Sep 2018	18:13:42	1	0.4036	1.0	1.00
52	R1808697-001	24 Sep 2018	18:14:24	1	21.0096	1.0	1.00
53	R1808697-002	24 Sep 2018	18:15:07	1	0.7652	1.0	1.00
54	CCV	24 Sep 2018	18:15:49	1	3.8903	1.0	1.00
55	CCB	24 Sep 2018	18:16:31	1	-0.0478	1.0	1.00
56	R1808702-001	24 Sep 2018	18:17:12	1	10.6625	1.0	1.00
57	R1808702-002	24 Sep 2018	18:17:54	1	1.3763	1.0	1.00
58	R1808708-001	24 Sep 2018	18:18:35	1	0.1964	1.0	1.00
59	R1808708-002	24 Sep 2018	18:19:17	1	0.1966	1.0	1.00
60	R1808708-003	24 Sep 2018	18:19:58	1	0.2678	1.0	1.00
61	R1808708-004	24 Sep 2018	18:20:42	1	0.2641	1.0	1.00
62	R1808708-005	24 Sep 2018	18:21:26	1	0.1168	1.0	1.00
63	R1808708-006	24 Sep 2018	18:22:08	1	0.3350	1.0	1.00
64	R1808708-006 MS	24 Sep 2018	18:22:51	1	2.4496	1.0	1.00
65	R1808708-006 MSD	24 Sep 2018	18:23:33	1	2.4641	1.0	1.00
66	CCV	24 Sep 2018	18:24:16	1	3.9463	1.0	1.00
67	CCB	24 Sep 2018	18:24:58	1	-0.0127	1.0	1.00
68	PB 3 RL/LL	24 Sep 2018	18:25:41	1	0.0289	1.0	1.00
69	LCS 3 INORG RL/LL	24 Sep 2018	18:26:24	1	0.0920	1.0	1.00
70	LCS 3 ORG RL/LL	24 Sep 2018	18:27:06	1	2.2499	1.0	1.00
71	R1808845-001	24 Sep 2018	18:27:48	1	1.2568	1.0	1.00
72	R1808880-001	24 Sep 2018	18:28:29	1	5.5674	1.0	1.00
73	R1808653-001	24 Sep 2018	18:29:11	1	0.8106	1.0	1.00
74	R1808653-002	24 Sep 2018	18:29:52	1	0.7992	1.0	1.00
75	R1808653-003	24 Sep 2018	18:30:34	1	5.5656	1.0	1.00

OPERATOR: GNITA
 ACQ. TIME: Sep 24, 2018 17:38:42
 DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
 TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

Multi-Channel Table
 Type: Unknowns
 Channel Range: 1 to 8 -- Cup Range: 76 to 100

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 351.2 TKN (mg/L)	Man Dil Factor	Auto Dil Factor
76	R1808708-007	24 Sep 2018	18:31:17	1	0.0834	1.0	1.00
77	R1808708-007 MS	24 Sep 2018	18:32:01	1	2.4061	1.0	1.00
78	CCV	24 Sep 2018	18:32:45	1	3.9142	1.0	1.00
79	CCB	24 Sep 2018	18:33:27	1	-0.0478	1.0	1.00
80	R1808708-007 MSD	24 Sep 2018	18:34:10	1	2.3663	1.0	1.00
81	R1808708-008	24 Sep 2018	18:34:52	1	0.1567	1.0	1.00
82	R1808708-009	24 Sep 2018	18:35:35	1	0.1487	1.0	1.00
83	R1808719-001	24 Sep 2018	18:36:17	1	3.3569	1.0	1.00
84	R1808719-002	24 Sep 2018	18:37:00	1	134.2089	1.0	1.00 Repeat @ 1/40
85	R1808721-001	24 Sep 2018	18:37:42	1	0.5506	1.0	1.00 Repeat str.
86	R1808721-002	24 Sep 2018	18:38:24	1	13.7418	1.0	1.00 Repeat @ 1/2
87	R1808738-001	24 Sep 2018	18:39:05	1	1.5437	1.0	1.00
88	R1808738-003	24 Sep 2018	18:39:47	1	0.9529	1.0	1.00
89	R1808738-005	24 Sep 2018	18:40:28	1	0.8176	1.0	1.00
90	CCV	24 Sep 2018	18:41:10	1	3.9413	1.0	1.00
91	CCB	24 Sep 2018	18:41:54	1	0.0005	1.0	1.00
92	R1808738-007	24 Sep 2018	18:42:37	1	1.3710	1.0	1.00
93	R1808738-009	24 Sep 2018	18:43:21	1	0.8289	1.0	1.00
94	R1808738-011	24 Sep 2018	18:44:04	1	0.6904	1.0	1.00
95	R1808741-001	24 Sep 2018	18:44:48	1	14.1436	1.0	1.00 Repeat @ 1/3
96	R1808741-002	24 Sep 2018	18:45:30	1	4.9305	1.0	1.00
97	R1808741-002 MS	24 Sep 2018	18:46:14	1	6.9862	1.0	1.00
98	R1808741-002 MSD	24 Sep 2018	18:46:56	1	7.1734	1.0	1.00
99	PB 4 RL/LL	24 Sep 2018	18:47:39	1	0.0363	1.0	1.00
100	LCS 4 INORG RL/LL	24 Sep 2018	18:48:22	1	2.3413	1.0	1.00

OPERATOR: GNITA
 ACQ. TIME: Sep 24, 2018 17:38:42
 DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
 TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

Multi-Channel Table
 Type: Unknowns
 Channel Range: 1 to 8 -- Cup Range: 101 to 125

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 351.2 TKN (mg/L)	Man Dil Factor	Auto Dil Factor
101	LCS 4 ORG RL/LL	24 Sep 2018	18:49:04	1	2.2185	1.0	1.00
102	CCV	24 Sep 2018	18:49:47	1	3.9445	1.0	1.00
103	CCB	24 Sep 2018	18:50:29	1	-0.0274	1.0	1.00
104	R1808738-013	24 Sep 2018	18:51:12	1	1.8687	1.0	1.00
105	R1808738-013 MS	24 Sep 2018	18:51:53	1	4.2318	1.0	1.00
106	R1808738-013 MSD	24 Sep 2018	18:52:37	1	4.1369	1.0	1.00
107	R1808738-015	24 Sep 2018	18:53:20	1	0.5114	1.0	1.00
108	R1808738-017	24 Sep 2018	18:54:04	1	0.7327	1.0	1.00
109	R1808738-019	24 Sep 2018	18:54:48	1	0.9137	1.0	1.00
110	R1808738-021	24 Sep 2018	18:55:31	1	24.7153	1.0	1.00
111	R1808738-023	24 Sep 2018	18:56:15	1	0.8134	1.0	1.00
112	R1808738-025	24 Sep 2018	18:56:57	1	1.5557	1.0	1.00
113	R1808738-025 MS	24 Sep 2018	18:57:40	1	0.5266	1.0	1.00
114	CCV	24 Sep 2018	18:58:23	1	3.9339	1.0	1.00
115	CCB	24 Sep 2018	18:59:05	1	-0.0125	1.0	1.00
116	R1808738-025 MSD	24 Sep 2018	18:59:48	1	2.7421	1.0	1.00
117	R1808784-001	24 Sep 2018	19:00:30	1	2.7145	1.0	1.00
118	R1808784-002	24 Sep 2018	19:01:13	1	22.5759	1.0	1.00
119	R1808783-001	24 Sep 2018	19:01:54	1	30.8345	1.0	1.00
120	R1808791-001	24 Sep 2018	19:02:36	1	24.7610	1.0	1.00
121	R1808791-003	24 Sep 2018	19:03:20	1	24.9821	1.0	1.00
122	R1808791-005	24 Sep 2018	19:04:03	1	52.9422	1.0	1.00
123	R1808791-006	24 Sep 2018	19:04:47	1	30.5921	1.0	1.00
124	R1808792-001	24 Sep 2018	19:05:30	1	29.9765	1.0	1.00
125	CCV	24 Sep 2018	19:06:14	1	3.8808	1.0	1.00

Possibly
Misloaded; reanalyze

OPERATOR: GNITA
 ACQ. TIME: Sep 24, 2018 17:38:42
 DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
 TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

Multi-Channel Table
 Type: Unknowns
 Channel Range: 1 to 8 -- Cup Range: 126 to 150

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 351.2 TKN (mg/L)	Man Dil Factor	Auto Dil Factor
126	CCB	24 Sep 2018	19:06:58	1	-0.0224	1.0	1.00
127	R1808662-001R @ 1/10	24 Sep 2018	19:07:41	1	55.3693	10.0	1.00
128	R1808669-007R STR	24 Sep 2018	19:08:24	1	1.7411	1.0	1.00
129	R1808697-001R @ 1/4	24 Sep 2018	19:09:06	1	21.0529	4.0	1.00
130	R1808702-001R @ 1/2	24 Sep 2018	19:09:49	1	10.4887	2.0	1.00
131	LCS INORG 3 REPEAT	24 Sep 2018	19:10:31	1	2.3121	1.0	1.00
132	R1808719-002R @ 1/40	24 Sep 2018	19:11:14	1	232.6113	40.0	1.00
133	R1808721-001R STR	24 Sep 2018	19:11:56	1	0.7470	1.0	1.00
134	R1808721-002R @ 1/2	24 Sep 2018	19:12:39	1	13.9102	2.0	1.00
135	R1808741-001R @ 1/3	24 Sep 2018	19:13:21	1	14.0667	3.0	1.00
136	R1808738-021R	24 Sep 2018	19:14:05	1	0.8509	1.0	1.00
137	CCV	24 Sep 2018	19:14:49	1	3.9400	1.0	1.00
138	CCB	24 Sep 2018	19:15:32	1	-0.0265	1.0	1.00
139	R1808738-023R	24 Sep 2018	19:16:16	1	1.5603	1.0	1.00
140	R1808738-026R	24 Sep 2018	19:17:00	1	0.5182	1.0	1.00
141	R1808738-025 MS R	24 Sep 2018	19:17:43	1	2.7667	1.0	1.00
142	R1808738-025 MSD R	24 Sep 2018	19:18:27	1	2.7393	1.0	1.00
143	R1808784-001R	24 Sep 2018	19:19:10	1	22.8526	1.0	1.00 Repeat @ 1/4
144	R1808784-002R	24 Sep 2018	19:19:53	1	30.9395	1.0	1.00 Repeat @ 1/4.
145	R1808783-001R	24 Sep 2018	19:20:35	1	0.6817	1.0	1.00
146	R1808791-001R	24 Sep 2018	19:21:18	1	25.1877	1.0	1.00 Repeat @ 1/4
147	R1808791-003R	24 Sep 2018	19:22:00	1	25.3737	1.0	1.00 Repeat @ 1/4
148	R1808791-005R	24 Sep 2018	19:22:43	1	53.5229	1.0	1.00 Repeat @ 1/10
149	CCV	24 Sep 2018	19:23:26	1	3.9055	1.0	1.00
150	CCB	24 Sep 2018	19:24:08	1	0.1636	1.0	1.00 > LL MRL

OPERATOR: GNITA
 ACQ. TIME: Sep 24, 2018 17:38:42
 DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
 TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

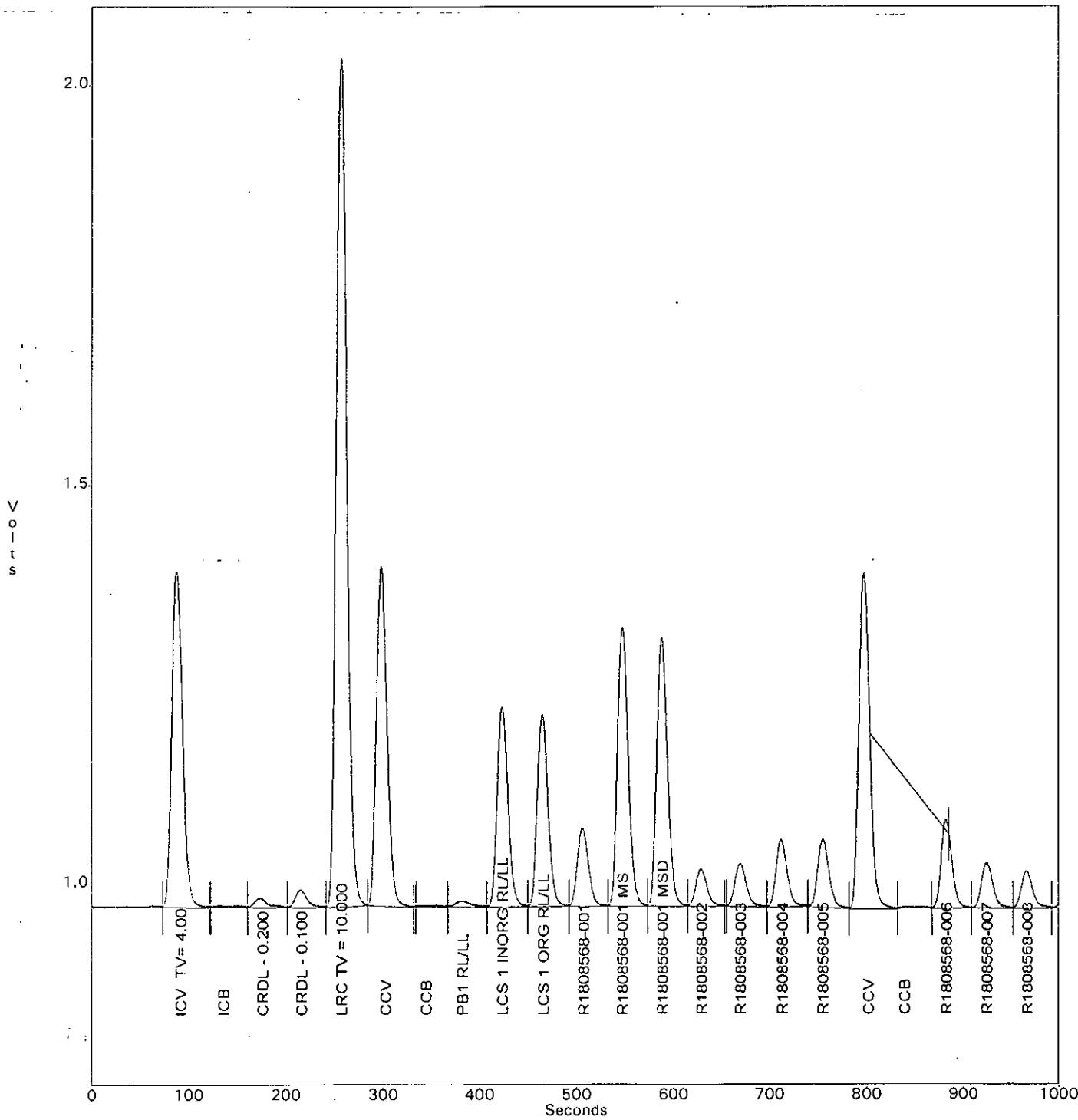
Multi-Channel Table
 Type: Unknowns
 Channel Range: 1 to 8 -- Cup Range: 151 to 175

Cup	Sample ID	Sampling Date	Sampling Time	Rep #	QC 8000 351.2 TKN (mg/L)	Man Dil Factor	Auto Dil Factor
151	R1808791-006R	24 Sep 2018	19:24:53	1	31.0097	1.0	1.00
152	R1808792-001R	24 Sep 2018	19:25:38	1	30.1719	1.0	1.00
153	R1808784-001R @ 1/4	24 Sep 2018	19:26:21	1	22.0339	4.0	1.00
154	R1808784-002R @ 1/4	24 Sep 2018	19:27:05	1	29.2377	4.0	1.00
155	R1808791-001R @ 1/4	24 Sep 2018	19:27:48	1	24.3649	4.0	1.00
156	R1808791-003R @ 1/4	24 Sep 2018	19:28:32	1	24.8342	4.0	1.00
157	R1808791-005R @ 1/10	24 Sep 2018	19:29:15	1	53.0767	10.0	1.00
158	R1808791-006R @ 1/10	24 Sep 2018	19:29:59	1	30.2853	10.0	1.00
159	R1808792-001R @ 1/10	24 Sep 2018	19:30:43	1	29.5688	10.0	1.00
160	CCV	24 Sep 2018	19:31:25	1	3.9829	1.0	1.00
161	CCB	24 Sep 2018	19:32:08	1	-0.0155	1.0	1.00
162	R1808738-023R	24 Sep 2018	19:32:50	1	1.5625	1.0	1.00
163	R1808738-025R	24 Sep 2018	19:33:33	1	0.5259	1.0	1.00
164	R1808783-001R	24 Sep 2018	19:34:16	1	0.7187	1.0	1.00
165	CCV	24 Sep 2018	19:34:58	1	3.9944	1.0	1.00
166	CCB	24 Sep 2018	19:35:43	1	-0.0478	1.0	1.00

OPERATOR:
ACQ. TIME:
DATA FILENAME:
TRAY FILENAME:

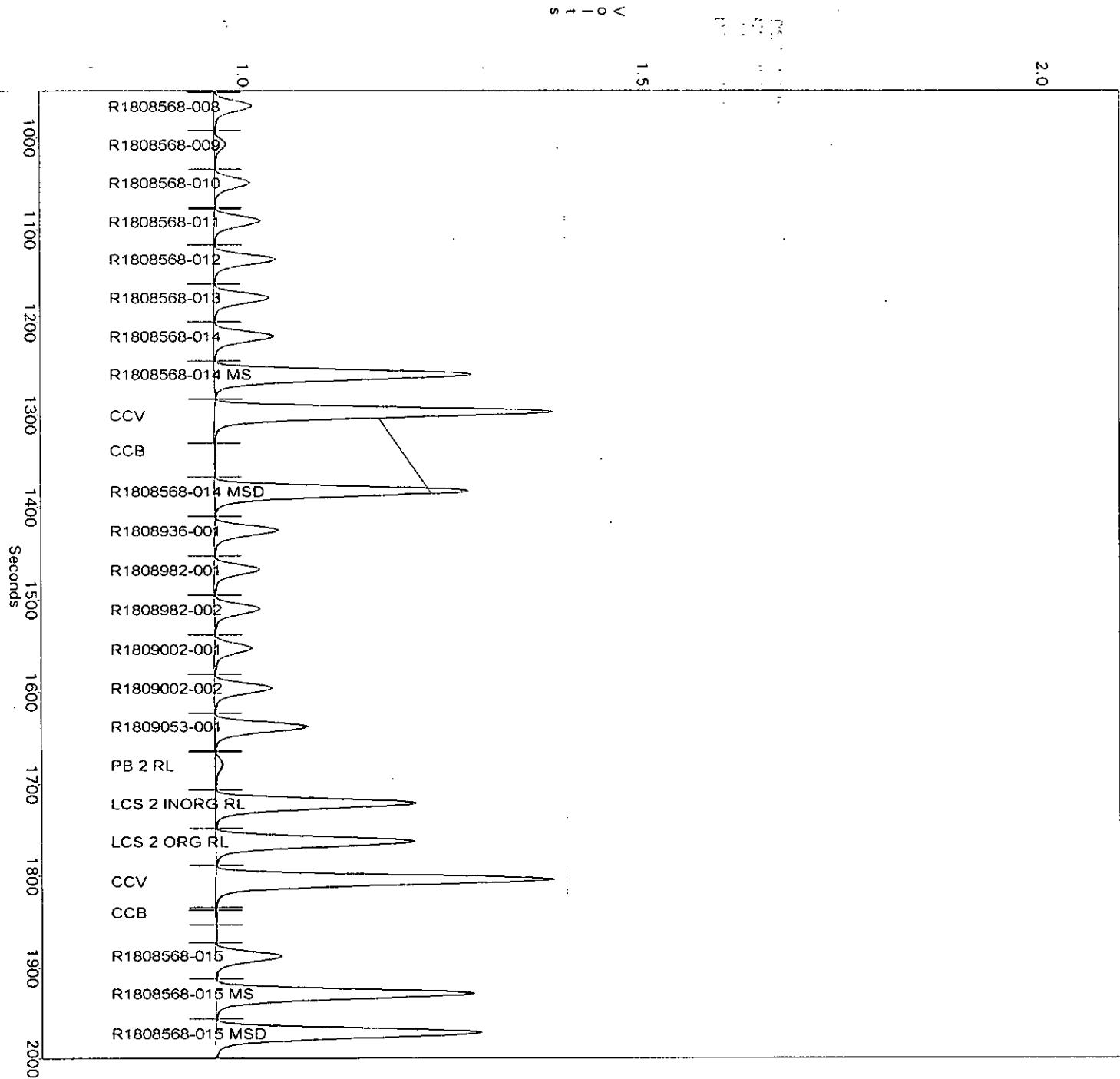
GNITA
Sep 24, 2018 17:38:42
C:\OMNION\DATA\180924A1.FDT
C:\OMNION\TRAYS\180924A1.TRA

Channel 2 - QC 8000 351.2 TKN



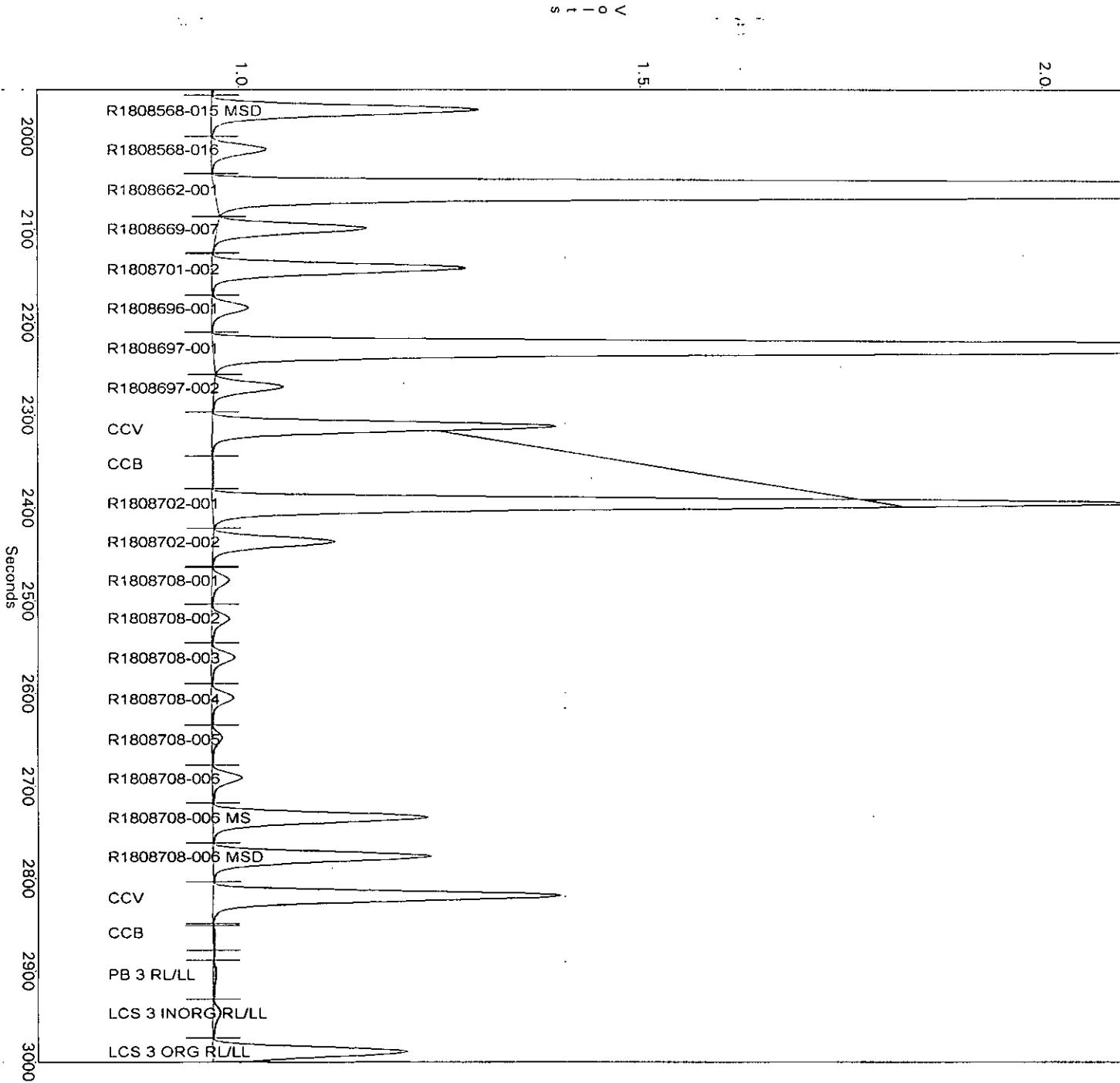
OPERATOR: GNITA
ACQ. TIME: Sep 24, 2018 17:38:42
DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

Channel 2 - QC 8000 351.2 TKN



OPERATOR: GNITA
ACQ. TIME: Sep 24, 2018 17:38:42
DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

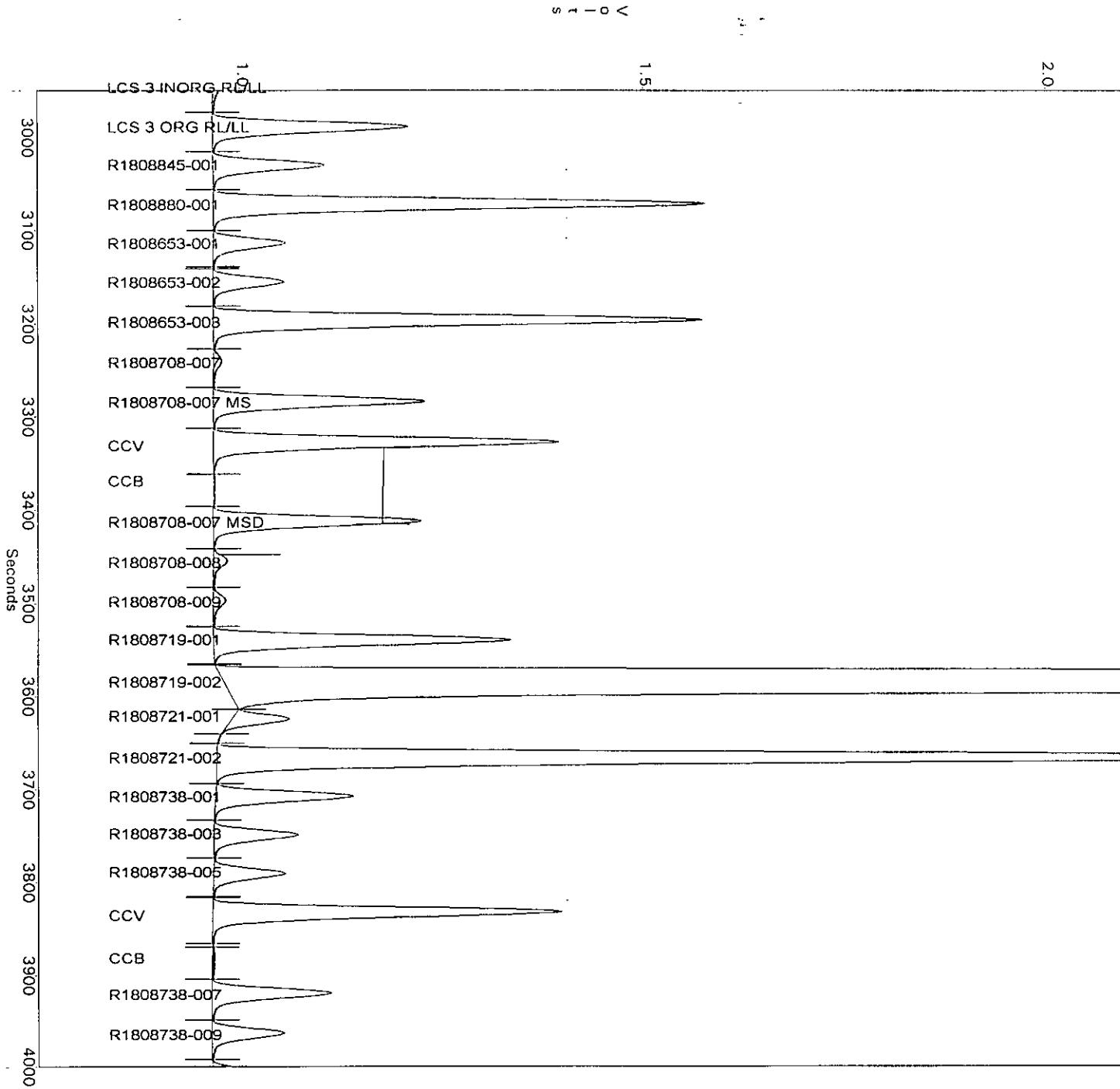
Channel 2 - QC 8000 351.2 TKN



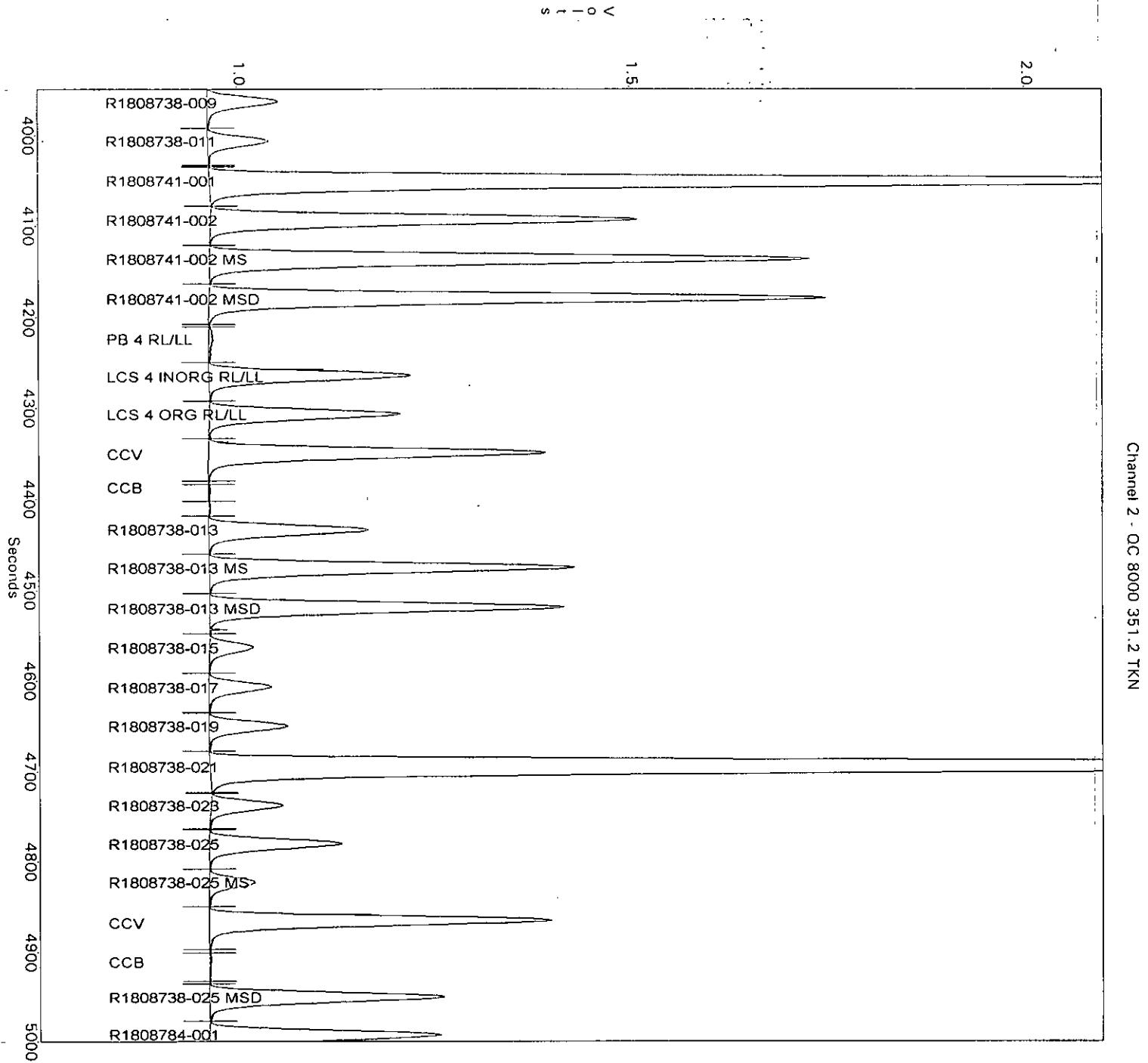
OPERATOR:
ACQ. TIME:
DATA FILENAME:
TRAY FILENAME:

GNITA
Sep 24, 2018 17:38:42
C:\OMNION\DATA\180924A1\FDT
C:\OMNION\TRAYS\180924A1.TRA

Channel 2 - QC 8000 351.2 TKN

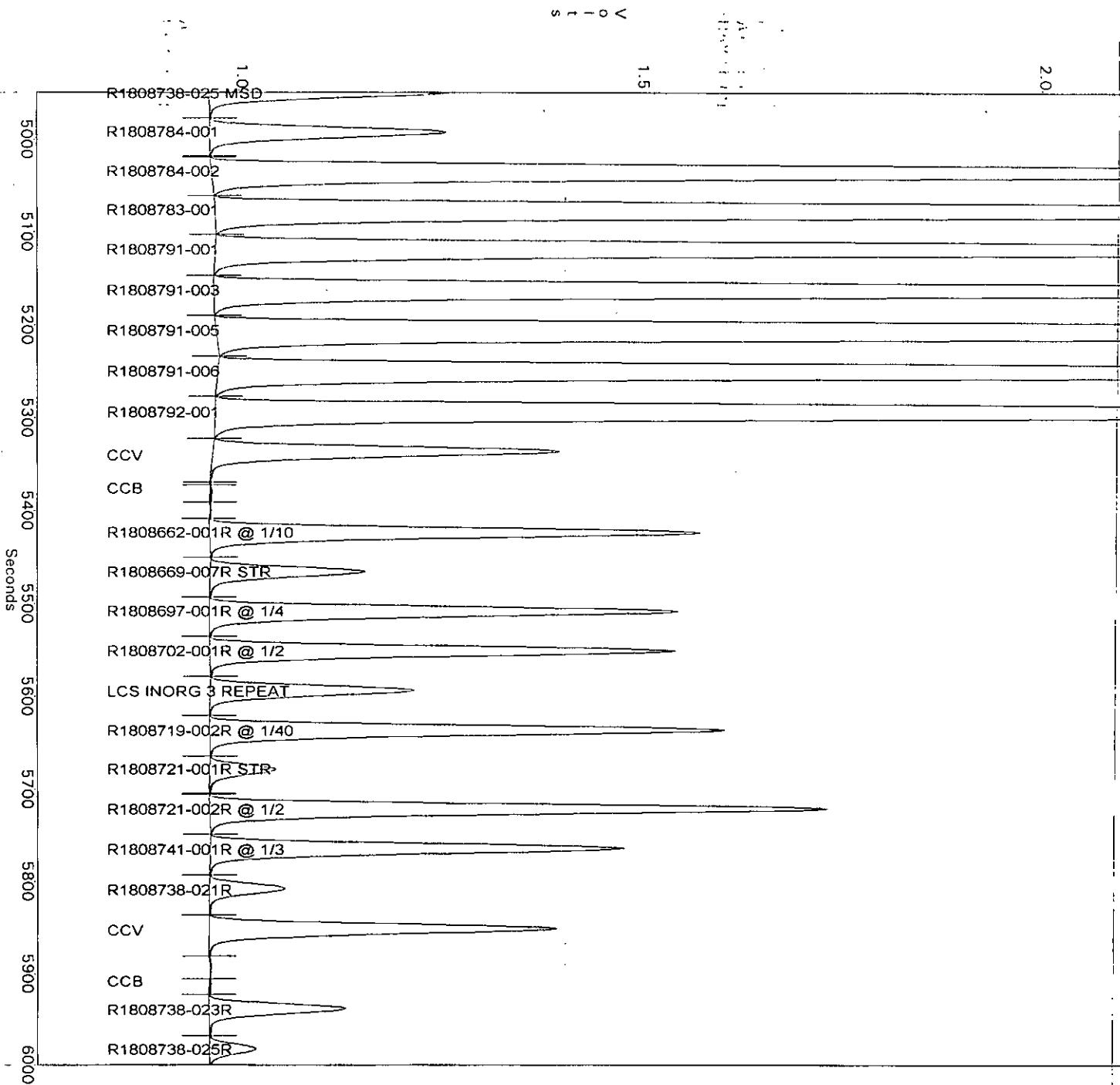


OPERATOR:
GNITA
ACC. TIME:
Sep 24, 2018 17:38:42
DATA FILENAME:
C:\OMNION\DATA\180924A1.FDT
TRAY FILENAME:
C:\OMNION\TRAYS\180924A1.TRA



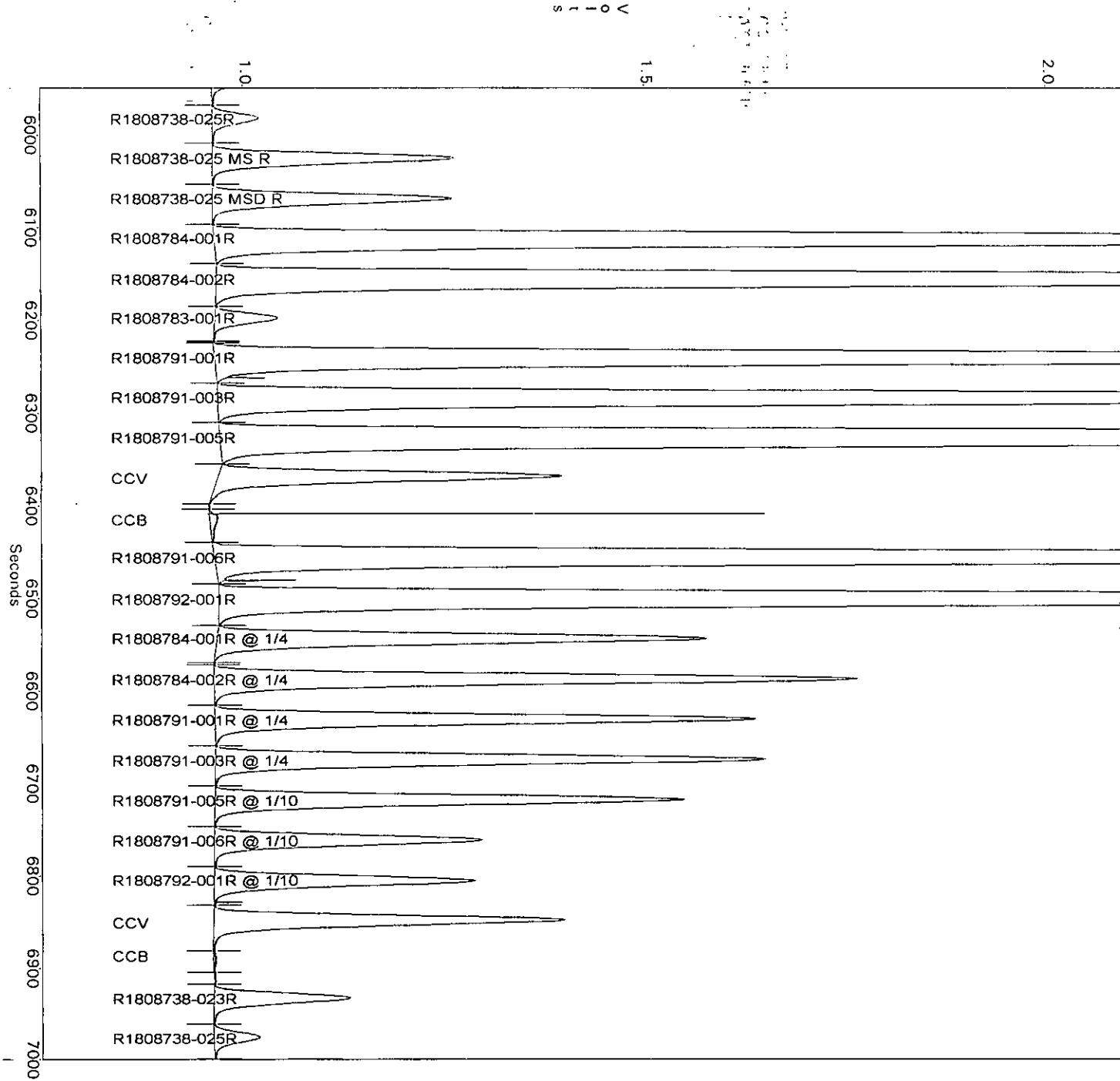
OPERATOR: GNITA
ACQ. TIME: Sep 24, 2018 17:38:42
DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

Channel 2 - QC 8000 351.2 TKN



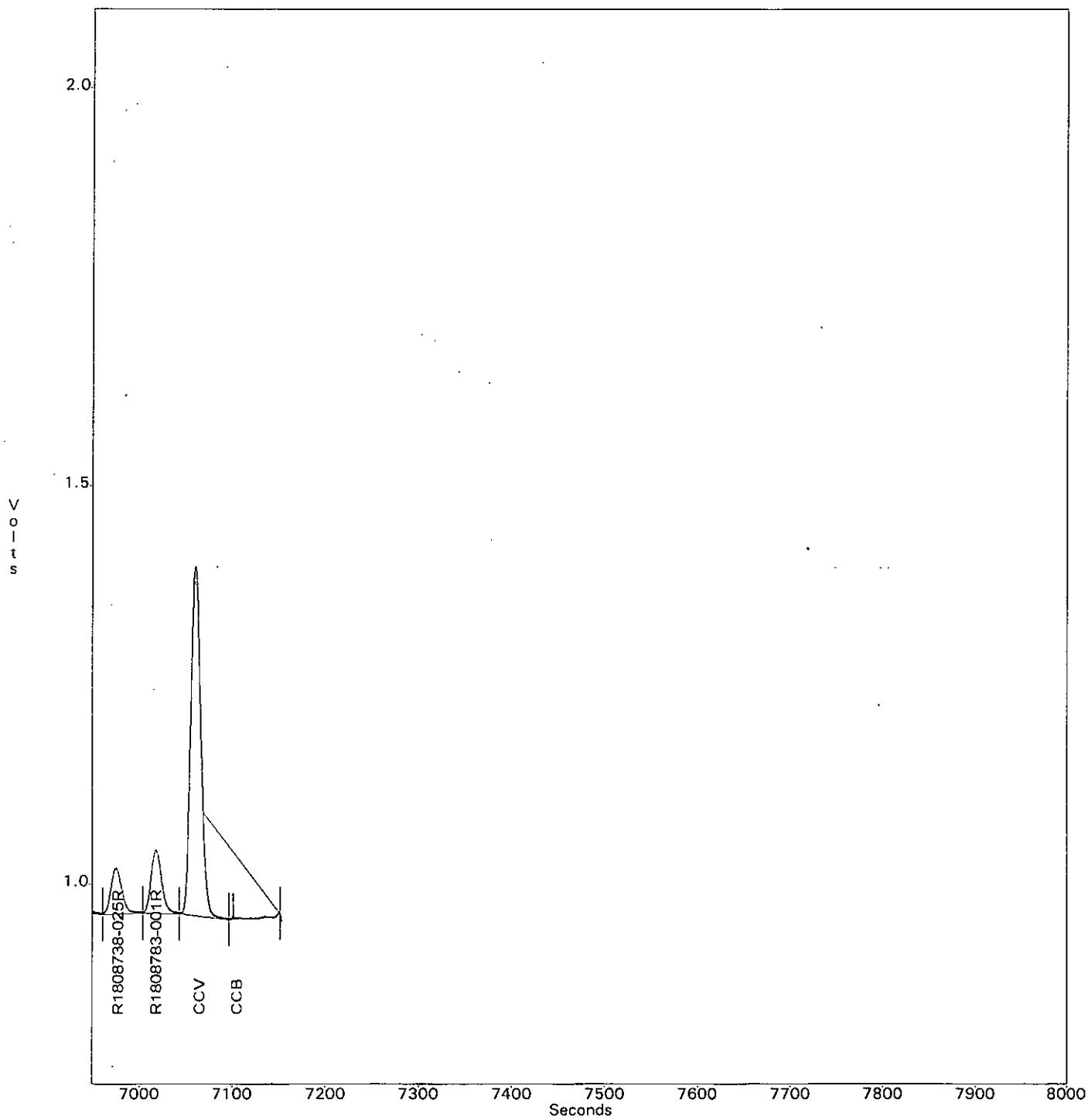
OPERATOR: GNITA
ACQ. TIME: Sep 24, 2018 17:38:42
DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

Channel 2 - QC 8000 351.2 TKN



OPERATOR: GNITA
ACQ. TIME: Sep 24, 2018 17:38:42
DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

Channel 2 - QC 8000 351.2 TKN



OPERATOR: GNITA
ACQ. TIME: Sep 24, 2018 17:38:42
DATA FILENAME: C:\OMNION\DATA\180924A1.FDT
METHOD FILENAME:
TRAY FILENAME: C:\OMNION\TRAYS\180924A1.TRA

TRAY DESCRIPTION:
Created: Sep 24, 2018 17:31:59
Modified: Sep 24, 2018 19:34:44
QC 8000 351.2 TKN - RUN LOG - 180924A1
DATA DESCRIPTION:
Created: Sep 24, 2018 17:38:42
Modified: Sep 24, 2018 17:38:42

Method - Ch. 2 (QC 8000 351.2 TKN)

METHOD DESCRIPTION:
Created: Jan 11, 2016 11:29:32
Modified: Sep 25, 2018 10:56:32
QC 8000 351.2 TKN - Run Log - TKN4715

ANALYTE DATA:
Analyte Name: QC 8000 351.2 TKN
Concentration Units: mg/L
Chemistry: Direct
Inject to Peak Start (s): 35.0
Peak Base Width (s): 35.659
% Width Tolerance: 65.000
Threshold: 2497.000
Autodilution Trigger: Off
QuikChem Method: 10-107-06-2-1

CALIBRATION DATA:
Levels:
1 : 10.000 2 : 5.000 3 : 2.000 4 : 1.000
5 : 0.500 6 : 0.200 7 : 0.100 8 : 0.050
9 : 0.000

Calibration Rep Handling: Average
Calibration Fit Type: 1st Order Poly
Force Though Zero: No
Weighting Method: 1/X
Concentration Scaling: None

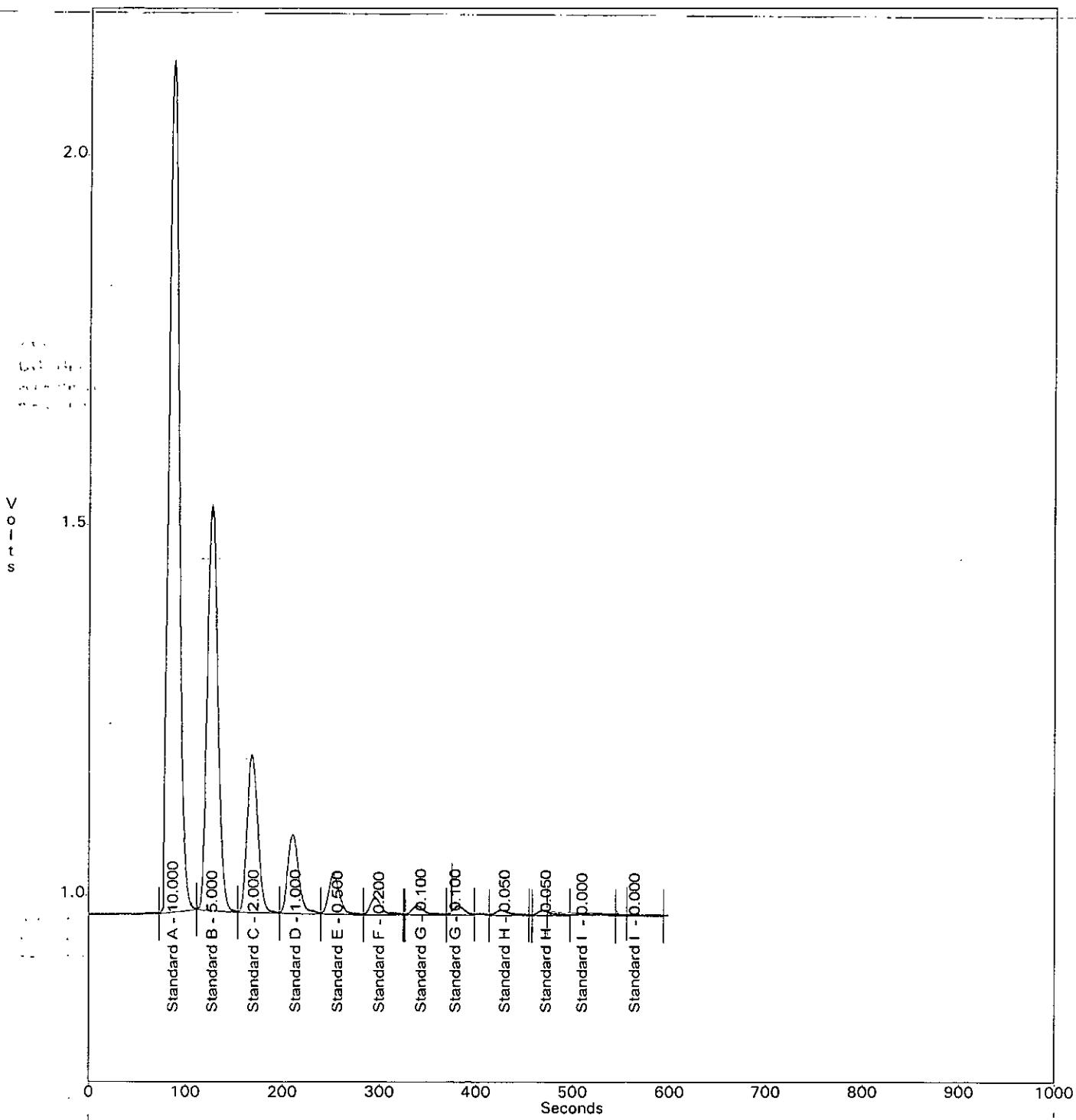
Sample ID: 180924A1
Run ID: 180924A1
Date: 2018-09-24

Sample ID: 180924A1
Run ID: 180924A1
Date: 2018-09-24

OPERATOR:
ACQ. TIME:
DATA FILENAME:
TRAY FILENAME:

GNITA
Sep 24, 2018 17:08:14
C:\OMNION\DATA\1809240A.FDT
C:\OMNION\TRAYS\1809240A.TRA

Channel 2 - QC 8000 351.2 TKN



OPERATOR: GNITA
 ACQ. TIME: Sep 24, 2018 17:08:14
 DATA FILENAME: C:\OMNION\DATA\1809240A.FDT
 METHOD FILENAME:
 TRAY FILENAME: C:\OMNION\TRAYS\1809240A.TRA

TRAY DESCRIPTION:
 Created: Sep 24, 2018 16:09:29
 Modified: Sep 24, 2018 16:09:29

QC 8000 351.2 TKN - RUN LOG - 1809240A

DATA DESCRIPTION:
 Created: Sep 24, 2018 17:08:14
 Modified: Sep 24, 2018 17:08:14

Method - Ch. 2 (QC 8000 351.2 TKN)

METHOD DESCRIPTION:
 Created: Jan 11, 2016 11:29:32
 Modified: Sep 25, 2018 10:56:32
 QC 8000 351.2 TKN - Run Log - TKN4715

ANALYTE DATA:
 Analyte Name: QC 8000 351.2 TKN
 Concentration Units: mg/L
 Chemistry: Direct
 Inject to Peak Start (s): 35.0
 Peak Base Width (s): 35.659
 % Width Tolerance: 65.000
 Threshold: 2497.000
 Autodilution Trigger: Off
 QuikChem Method: 10-107-06-2-1

CALIBRATION DATA:
 Levels:
 1 : 10.000 2 : 5.000 3 : 2.000 4 : 1.000
 5 : 0.500 6 : 0.200 7 : 0.100 8 : 0.050
 9 : 0.000

Calibration Rep Handling: Average
 Calibration Fit Type: 1st Order Poly
 Force Though Zero: No
 Weighting Method: 1/X
 Concentration Scaling: None

DATA REPORT
 Sample ID: 1
 Date: 9/24/2018
 Time: 17:08:14
 Operator: GNITA
 Method: QC 8000 351.2 TKN
 Tray: 1809240A.TRA
 File: 1809240A.FDT
 Status: OK

QC 8000 351.2 TKN

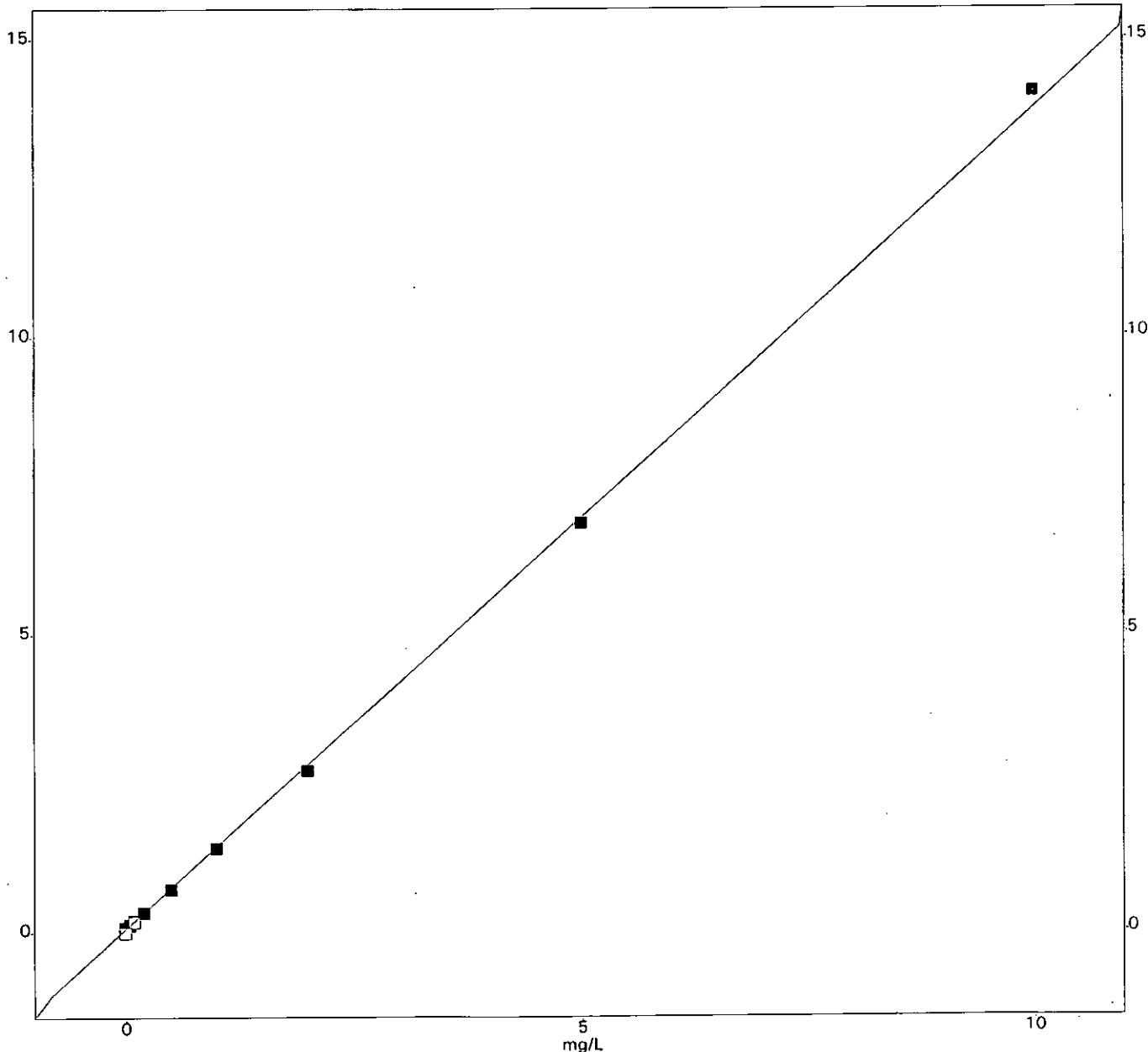
Lvl	Area	mg/L	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5	Replic STD	Replic % RSD	Residual 1st Poly
1	14110384	10.00	14110384					0.0	0.0	-2.0
2	6853735	5.00	6853735					0.0	0.0	1.4
3	2713907	2.00	2713907					0.0	0.0	3.8
4	1409341	1.00	1409341					0.0	0.0	2.4
5	718534	0.50	718534					0.0	0.0	5.2
6	330451	0.20	330451					0.0	0.0	3.9
7	197722	0.10	<u>176835</u>	197722				0.0	0.0	4.2
8	130474	0.05	<u>128387</u>	132560				2950.8	2.3	6.2
9	82534	0.00	82534	<u>0</u>				0.0	0.0	

Underlined Italic numbers and hollow graph points reflect the unused Replicate Points

1st Order Poly
Conc = 7.263e-007 Area - 4.785e-002
 $r = 0.9997$

Analyst: Woods Pipet: TOC TOX

Scaling: None - Weighting: 1/X



ALS Environmental
1565 Jefferson Rd., Rochester NY 14623

General Chemistry Analytical Run Cover Sheet

Analyst: CWoods

Date: 9/24/18

Analysis: Total Kjeldahl Nitrogen, 0.05 TO 10.0 mg/L

Instrument: Lachat 8000

PRIMARY STOCKS	Log # Prep/Exp. Dates	Reagent	Weight (g)	Final Vol. (mLs)	Conc. (mg/L)
Standard *	188275 Prep: Expires 02/28/2019	N/A	N/A	N/A	1000 (A)
Reference *	180043 Prep: Expires 11/9/18	N/A	3.819	1000	1000 (B)
Organic LCS *	LIMS 176608 See Digest Sheet	L-Glutamic Acid LIMS 176100 Exp: 11/16/21	5.252	1000	500 (C)

* Diluent is UPDI

Working Stock Prep	Dilutions:			
	Stock Soln (mLs)	Stock Soln (mg/L)	Final Volume (mLs)	True Value (mg/L)
Standard	1	1000	100	10 (D)
Quality Control				
I/CCV: Diluent is PDMM	0.04	1000 (B)	10	4.00
LCS/MS	0.05	1000 (A)	20	2.50
Organic LCS	0.10	500 (C)	20	2.50
LCS/MS - Soil	0.05	1000 (A)	~2.0	~250 ug/g See digest sheet

Standard Curve Prep	Concentration (mg/L)	mLs PDMM	mLs 10 mg/L Working Stock (D)
10.00	0.00	10.0	
5.00	5.00	5.00	
2.00	8.00	2.00	
1.00	9.00	1.00	
0.50	1/10 dil'n of 5.00		
0.200	1/10 dil'n of 2.00		
0.100	1/10 dil'n of 1.00		
0.050	1/10 dil'n of 0.50		
0	10.0	0.00	

REAGENTS	Log ID	Expiration Date
Digest Sol'n	193487	10/21/2018
PDMM	Prepared from 193487	10/21/2018
Buffer Sol'n	193489	10/21/2018
Color Reagent	193486	10/21/2018
0.8 M NaOH	193491	10/21/2018
Hypochlorite Sol'n	fresh daily	FRESH DAILY
50/50 HCl	N/A	N/A

COMMENTS

Instrument Log filled in? (Y) (N)

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: MROGERSON

Analysis Lot:
607783
Method/Testcode: 365.1/Tot Phos T

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC? Tier</u>
RQ1810070-01	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0488 mg/L	1					9/21/18 14:57:06	N IV
RQ1810070-02	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 14:58:13	N IV
RQ1809991-01	Phosphorus, Total	MB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 14:59:20	N IV
RQ1809991-02	Phosphorus, Total	LCS		Water	0.02 mg/L	20 mL	0.0239 mg/L	J 1	0.002	0.050	96		9/21/18 15:00:28	N IV
R1808447-016	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0461 mg/L	1	0.0020	0.0050			9/21/18 15:02:43	N IV
RQ1809991-03	Phosphorus, Total	MS	R1808447-016	Water	0.07 mg/L	20 mL	0.070 mg/L	1	0.002	0.050	97		9/21/18 15:03:50	N IV
RQ1809991-04	Phosphorus, Total	DMS	R1808447-016	Water	0.07 mg/L	20 mL	0.071 mg/L	1	0.002	0.050	100	1	9/21/18 15:04:58	N IV
R1808567-013	Phosphorus, Total	N/A		Water	0.07 mg/L	20 mL	0.0696 mg/L	1	0.0020	0.0050			9/21/18 15:09:26	N IV
RQ1810070-03	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0494 mg/L	1					9/21/18 15:10:34	N IV
RQ1810070-04	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 15:11:40	N IV
R1808598-001	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.069 mg/L	5	0.010	0.025			9/21/18 15:15:01	N IV
RQ1809991-05	Phosphorus, Total	MS	R1808598-001	Water	0.02 mg/L	20 mL	0.10 mg/L	J 5	0.01	0.25	128*		9/21/18 15:16:07	N IV
RQ1809991-06	Phosphorus, Total	DMS	R1808598-001	Water	0.02 mg/L	20 mL	0.1 mg/L	J 5	0.01	0.25	123*	1	9/21/18 15:17:13	N IV
R1808598-003	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.0250 mg/L	1	0.0020	0.0050			9/21/18 15:18:21	N IV
R1808598-005	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.116 mg/L	5	0.010	0.025			9/21/18 15:19:28	N IV
R1808598-007	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.0257 mg/L	1	0.0020	0.0050			9/21/18 15:20:36	N IV
R1808598-009	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0131 mg/L	1	0.0020	0.0050			9/21/18 15:21:43	N IV
R1808598-011	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0357 mg/L	1	0.0020	0.0050			9/21/18 15:22:51	N IV
RQ1810070-05	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0489 mg/L	1					9/21/18 15:23:59	N IV
RQ1810070-06	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 15:25:06	N IV
R1808598-013	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0543 mg/L	1	0.0020	0.0050			9/21/18 15:26:13	N IV
R1808598-015	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0425 mg/L	1	0.0020	0.0050			9/21/18 15:27:20	N IV
R1808598-017	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0208 mg/L	1	0.0020	0.0050			9/21/18 15:28:28	N IV
R1808613-001	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.0333 mg/L	1	0.0020	0.0050			9/21/18 15:29:34	N IV
R1808613-003	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0190 mg/L	1	0.0020	0.0050			9/21/18 15:30:40	N IV
R1808613-005	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.0247 mg/L	1	0.0020	0.0050			9/21/18 15:31:47	N IV
R1808613-007	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0120 mg/L	1	0.0020	0.0050			9/21/18 15:32:54	N IV
RQ1810070-08	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0486 mg/L	1					9/21/18 15:37:21	N IV
RQ1810070-07	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 15:38:27	N IV
RQ1810070-10	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0488 mg/L	1					9/21/18 17:11:18	N IV
RQ1810070-09	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 17:12:25	N IV
R1808567-007	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	1.41 mg/L	100	0.20	0.50			9/21/18 17:22:30	N IV
R1808567-009	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	1.87 mg/L	100	0.20	0.50			9/21/18 17:23:37	N IV
RQ1810070-12	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0488 mg/L	1					9/21/18 17:24:45	N IV
RQ1810070-11	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 17:25:52	N IV
R1808567-011	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	2.33 mg/L	100	0.20	0.50			9/21/18 17:26:59	N IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05			Analyst: MROGERSON			Analysis Lot:		607783		Method/Testcode: 365.1/Tot Phos T				
<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC? Tier</u>
R1808567-015	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	3.4 mg/L	200	0.4	1.0			9/21/18 17:28:06	N IV
R1808567-017	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	2.35 mg/L	100	0.20	0.50			9/21/18 17:29:13	N IV
RQ1810070-14	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0495 mg/L	1					9/21/18 17:38:10	N IV
RQ1810070-13	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 17:39:17	N IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: MROGERSON

Analysis Lot:

607784

Method/Testcode: 365.1/Tot Phos T

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC?</u>	<u>Tier</u>	
RQ1810071-01	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0489 mg/L	1					9/21/18 15:23:59	N	IV	
RQ1810071-02	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050		9/21/18 15:25:06	N	IV	
RQ1809992-01	Phosphorus, Total	MB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050		9/21/18 15:34:01	N	IV	
RQ1809992-02	Phosphorus, Total	LCS		Water	0.02 mg/L	20 mL	0.0247 mg/L	J	1	0.002	0.050	99	9/21/18 15:35:07	N	IV	
RQ1810071-03	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0486 mg/L	1					9/21/18 15:37:21	N	IV	
RQ1810071-04	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050		9/21/18 15:38:27	N	IV	
R1808613-009	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0101 mg/L	1	0.0020	0.0050			9/21/18 15:39:35	N	IV	
R1808614-001	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0526 mg/L	1	0.0020	0.0050			9/21/18 15:40:42	N	IV	
R1808614-003	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0484 mg/L	1	0.0020	0.0050			9/21/18 15:41:50	N	IV	
R1808614-005	Phosphorus, Total	N/A		Water	0.07 mg/L	20 mL	0.0675 mg/L	1	0.0020	0.0050			9/21/18 15:42:58	N	IV	
R1808614-007	Phosphorus, Total	N/A		Water	0.06 mg/L	20 mL	0.0626 mg/L	1	0.0020	0.0050			9/21/18 15:44:05	Y	IV	
RQ1809992-03	Phosphorus, Total	MS	R1808614-007	Water	0.09 mg/L	20 mL	0.089 mg/L	1	0.002	0.050	106		9/21/18 15:45:13	N	IV	
RQ1809992-04	Phosphorus, Total	DMS	R1808614-007	Water	0.09 mg/L	20 mL	0.090 mg/L	1	0.002	0.050	109	1	9/21/18 15:46:20	N	IV	
R1808559-001	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0054 mg/L	1	0.0020	0.0050			9/21/18 15:47:27	Y	IV	
RQ1809992-05	Phosphorus, Total	MS	R1808559-001	Water	0.03 mg/L	20 mL	0.029 mg/L	J	1	0.002	0.050	94		9/21/18 15:48:34	N	IV
RQ1809992-06	Phosphorus, Total	DMS	R1808559-001	Water	0.03 mg/L	20 mL	0.029 mg/L	J	1	0.002	0.050	94	<1	9/21/18 15:49:41	N	IV
RQ1810071-05	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0488 mg/L	1					9/21/18 15:50:48	N	IV	
RQ1810071-06	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050			9/21/18 15:51:55	N	IV
R1808559-002	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0137 mg/L	1	0.0020	0.0050			9/21/18 15:53:02	N	IV	
R1808565-002	Phosphorus, Total	N/A		Water	0.07 mg/L	20 mL	0.0724 mg/L	1	0.0020	0.0050			9/21/18 15:55:15	N	IV	
R1808565-003	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0503 mg/L	1	0.0020	0.0050			9/21/18 15:56:22	N	IV	
R1808565-004	Phosphorus, Total	N/A		Water	0.00 mg/L	20 mL	0.0050 mg/L	U	1	0.0020	0.0050			9/21/18 15:57:28	N	IV
R1808566-002	Phosphorus, Total	N/A		Water	0.10 mg/L	20 mL	0.0958 mg/L	1	0.0020	0.0050			9/21/18 16:01:58	N	IV	
R1808565-009	Phosphorus, Total	N/A		Water	0.00 mg/L	20 mL	0.0050 mg/L	U	1	0.0020	0.0050			9/21/18 16:03:05	N	IV
RQ1810071-07	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0489 mg/L	1					9/21/18 16:04:13	N	IV	
RQ1810071-08	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050			9/21/18 16:05:21	N	IV
R1808565-011	Phosphorus, Total	N/A		Water	0.08 mg/L	20 mL	0.0759 mg/L	1	0.0020	0.0050			9/21/18 16:06:28	N	IV	
R1808565-012	Phosphorus, Total	N/A		Water	0.09 mg/L	20 mL	0.0886 mg/L	1	0.0020	0.0050			9/21/18 16:07:35	N	IV	
R1808566-003	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0538 mg/L	1	0.0020	0.0050			9/21/18 16:08:42	N	IV	
RQ1810071-10	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0491 mg/L	1					9/21/18 16:17:36	N	IV	
RQ1810071-09	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050			9/21/18 16:18:43	N	IV
RQ1810071-12	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0488 mg/L	1					9/21/18 17:24:45	N	IV	
RQ1810071-11	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050			9/21/18 17:25:52	N	IV
R1808565-001	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.108 mg/L	2	0.004	0.010			9/21/18 17:30:20	N	IV	
R1808565-005	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.143 mg/L	5	0.010	0.025			9/21/18 17:31:27	N	IV	
R1808565-006	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.81 mg/L	20	0.04	0.10			9/21/18 17:32:34	N	IV	

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: MROGERSON

Analysis Lot:

607784

Method/Testcode: 365.1/Tot Phos T

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC? Tier</u>
R1808565-007	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.167 mg/L	5	0.010	0.025			9/21/18 17:33:41	N IV
R1808566-001	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.121 mg/L	5	0.010	0.025			9/21/18 17:34:48	N IV
RQ1810071-14	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0495 mg/L	1					9/21/18 17:38:10	N IV
RQ1810071-13	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 17:39:17	N IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05			Analyst: MROGERSON			Analysis Lot:		607785	Method/Testcode: 365.1/Tot Phos T					
Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC? Tier
RQ1810072-01	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0489 mg/L	1					9/21/18 16:04:13	N IV
RQ1810072-02	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 16:05:21	N IV
RQ1809993-01	Phosphorus, Total	MB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 16:10:56	N IV
RQ1809993-02	Phosphorus, Total	LCS		Water	0.02 mg/L	20 mL	0.0249 mg/L	J 1	0.002	0.050	100		9/21/18 16:12:03	N IV
R1808565-008	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0545 mg/L	1	0.0020	0.0050			9/21/18 16:14:16	Y IV
RQ1809993-03	Phosphorus, Total	MS	R1808565-008	Water	0.08 mg/L	20 mL	0.079 mg/L	1	0.002	0.050	99		9/21/18 16:15:22	N IV
RQ1809993-04	Phosphorus, Total	DMS	R1808565-008	Water	0.08 mg/L	20 mL	0.079 mg/L	1	0.002	0.050	98	<1	9/21/18 16:16:29	N IV
RQ1810072-03	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0491 mg/L	1					9/21/18 16:17:36	N IV
RQ1810072-04	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 16:18:43	N IV
R1808565-013	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0514 mg/L	1	0.0020	0.0050			9/21/18 16:19:50	Y IV
RQ1809993-05	Phosphorus, Total	MS	R1808565-013	Water	0.08 mg/L	20 mL	0.077 mg/L	1	0.002	0.050	102		9/21/18 16:20:58	N IV
RQ1809993-06	Phosphorus, Total	DMS	R1808565-013	Water	0.08 mg/L	20 mL	0.076 mg/L	1	0.002	0.050	98	1	9/21/18 16:22:05	N IV
R1808566-004	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0396 mg/L	1	0.0020	0.0050			9/21/18 16:23:13	N IV
R1808566-006	Phosphorus, Total	N/A		Water	0.06 mg/L	20 mL	0.0586 mg/L	1	0.0020	0.0050			9/21/18 16:25:28	N IV
R1808566-007	Phosphorus, Total	N/A		Water	0.07 mg/L	20 mL	0.0715 mg/L	1	0.0020	0.0050			9/21/18 16:26:35	N IV
RQ1810072-05	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0488 mg/L	1					9/21/18 16:31:03	N IV
RQ1810072-06	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 16:32:10	N IV
R1808566-012	Phosphorus, Total	N/A		Water	0.07 mg/L	20 mL	0.0668 mg/L	1	0.0020	0.0050			9/21/18 16:34:24	N IV
R1808566-013	Phosphorus, Total	N/A		Water	0.09 mg/L	20 mL	0.0920 mg/L	1	0.0020	0.0050			9/21/18 16:35:30	N IV
R1808566-018	Phosphorus, Total	N/A		Water	0.00 mg/L	20 mL	0.0050 mg/L	U 1	0.0020	0.0050			9/21/18 16:39:58	N IV
R1808568-002	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0541 mg/L	1	0.0020	0.0050			9/21/18 16:42:14	N IV
R1808568-003	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.0502 mg/L	1	0.0020	0.0050			9/21/18 16:43:21	N IV
RQ1810072-07	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0493 mg/L	1					9/21/18 16:44:29	N IV
RQ1810072-08	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 16:45:36	N IV
RQ1810072-10	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0492 mg/L	1					9/21/18 16:57:52	N IV
RQ1810072-09	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 16:58:59	N IV
RQ1810072-12	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0488 mg/L	1					9/21/18 17:24:45	N IV
RQ1810072-11	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 17:25:52	N IV
R1808566-005	Phosphorus, Total	N/A		Water	0.06 mg/L	20 mL	0.120 mg/L	2	0.004	0.010			9/21/18 17:35:55	N IV
R1808566-008	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.109 mg/L	2	0.004	0.010			9/21/18 17:37:02	N IV
RQ1810072-14	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0495 mg/L	1					9/21/18 17:38:10	N IV
RQ1810072-13	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U 1	0.002	0.050			9/21/18 17:39:17	N IV
R1808566-009	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.284 mg/L	10	0.020	0.050			9/21/18 17:40:24	N IV
R1808566-010	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.129 mg/L	5	0.010	0.025			9/21/18 17:41:31	N IV
R1808566-011	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.139 mg/L	5	0.010	0.025			9/21/18 17:42:39	N IV
R1808568-005	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.154 mg/L	5	0.010	0.025			9/21/18 17:43:47	N IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: MROGERSON

Analysis Lot:

607785

Method/Testcode: 365.1/Tot Phos T

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC? Tier</u>
R1808566-015	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.304 mg/L	10	0.020	0.050			9/21/18 17:44:54	N IV
R1808566-017	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	1.64 mg/L	100	0.20	0.50			9/21/18 17:46:02	N IV
R1808568-001	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.223 mg/L	5	0.010	0.025			9/21/18 17:47:09	N IV
R1808568-004	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.160 mg/L	5	0.010	0.025			9/21/18 17:48:17	N IV
RQ1810072-16	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0490 mg/L	1					9/21/18 17:51:38	N IV
RQ1810072-15	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050		9/21/18 17:52:45	N IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: MROGERSON

Analysis Lot:

607786

Method/Testcode: 365.1/Tot Phos T

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC?</u>	<u>Tier</u>	
RQ1810073-01	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0493 mg/L	1					9/21/18 16:44:29	N	IV	
RQ1810073-02	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050		9/21/18 16:45:36	N	IV	
RQ1809994-01	Phosphorus, Total	MB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050		9/21/18 16:47:51	N	IV	
RQ1809994-02	Phosphorus, Total	LCS		Water	0.02 mg/L	20 mL	0.0247 mg/L	J	1	0.002	0.050	99	9/21/18 16:48:57	N	IV	
RQ1810073-03	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0492 mg/L		1				9/21/18 16:57:52	N	IV	
RQ1810073-04	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050		9/21/18 16:58:59	N	IV	
R1808568-007	Phosphorus, Total	N/A		Water	0.09 mg/L	20 mL	0.0851 mg/L		1	0.0020	0.0050		9/21/18 17:00:06	N	IV	
R1808568-008	Phosphorus, Total	N/A		Water	0.06 mg/L	20 mL	0.0561 mg/L		1	0.0020	0.0050		9/21/18 17:01:13	N	IV	
R1808568-009	Phosphorus, Total	N/A		Water	0.00 mg/L	20 mL	0.0050 mg/L	U	1	0.0020	0.0050		9/21/18 17:02:21	N	IV	
R1808568-010	Phosphorus, Total	N/A		Water	0.07 mg/L	20 mL	0.0667 mg/L		1	0.0020	0.0050		9/21/18 17:03:28	N	IV	
R1808568-012	Phosphorus, Total	N/A		Water	0.07 mg/L	20 mL	0.0664 mg/L		1	0.0020	0.0050		9/21/18 17:05:42	N	IV	
R1808568-014	Phosphorus, Total	N/A		Water	0.10 mg/L	20 mL	0.0950 mg/L		1	0.0020	0.0050		9/21/18 17:07:57	N	IV	
RQ1810073-05	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0488 mg/L		1				9/21/18 17:11:18	N	IV	
RQ1810073-06	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050		9/21/18 17:12:25	N	IV	
R1808653-001	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0095 mg/L		1	0.0020	0.0050		9/21/18 17:13:32	N	IV	
R1808653-002	Phosphorus, Total	N/A		Water	0.01 mg/L	20 mL	0.0092 mg/L		1	0.0020	0.0050		9/21/18 17:14:39	N	IV	
R1808738-001	Phosphorus, Total	N/A		Water	0.10 mg/L	20 mL	0.0986 mg/L		1	0.0020	0.0050		9/21/18 17:16:52	N	IV	
R1808738-003	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.0307 mg/L		1	0.0020	0.0050		9/21/18 17:17:59	N	IV	
R1808738-005	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0441 mg/L		1	0.0020	0.0050		9/21/18 17:19:07	N	IV	
R1808738-007	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.0417 mg/L		1	0.0020	0.0050		9/21/18 17:20:14	N	IV	
R1808738-009	Phosphorus, Total	N/A		Water	0.08 mg/L	20 mL	0.0751 mg/L		1	0.0020	0.0050		9/21/18 17:21:22	N	IV	
RQ1810073-08	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0488 mg/L		1				9/21/18 17:24:45	N	IV	
RQ1810073-07	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050		9/21/18 17:25:52	N	IV	
RQ1810073-10	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0495 mg/L		1				9/21/18 17:38:10	N	IV	
RQ1810073-09	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050		9/21/18 17:39:17	N	IV	
R1808566-014	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	1.58 mg/L		100	0.20	0.50		9/21/18 17:49:24	Y	IV	
RQ1809994-03	Phosphorus, Total	MS	R1808566-014	Water	0.02 mg/L	20 mL	2.1 mg/L	J	100	0.2	5.0	2020*	9/21/18 17:50:31	N	IV	
RQ1810073-12	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0490 mg/L		1				9/21/18 17:51:38	N	IV	
RQ1810073-11	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050		9/21/18 17:52:45	N	IV	
RQ1809994-04	Phosphorus, Total	DMS	R1808566-014	Water	0.02 mg/L	20 mL	1.6 mg/L	J	100	0.2	5.0	-32*	28*	9/21/18 17:53:52	N	IV
R1808568-006	Phosphorus, Total	N/A		Water	0.03 mg/L	20 mL	0.145 mg/L		5	0.010	0.025		9/21/18 17:54:59	N	IV	
RQ1809994-05	Phosphorus, Total	MS	R1808568-006	Water	0.03 mg/L	20 mL	0.17 mg/L	J	5	0.01	0.25	93	9/21/18 17:56:06	N	IV	
RQ1809994-06	Phosphorus, Total	DMS	R1808568-006	Water	0.03 mg/L	20 mL	0.17 mg/L	J	5	0.01	0.25	98	<1	9/21/18 17:57:13	N	IV
R1808568-011	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.104 mg/L		2	0.004	0.010		9/21/18 17:58:21	N	IV	
R1808568-013	Phosphorus, Total	N/A		Water	0.06 mg/L	20 mL	0.125 mg/L		2	0.004	0.010		9/21/18 17:59:28	N	IV	
R1808568-015	Phosphorus, Total	N/A		Water	0.04 mg/L	20 mL	0.179 mg/L		5	0.010	0.025		9/21/18 18:00:35	N	IV	

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-FIA-05

Analyst: MROGERSON

Analysis Lot:

607786

Method/Testcode: 365.1/Tot Phos T

<u>Lab Code</u>	<u>Target Analytes</u>	<u>QC</u>	<u>Parent Sample</u>	<u>Matrix</u>	<u>Raw Result</u>	<u>Sample Amt.</u>	<u>Final Result</u>	<u>Dil</u>	<u>MDL</u>	<u>PQL</u>	<u>% Rec</u>	<u>% RSD</u>	<u>Date Analyzed</u>	<u>QC? Tier</u>	
R1808568-016	Phosphorus, Total	N/A		Water	0.05 mg/L	20 mL	0.101 mg/L	2	0.004	0.010			9/21/18 18:01:43	N IV	
R1808653-003	Phosphorus, Total	N/A		Water	0.02 mg/L	20 mL	0.87 mg/L	50	0.10	0.25			9/21/18 18:02:51	N IV	
RQ1810073-14	Phosphorus, Total	CCV		Water	0.05 mg/L	20 mL	0.0489 mg/L	1					9/21/18 18:05:06	N IV	
RQ1810073-13	Phosphorus, Total	CCB		Water	0.00 mg/L	20 mL	0.050 mg/L	U	1	0.002	0.050			9/21/18 18:06:13	N IV

indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Preparation Information Benchsheet

Prep Run#: 322334

Team: GenChem/MROGERSON

Prep WorkFlow: Gen Dig Phos

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/19/18 05:23 PM

#	Lab Code	Client ID	B#	Amt. Ext.	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	Spike Amt./Inv. ID	Comments
1	RQ1809991-01	MB		20mL	365.1/Tot Phos T				20.00mL			
2	RQ1809991-02	LCS		20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
3	R1808447-016	Caledonia FH 091802	.02	20mL	365.1/Tot Phos T				20.00mL			
4	RQ1809991-03	R1808447-016 MS	.02	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
5	RQ1809991-04	R1808447-016 DMS	.02	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
6	R1808567-007	5-RAMA-13.3-09052018-W	.04	20mL	365.1/Tot Phos T				20.00mL			
7	R1808567-009	5-RAMA-16.1-09052018-W	.04	20mL	365.1/Tot Phos T				20.00mL			
8	R1808567-011	5-RAMA-16.5-09052018-W	.04	20mL	365.1/Tot Phos T				20.00mL			
9	R1808567-013	5-RAMA-16.7-09052018-W	.04	20mL	365.1/Tot Phos T				20.00mL			
10	R1808567-015	5-OCSDSTP-001-09052018-W	.04	20mL	365.1/Tot Phos T				20.00mL			
11	R1808567-017	5-RAMA-16.5-09052018-W-DUP	.04	20mL	365.1/Tot Phos T				20.00mL			
12	R1808598-001	18LMG303	.01	20mL	365.1/Tot Phos T				20.00mL			
13	RQ1809991-05	R1808598-001 MS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
14	RQ1809991-06	R1808598-001 DMS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
15	R1808598-003	18LMG313	.01	20mL	365.1/Tot Phos T				20.00mL			
16	R1808598-005	18LMG305	.01	20mL	365.1/Tot Phos T				20.00mL			
17	R1808598-007	18LMG316	.01	20mL	365.1/Tot Phos T				20.00mL			
18	R1808598-009	18LMG315	.01	20mL	365.1/Tot Phos T				20.00mL			
19	R1808598-011	18LMG309	.01	20mL	365.1/Tot Phos T				20.00mL			
20	R1808598-013	18LMG301	.01	20mL	365.1/Tot Phos T				20.00mL			
21	R1808598-015	18LMG307	.01	20mL	365.1/Tot Phos T				20.00mL			
22	R1808598-017	18LMG311	.01	20mL	365.1/Tot Phos T				20.00mL			
23	R1808613-001	18SRB009	.01	20mL	365.1/Tot Phos T				20.00mL			
24	R1808613-003	18SRB011	.01	20mL	365.1/Tot Phos T				20.00mL			
25	R1808613-005	18SRB023	.01	20mL	365.1/Tot Phos T				20.00mL			
26	R1808613-007	18SRB018	.01	20mL	365.1/Tot Phos T				20.00mL			

Spiking Solutions

Name: Phosphate (Total and Ortho) 10 ug/ml as Inventory ID 193374

Logbook Ref: 193374

Expires On: 03/19/2019

Preparation Information Benchsheet

Prep Run#: 322334

Team: GenChem/MROGERSON

Prep WorkFlow: Gen Dig Phos

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/19/18 05:23 PM

Preparation Steps

Step: Digestion

Started: 9/19/18 17:23

Finished: 9/19/18 18:23

By: MROGERSON

Comments:

Comments: _____

Reviewed By: _____ Date: _____

Spike Witness: NSMITH

Date: _____

Chain of Custody

Relinquished By: _____

Date: _____

Extracts Examined

Received By: _____

Date: _____

Yes No

Preparation Information Benchsheet

Prep Run#: 322335

Team: GenChem/MROGERSON

Prep WorkFlow: Gen Dig Phos

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/19/18 05:23 PM

#	Lab Code	Client ID	B#	Amt. Ext	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ1809992-01	MB		20mL	365.1/Tot Phos T				20.00mL			
2	RQ1809992-02	LCS		20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
3	R1808613-009	18SRB097	.01	20mL	365.1/Tot Phos T				20.00mL			
4	R1808614-001	5-RAMA-16.8-09062018-W	.04	20mL	365.1/Tot Phos T				20.00mL			
5	R1808614-003	5-RAMA-18.6-09062018-W	.04	20mL	365.1/Tot Phos T				20.00mL			
6	R1808614-005	5-KJSTP-001-09062018-W	.04	20mL	365.1/Tot Phos T				20.00mL			
7	R1808614-007	5-RAMA_T25_3-0.2-09062018-W	.04	20mL	365.1/Tot Phos T				20.00mL			
8	RQ1809992-03	R1808614-007 MS	.04	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
9	RQ1809992-04	R1808614-007 DMS	.04	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
10	R1808559-001	Upstream	.02	20mL	365.1/Tot Phos T				20.00mL			
11	RQ1809992-05	R1808559-001 MS	.02	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
12	RQ1809992-06	R1808559-001 DMS	.02	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
13	R1808559-002	Downstream/Outfall	.02	20mL	365.1/Tot Phos T				20.00mL			
14	R1808565-001	13-RIOG-TI-0.8-09052018-W	.01	20mL	365.1/Tot Phos T				20.00mL			
15	R1808565-002	13-MASO-2.8-09052018-W	.01	20mL	365.1/Tot Phos T				20.00mL			
16	R1808565-003	13-RUTG-9.3-09052018-W	.01	20mL	365.1/Tot Phos T				20.00mL			
17	R1808565-004	13-RUTG-9.3-09052018-W-EB	.01	20mL	365.1/Tot Phos T				20.00mL			
18	R1808565-005	13-POCH-2.6-09052018-W	.01	20mL	365.1/Tot Phos T				20.00mL			
19	R1808565-006	13-TINW-T3-2.1-09-09062018-W	.01	20mL	365.1/Tot Phos T				20.00mL			
20	R1808565-007	13-TINW-4.5-0.8-09062018-W	.01	20mL	365.1/Tot Phos T				20.00mL			
21	R1808566-002	13-WALK-0.8-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
22	R1808565-009	13-PIKL-5.7-09062018-W-EB	.01	20mL	365.1/Tot Phos T				20.00mL			

Preparation Information Benchsheet

Prep Run#: 322335

Team: GenChem/MROGERSON

Prep WorkFlow: Gen Dig Phos

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/19/18 05:23 PM

23	R1808565-011	13-WALK-T13-0.7-090620 18-W	.01	20mL	365.1/Tot Phos T				20.00mL			
24	R1808565-012	13-WALK-T15-0.1-090620 18-W	.01	20mL	365.1/Tot Phos T				20.00mL			
25	R1808566-003	13-SWAK-1.7-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
26	R1808566-001	13-WALK-2.1-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			

Spiking Solutions

Name: Phosphate (Total and Ortho) 10 ug/ml as Inventory ID 193374

Logbook Ref: 193374

Expires On: 03/19/2019

Preparation Steps

Step: Digestion

Started: 9/19/18 17:23

Finished: 9/19/18 18:23

By: MROGERSON

Comments:

Comments:

Reviewed By: _____ Date: _____

Spike Witness: NSMITH

Date: _____

Chain of Custody

Relinquished By: _____

Date: _____

Extracts Examined

Received By: _____

Date: _____

Yes No

Preparation Information Benchsheet

Prep Run#: 322336

Team: GenChem/MROGERSON

Prep WorkFlow: Gen Dig Phos

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/19/18 05:23 PM

#	Lab Code	Client ID	B#	Amt. Ext	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ1809993-01	MB		20mL	365.1/Tot Phos T				20.00mL			
2	RQ1809993-02	LCS		20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
3	R1808565-008	13-PKIL-5.7-09062018-W	.01	20mL	365.1/Tot Phos T				20.00mL			
4	RQ1809993-03	R1808565-008 MS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
5	RQ1809993-04	R1808565-008 DMS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
6	R1808565-013	13-PKIL-5.7-09062018-W DUP	.01	20mL	365.1/Tot Phos T				20.00mL			
7	RQ1809993-05	R1808565-013 MS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
8	RQ1809993-06	R1808565-013 DMS	.01	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
9	R1808566-004	13-WKLEI-0.6-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
10	R1808566-005	13-WALK-9.8-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
11	R1808566-006	13-WALK-60.1-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
12	R1808566-007	13-RUTG-1.5-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
13	R1808566-008	13-POCH-1.8-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
14	R1808566-009	13-QKER-0.9-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
15	R1808566-010	13-WALK-9.8-09052018-W-DUP	.06	20mL	365.1/Tot Phos T				20.00mL			
16	R1808566-011	13-WALK-44.4-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
17	R1808566-012	13-MASO-0.2-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
18	R1808566-013	13-MONH-0.4-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
19	R1808568-005	13-WALK-29.9-09052018-W-DUP	.06	20mL	365.1/Tot Phos T				20.00mL			
20	R1808566-015	13-WALK-46.6-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
21	R1808566-017	13-RIOG-0.7-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			

Preparation Information Benchsheet

Prep Run#: 322336

Team: GenChem/MROGERSON

Prep WorkFlow: Gen Dig Phos

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/19/18 05:23 PM

22	R1808566-018	13-RIOG-0.7-09062018-W EB	.06	20mL	365.1/Tot Phos T			20.00mL			
23	R1808568-001	13-WALK-35.6-09052018-W	.06	20mL	365.1/Tot Phos T			20.00mL			
24	R1808568-002	13-MONH-4.1-09052018-W	.06	20mL	365.1/Tot Phos T			20.00mL			
25	R1808568-003	13-LGUN-6.0-09052018-W	.06	20mL	365.1/Tot Phos T			20.00mL			
26	R1808568-004	13-WALK-29.9-09052018-W	.06	20mL	365.1/Tot Phos T			20.00mL			

Spiking Solutions

Name: Phosphate (Total and Ortho) 10 ug/ml as Inventory ID 193374 Logbook Ref: 193374 Expires On: 03/19/2019

Preparation Steps

Step: Digestion

Started: 9/19/18 17:23

Finished: 9/19/18 18:23

By: MROGERSON

Comments:

Comments:

Reviewed By: _____ Date: _____ Spike Witness: NSMITH Date: _____

Chain of Custody

Relinquished By: _____	Date: _____	Extracts Examined
Received By: _____	Date: _____	Yes No

Preparation Information Benchsheet

Prep Run#: 322337

Team: GenChem/MROGERSON

Prep WorkFlow: Gen Dig Phos

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/19/18 05:23 PM

#	Lab Code	Client ID	B#	Amt. Ext	Method /Test	pH	AE	BN	Final Vol	Sample Desc. (Initial/Final)	SpikeAmt./Inv. ID	Comments
1	RQ1809994-01	MB		20mL	365.1/Tot Phos T				20.00mL			
2	RQ1809994-02	LCS		20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
3	R1808566-014	13-WCHEE-0.6-09062018-W	.17	20mL	365.1/Tot Phos T				20.00mL			
4	RQ1809994-03	R1808566-014 MS	.17	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
5	RQ1809994-04	R1808566-014 DMS	.17	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
6	R1808568-006	13-GUNK-37.7-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
7	RQ1809994-05	R1808568-006 MS	.06	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
8	RQ1809994-06	R1808568-006 DMS	.06	20mL	365.1/Tot Phos T				20.00mL		0.0500 mL/193374	
9	R1808568-007	13-GUNK_T35-0.2-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
10	R1808568-008	13-GUNK-40.3-09052018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
11	R1808568-009	13-TINW-0.5-09062018-W-FB	.06	20mL	365.1/Tot Phos T				20.00mL			
12	R1808568-010	13-PKIL-0.4-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
13	R1808568-011	13-WALK-19.0-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
14	R1808568-012	13-GUNK-0.4-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
15	R1808568-013	13-WALK-22.8-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
16	R1808568-014	13-DWAR-2.0-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
17	R1808568-015	13-WALK-26.9-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
18	R1808568-016	13-TINW-0.5-09062018-W	.06	20mL	365.1/Tot Phos T				20.00mL			
19	R1808653-001	19PKTP19FW	.01	20mL	365.1/Tot Phos T				20.00mL			
20	R1808653-002	19PKTP18DS	.01	20mL	365.1/Tot Phos T				20.00mL			
21	R1808653-003	19PKTP18DD	.01	20mL	365.1/Tot Phos T				20.00mL			
22	R1808738-001	18LHB309	.02	20mL	365.1/Tot Phos T				20.00mL			
23	R1808738-003	18LHB317	.02	20mL	365.1/Tot Phos T				20.00mL			
24	R1808738-005	18LHB318	.02	20mL	365.1/Tot Phos T				20.00mL			
25	R1808738-007	18LHB305	.02	20mL	365.1/Tot Phos T				20.00mL			
26	R1808738-009	18LHB323	.02	20mL	365.1/Tot Phos T				20.00mL			

Preparation Information Benchsheet

Prep Run#: 322337

Team: GenChem/MROGERSON

Prep WorkFlow: Gen Dig Phos

Prep Method: Method

Status: Prepped

Prep Date/Time: 9/19/18 05:23 PM

Spiking Solutions

Name: Phosphate (Total and Ortho) 10 ug/ml as Inventory ID 193374

Logbook Ref: 193374

Expires On: 03/19/2019

Preparation Steps

Step: Digestion

Started: 9/19/18 17:23

Finished: 9/19/18 18:23

By: MROGERSON

Comments

Comments:

Reviewed By: _____ Date: _____

Spike Witness: NSMITH

Date: _____

Chain of Custody

Relinquished By: _____

Date: _____

Extracts Examined

Received By: _____

Date: _____

Yes No

ALS Environmental

Time on: 17:23
 Time off: 18:23
 psi reached: 23.8
 Temp(°C) reached: 125.0

Analyte: TPO4 Digest

Analyst: MAR

DOD pipet cal: Thur, DaisyBalance ID: NA

Low Level / Regular Level

Date: 9/19/18Spk Witness: MSOrg. LCS ID: 190673Prep: 6/4/18Exp: 6/4/19ID: Sample

#	Misc.	Order #	Amt	Dilution	Spk Amount	Comments
1		PB 1 LL	20	1		
✓ 2		LCS 1 INORG LL	20	1	0.05 mL	10 ppm
3		LCS 1 ORG LL	20	1	0.05 mL	10 ppm
4		R1808447-016	20	1		
✓ 5		R1808447-016 MS	20	1	0.05 mL	10 ppm
✓ 6		R1808447-016 DM	20	1	0.05 mL	10 ppm
7		R1808567-007	20	1		
8		R1808567-009	20	1		
9		R1808567-011	20	1		
10		R1808567-013	20	1		
11		R1808567-015	20	1		
12		R1808567-017	20	1		
✓ 13		R1808598-001	20	1		
✓ 14		R1808598-001 MS	20	1	0.05 mL	10 ppm
15		R1808598-001 DM	20	1	0.05 mL	10 ppm
16		R1808598-003	20	1		
17		R1808598-005	20	1		
18		R1808598-007	20	1		
19		R1808598-009	20	1		
20		R1808598-011	20	1		
21		R1808598-013	20	1		
22		R1808598-015	20	1		
23		R1808598-017	20	1		
24		R1808613-001	20	1		
25		R1808613-003	20	1		
26		R1808613-005	20	1		
27		R1808613-007	20	1		
✓ 28		PB 2 LL	20	1		
✓ 29		LCS 2 INORG LL	20	1	0.05 mL	10 ppm
✓ 30		LCS 2 ORG LL	20	1	0.05 mL	10 ppm
31		R1808613-009	20	1		
32		R1808614-001	20	1		
33		R1808614-003	20	1		
34		R1808614-005	20	1		
✓ 35		R1808614-007	20	1		
✓ 36		R1808614-007 MS	20	1	0.05 mL	10 ppm
✓ 37		R1808614-007 DM	20	1	0.05 mL	10 ppm
38		R1808559-001	20	1		
✓ 39		R1808559-001 MS	20	1	0.05 mL	10 ppm
✓ 40		R1808559-001 DM	20	1	0.05 mL	10 ppm
41		R1808559-002	20	1		
42		R1808565-001	20	1		
43		R1808565-002	20	1		
44		R1808565-003	20	1		
45		R1808565-004	20	1		
46		R1808565-005	20	1		
47		R1808565-006	20	1		
48		R1808565-007	20	1		
49		R1808566-002	20	1		
50		R1808565-009	20	1		

ALS Environmental

Analyte: TPO4 Digest

Low Level / Regular Level

Time on: 17:23
 Time off: 18:23
 psi reached: 23.8
 Temp(°C) reached: 125.0

Analyst: MAR
 Pipet ID: Ther. Dursy
 DOD pipet cal: NA
 Balance ID: NA

Org. LCS ID:	<u>90673</u>
Prep:	<u>6/4/18</u>
Exp:	<u>6/4/19</u>

#	Misc.	Order #	Sample			Comments
			Amt	Dilution	Spk Amount	
51		R1808565-011	20	1		
52		R1808565-012	20	1		
53		R1808566-003	20	1		
54		R1808566-001	20	1		
55		PB 3 LL	20	1		
✓ 56		LCS 3 INORG LL	20	1	0.05 mL	10 ppm
✓ 57		LCS 3 ORG LL	20	1	0.05 mL	10 ppm
58		R1808565-008	20	1		
✓ 59		R1808565-008 MS	20	1	0.05 mL	10 ppm
✓ 60		R1808565-008 DM	20	1	0.05 mL	10 ppm
61		R1808565-013	20	1		
✓ 62		R1808565-013 MS	20	1	0.05 mL	10 ppm
✓ 63		R1808565-013 DM	20	1	0.05 mL	10 ppm
64		R1808566-004	20	1		
65		R1808566-005	20	1		
66		R1808566-006	20	1		
67		R1808566-007	20	1		
68		R1808566-008	20	1		
69		R1808566-009	20	1		
70		R1808566-010	20	1		
71		R1808566-011	20	1		
72		R1808566-012	20	1		
73		R1808566-013	20	1		
74		R1808568-005	20	1		
75		R1808566-015	20	1		
76		R1808566-017	20	1		
77		R1808566-018	20	1		
78		R1808568-001	20	1		
79		R1808568-002	20	1		
80		R1808568-003	20	1		
81		R1808568-004	20	1		
✓ 82		PB 4 LL	20	1		
✓ 83		LCS 4 INORG LL	20	1	0.05 mL	10 ppm
✓ 84		LCS 4 ORG LL	20	1	0.05 mL	10 ppm
85		R1808566-014	20	1		
✓ 86		R1808566-014 MS	20	1	0.05 mL	10 ppm
✓ 87		R1808566-014 DM	20	1	0.05 mL	10 ppm
✓ 88		R1808568-006	20	1		
✓ 89		R1808568-006 MS	20	1	0.05 mL	10 ppm
✓ 90		R1808568-006 DM	20	1	0.05 mL	10 ppm
91		R1808568-007	20	1		
92		R1808568-008	20	1		
93		R1808568-009	20	1		
94		R1808568-010	20	1		
95		R1808568-011	20	1		
96		R1808568-012	20	1		
97		R1808568-013	20	1		
98		R1808568-014	20	1		
99		R1808568-015	20	1		
100		R1808568-016	20	1		

ALS Environmental

Time on: 17:23
 Time off: 18:23
 psi reached: 23.8
 Temp(°C) reached: 125.0

Analyte: TPO4 DigestAnalyst: MARPipet ID: Ther. DarsyDOD pipet cal: NABalance ID: NA

Low Level / Regular Level

Date: 9/19/18

Spk Witness:

Org. LCS ID: 190673Prep: C/4/18Exp: 6/4/19**Sample**

#	Misc.	Order #	Amt	Dilution	Spk Amount	Comments
101		R1808653-001	20	1		
102		R1808653-002	20	1		
103		R1808653-003	20	1		
104		R1808738-001	20	1		
105		R1808738-003	20	1		
106		R1808738-005	20	1		
107		R1808738-007	20	1		
108		R1808738-009	20	1		

Analyst: MAR
Instrument: Lachut 8800

Date 9/21/18
Analysis T8y

Common Dilutions

Dilution	Matrix of Diluent	1st Dilution		2nd Dilution		3rd Dilution		4th Dilution		5th Dilution	
		mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample	mL's of Diluent	Dilution Factor	mL's of Sample
1/2	TDS	4	4	1/2							
1/3		3	6	1/3							
1/4		2	6	1/4							
1/5		2	8	1/5							
1/10		1	9	1/10							
1/20		1	1	1/2	1	9	1/20				
1/30		3	6	1/3	1	9	1/30				
1/40		1	3	1/4	1	9	1/40				
1/50		1	4	1/5	1	9	1/50				
1/100		1	9	1/10	1	9	1/100				
1/200		1	1	1/2	1	9	1/200	1	9	1/200	
1/300		3	6	1/3	1	9	1/300	1	9	1/300	
1/400		1	3	1/4	1	9	1/400	1	9	1/400	
1/500		1	4	1/5	1	9	1/500	1	9	1/500	
1/1000		1	9	1/10	1	9	1/1000	1	9	1/1000	
1/2000		1	1	1/2	1	9	1/2000	1	9	1/2000	
1/3000		3	6	1/3	1	9	1/3000	1	9	1/3000	
1/4000		1	3	1/4	1	9	1/4000	1	9	1/4000	
1/10000		1	9	1/10	1	9	1/10000	1	9	1/10000	
1/20000		1	1	1/2	1	9	1/20000	1	9	1/20000	
1/40000		1	3	1/4	1	9	1/40000	1	9	1/40000	
1/100000		1	9	1/10	1	9	1/100000	1	9	1/100000	

Special Dilutions

Creator : GABRIELA NITA-JOUSSI
 Creation Date : 9/21/2018 2:40:43 PM
 Last Modified : 9/21/2018 6:07:46 PM
 Description :

Mal TPOU

Pipettes: Beta, Hawk

Cup	Sample ID	MDF	Weight	Sample Type	Comments
S1	STD 0.100			Calibration Standard	
S2	STD 0.070			Calibration Standard	
S3	STD 0.050			Calibration Standard	
S4	STD 0.030			Calibration Standard	
S5	STD 0.010			Calibration Standard	
S6	STD 0.005			Calibration Standard	
S7	STD 0.003			Calibration Standard	
S8	STD 0.00			Calibration Standard	
S10	ICV TV= 0.050			Unknown	
S8	ICB			Unknown	
S6	CRDL 0.005			Unknown	
S7	CRDL 0.003			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
1	PB 1 LL			Unknown	
2	LCS 1 LL TV=0.025			Unknown	
3	LCS 1 ORG LL			Unknown	
4	R1808447-016			Unknown	
5	R1808447-016 MS			Unknown	
6	R1808447-016 MSD	1.00000		Unknown	
7	R1808567-007			Unknown	Rpt @ 100
8	R1808567-009			Unknown	Rpt @ 100
9	R1808567-011			Unknown	Rpt @ 100
10	R1808567-013			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
11	R1808567-015			Unknown	Rpt @ 200
12	R1808567-017			Unknown	Rpt @ 100
13	R1808598-001	5.00000		Unknown	
14	R1808598-001 MS	5.00000		Unknown	
15	R1808598-001 MSD	5.00000		Unknown	
16	R1808598-003			Unknown	
17	R1808598-005	5.00000		Unknown	
18	R1808598-007			Unknown	
19	R1808598-009			Unknown	
20	R1808598-011			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
21	R1808598-013			Unknown	
22	R1808598-015			Unknown	

23	R1808598-017			Unknown	
24	R1808613-001			Unknown	
25	R1808613-003			Unknown	
26	R1808613-005			Unknown	
27	R1808613-007			Unknown	
28	PB 2 LL			Unknown	
29	LCS 2 INORG LL			Unknown	
30	LCS 2 ORG LL			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
31	R1808613-009			Unknown	
32	R1808614-001			Unknown	
33	R1808614-003			Unknown	
34	R1808614-005			Unknown	
35	R1808614-007			Unknown	
36	R1808614-007 MS			Unknown	
37	R1808614-007 MSD			Unknown	
38	R180855+-001			Unknown	
39	R1808559-001 MS			Unknown	
40	R1808559-001 MSD			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
41	R1808559-002			Unknown	
42	R1808565-001			Unknown	Rpt @ 2
43	R1808565-002			Unknown	
44	R1808565-003			Unknown	
45	R1808565-004			Unknown	
46	R1808656-005			Unknown	Rpt @ 25
47	R1808565-006	2.00000		Unknown	Rpt @ 20
48	R1808565-007			Unknown	Rpt @ 5
49	R1808566-002			Unknown	
50	R1808565-009			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
51	R1808565-011			Unknown	
52	R1808565-012			Unknown	
53	R1808566-003			Unknown	
54	R1808566-001			Unknown	Rpt @ 5
55	PB 3 LL			Unknown	
56	LCS3 INORG			Unknown	
57	LCS 3 ORG			Unknown	
58	R1808565-008			Unknown	
59	R1808565-008 MS			Unknown	
60	R1808565-008 MSD			Unknown	
S10	CCV			Unknown	

S8	CCB			Unknown	
61	R1808565-013			Unknown	
62	R1808565-013 MS			Unknown	
63	R1808565-013 MSD			Unknown	
64	R1808566-004			Unknown	
65	R1808566-005			Unknown	Rpt @ 2
66	R1808566-006			Unknown	
67	R1808566-007			Unknown	
68	R1808566-008			Unknown	Rpt @ 2
69	R1808566-009			Unknown	Rpt @ 10
70	R1808566-010			Unknown	Rpt @ 10
S10	CCV			Unknown	
S8	CCB			Unknown	
71	R1808566-011			Unknown	Rpt @ 5
72	R1808566-012			Unknown	
73	R1808566-013			Unknown	
74	R1808568-005			Unknown	Rpt @ 5
75	R1808566-015			Unknown	Rpt @ 10
76	R1808566-017			Unknown	Rpt @ 100
77	R1808566-018			Unknown	
78	R1808568-001			Unknown	Rpt @ 5
79	R1808568-002			Unknown	
80	R1808568-003			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
81	R1808568-004			Unknown	Rpt @ 5
82	PB 4			Unknown	
83	LCS 4 INORG			Unknown	
84	LCS 4 ORG			Unknown	
85	R1808566-014			Unknown	Rpt @ 100
86	R1808566-014 MS			Unknown	
87	R1808566-014 MSD			Unknown	
88	R1808568-006			Unknown	Rpt @ 5
89	R1808568-006 MS			Unknown	
90	R1808568-006 MSD			Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	
91	R1808568-007			Unknown	
92	R1808568-008			Unknown	
93	R1808568-009			Unknown	
94	R1808568-010			Unknown	
95	R1808568-011			Unknown	Rpt @ 2
96	R1808568-012			Unknown	
97	R1808568-013			Unknown	Rpt @ 2
98	R1808568-014			Unknown	

99	R1808568-015		Unknown	PPT @ S
100	R1808568-016		Unknown	PPT @ Z
S10	CCV		Unknown	
S8	CCB		Unknown	
101	R1808653-001		Unknown	
102	R1808653-002		Unknown	
103	R1808653-003		Unknown	PPT @ S0
104	R1808738-001		Unknown	
105	R1808738-003		Unknown	
106	R1808738-005		Unknown	
107	R1808738-007		Unknown	
108	R1808738-009		Unknown	
109	R1808567-007 RPT	100.000	Unknown	
110	R1808567-009 RPT	100.000	Unknown	
S10	CCV		Unknown	
S8	CCB		Unknown	
111	R1808567-011 RPT	100.000	Unknown	
112	R1808567-015 RPT	200.000	Unknown	
113	R1808567-017 RPT	100.000	Unknown	
114	R1808565-001 RPT	2.00000	Unknown	
115	R1808565-005 RPT	5.00000	Unknown	
116	R1808565-006 RPT	20.0000	Unknown	
117	R1808565-007 RPT	5.00000	Unknown	
118	R1808566-001 RPT	5.00000	Unknown	
119	R1808566-005 RPT	2.00000	Unknown	
120	R1808566-008 RPT	2.00000	Unknown	
S10	CCV		Unknown	
S8	CCB		Unknown	
121	R1808566-009 RPT	10.0000	Unknown	
122	R1808566-010 RPT	5.00000	Unknown	
123	R1808566-011 RPT	5.00000	Unknown	
124	R1808568-005 RPT	5.00000	Unknown	
125	R1808566-015 RPT	10.0000	Unknown	
126	R1808566-017 RPT	100.000	Unknown	
127	R1808568-001 RPT	5.00000	Unknown	
128	R1808568-004 RPT	5.00000	Unknown	
129	R1808566-014 RPT	100.000	Unknown	
130	R1808566-014 MS RPT	100.000	Unknown	
S10	CCV		Unknown	
S8	CCB		Unknown	
131	R1808566-014 DMS RPT	100.000	Unknown	
132	R1808568-006 RPT	5.00000	Unknown	
133	R1808568-006 MS RPT	5.00000	Unknown	
134	R1808568-006 DMS RPT	5.00000	Unknown	
135	R1808568-011 RPT	2.00000	Unknown	

136	R1808568-013 RPT	2.00000		Unknown	
137	R1808568-015 RPT	5.00000		Unknown	
138	R1808568-016 RPT	2.00000		Unknown	
139	R1808653-003 RPT	50.0000		Unknown	
140	R18085660914 DMS RPT	100.000		Unknown	
S10	CCV			Unknown	
S8	CCB			Unknown	

Analyte Table

QC8500 365.1 TPO4-L
(mg/L)

STD 0.100	0.10000
STD 0.070	0.07000
STD 0.050	0.05000
STD 0.030	0.03000
STD 0.010	0.01000
STD 0.005	0.00500
STD 0.003	0.00300
STD 0.00	0.00000

Original Run Filename: OM_9-21-2018_02-40-43PM.OMN Created: 9/21/2018 2:40:43 PM

Original Run Author's Signature: [GABRIELA NITA-JOUUPPI]

Current Run Filename: OM_9-21-2018_02-40-43PM.OMN Last Modified: 9/21/2018 6:07:46 PM

Current Run Author's Signature: [GABRIELA NITA-JOUUPPI]

Description: Default New Run

Sample	Cup No.	Channel 2		Detection Time	MDF		
		QC8500 365.1 TPO4-LL					
		Conc. (mg/L)	Area (V.s)				
STD 0.100	S1	0.10000	2.31051	9/21/2018@2:42:30 PM			
STD 0.070	S2	0.07000	1.57999	9/21/2018@2:43:37 PM			
STD 0.050	S3	0.05000	1.12390	9/21/2018@2:44:44 PM			
STD 0.030	S4	0.03000	0.66486	9/21/2018@2:45:51 PM			
STD 0.010	S5	0.01000	0.23232	9/21/2018@2:46:58 PM			
STD 0.005	S6	0.00500	0.12037	9/21/2018@2:48:05 PM			
STD 0.003	S7	0.00300	0.08127	9/21/2018@2:49:12 PM			
STD 0.00	S8	0.00000	0.00904	9/21/2018@2:50:18 PM			
DQM Test: Minimum Correlation Coefficient							
Result:	0.99979 > 0.99700						
Message	Pass						
Action	Continue						
ICV TV= 0.050	S10	0.04596	1.04982	9/21/2018@2:52:39 PM			
Calibration:	Table/Fig. : 1						
ICB	S8	0.00074	0.01717	9/21/2018@2:53:46 PM			
CRDL 0.005	S6	0.00505	0.11555	9/21/2018@2:54:52 PM			
CRDL 0.003	S7	0.00310	0.07099	9/21/2018@2:55:59 PM			
CCV	S10	0.04875	1.11355	9/21/2018@2:57:06 PM			
CCB	S8	0.00026	0.00623	9/21/2018@2:58:13 PM			
PB 1 LL	1	0.00168	0.03859	9/21/2018@2:59:20 PM			
LCS 1 LL TV=0.025	2	0.02393	0.54682	9/21/2018@3:00:28 PM			
LCS 1 ORG LL	3	0.02308	0.52722	9/21/2018@3:01:36 PM			
R1808447-016	4	0.04605	1.05188	9/21/2018@3:02:43 PM			
R1808447-016 MS	5	0.07030	1.60577	9/21/2018@3:03:50 PM			
R1808447-016 MSD	6	0.07108	1.62362	9/21/2018@3:04:58 PM	1.00		
R1808567-007	7	1.40991	32.19968	9/21/2018@3:06:05 PM			
R1808567-009	8	1.95659	44.68474	9/21/2018@3:07:12 PM			
R1808567-011	9	2.35442	53.77028	9/21/2018@3:08:19 PM			
R1808567-013	10	0.06961	1.58991	9/21/2018@3:09:26 PM			
CCV	S10	0.04940	1.12840	9/21/2018@3:10:34 PM			
CCB	S8	0.00031	0.00734	9/21/2018@3:11:40 PM			
R1808567-015	11	3.45920	79.00121	9/21/2018@3:12:47 PM			
R1808567-017	12	2.36641	54.04421	9/21/2018@3:13:54 PM			
R1808598-001	13	0.06909	0.31580	9/21/2018@3:15:01 PM	5.00		
R1808598-001 MS	14	0.10101	0.46157	9/21/2018@3:16:07 PM	5.00		
R1808598-001 MSD	15	0.09988	0.45643	9/21/2018@3:17:13 PM	5.00		
R1808598-003	16	0.02497	0.57042	9/21/2018@3:18:21 PM			
R1808598-005	17	0.11573	0.52883	9/21/2018@3:19:28 PM	5.00		
R1808598-007	18	0.02568	0.58670	9/21/2018@3:20:36 PM			
R1808598-009	19	0.01314	0.30036	9/21/2018@3:21:43 PM			
R1808598-011	20	0.03574	0.81653	9/21/2018@3:22:51 PM			
CCV	S10	0.04892	1.11752	9/21/2018@3:23:59 PM			
CCB	S8	0.00077	0.01787	9/21/2018@3:25:06 PM			
R1808598-013	21	0.05431	1.24054	9/21/2018@3:26:13 PM			
R1808598-015	22	0.04254	0.97178	9/21/2018@3:27:20 PM			
R1808598-017	23	0.02082	0.47568	9/21/2018@3:28:28 PM			
R1808613-001	24	0.03326	0.75985	9/21/2018@3:29:34 PM			
R1808613-003	25	0.01896	0.43313	9/21/2018@3:30:40 PM			
R1808613-005	26	0.02466	0.56340	9/21/2018@3:31:47 PM			
R1808613-007	27	0.01203	0.27485	9/21/2018@3:32:54 PM			
PB 2 LL	28	0.00149	0.03416	9/21/2018@3:34:01 PM			
LCS 2 INORG LL	29	0.02470	0.56442	9/21/2018@3:35:07 PM			
LCS 2 ORG LL	30	0.02385	0.54495	9/21/2018@3:36:13 PM			
CCV	S10	0.04860	1.11022	9/21/2018@3:37:21 PM			
CCB	S8	0.00052	0.01201	9/21/2018@3:38:27 PM			
R1808613-009	31	0.01011	0.23115	9/21/2018@3:39:35 PM			
R1808614-001	32	0.05262	1.20204	9/21/2018@3:40:42 PM			
R1808614-003	33	0.04839	1.10540	9/21/2018@3:41:50 PM			

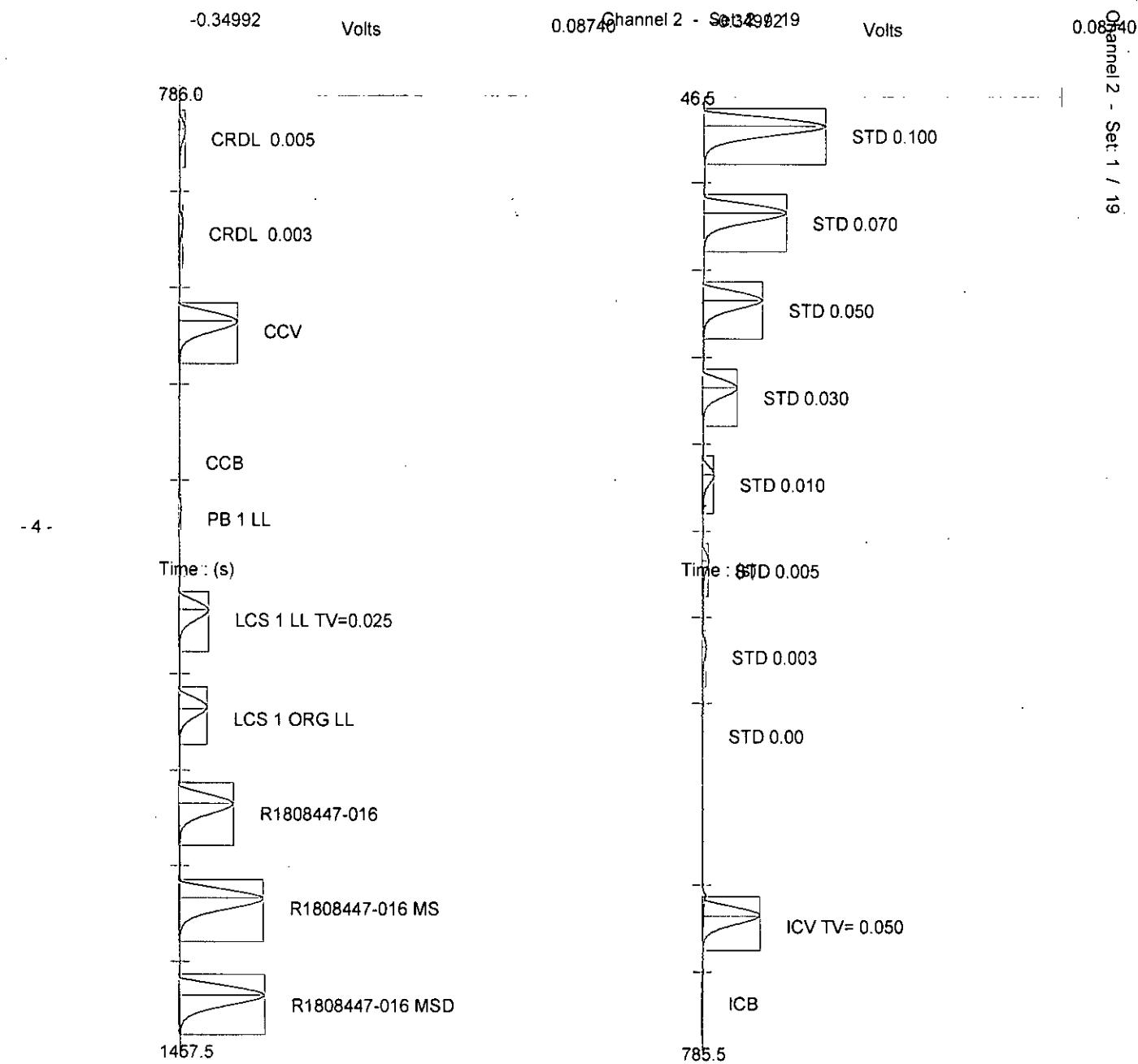
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R1808614-007	35	0.06255	1.42862	9/21/2018@3:44:05 PM	
R1808614-007 MS	36	0.08893	2.03114	9/21/2018@3:45:13 PM	
R1808614-007 MSD	37	0.08991	2.05363	9/21/2018@3:46:20 PM	
R1808555-001	38	0.00543	0.12422	9/21/2018@3:47:27 PM	
R1808559-001 MS	39	0.02898	0.66197	9/21/2018@3:48:34 PM	
R1808559-001 MSD	40	0.02895	0.66143	9/21/2018@3:49:41 PM	
CCV	S10	0.04875	1.11359	9/21/2018@3:50:48 PM	
CCB	S8	0.00060	0.01393	9/21/2018@3:51:55 PM	
R1808559-002	41	0.01367	0.31238	9/21/2018@3:53:02 PM	
R1808565-001	42	0.10944	2.49963	9/21/2018@3:54:09 PM	
R1808565-002	43	0.07239	1.65353	9/21/2018@3:55:15 PM	
R1808565-003	44	0.05028	1.14842	9/21/2018@3:56:22 PM	
R1808565-004	45	0.00248	0.05677	9/21/2018@3:57:28 PM	
R1808565-005	46	0.13672	3.12266	9/21/2018@3:58:35 PM	
R1808565-006	47	0.62413	7.12709	9/21/2018@3:59:43 PM	2.00
R1808565-007	48	0.16305	3.72399	9/21/2018@4:00:51 PM	
R1808566-002	49	0.09580	2.18798	9/21/2018@4:01:58 PM	
R1808565-009	50	0.00203	0.04650	9/21/2018@4:03:05 PM	
CCV	S10	0.04888	1.11657	9/21/2018@4:04:13 PM	
CCB	S8	0.00092	0.02129	9/21/2018@4:05:21 PM	
R1808565-011	51	0.07589	1.73337	9/21/2018@4:06:28 PM	
R1808565-012	52	0.08863	2.02429	9/21/2018@4:07:35 PM	
R1808566-003	53	0.05378	1.22839	9/21/2018@4:08:42 PM	
R1808566-001	54	0.12148	2.77456	9/21/2018@4:09:49 PM	
PB 3 LL	55	0.00138	0.03170	9/21/2018@4:10:56 PM	
LCS3 INORG	56	0.02489	0.56863	9/21/2018@4:12:03 PM	
LCS 3 ORG	57	0.02426	0.55436	9/21/2018@4:13:09 PM	
R1808565-008	58	0.05446	1.24407	9/21/2018@4:14:16 PM	
R1808565-008 MS	59	0.07925	1.81006	9/21/2018@4:15:22 PM	
R1808565-008 MSD	60	0.07903	1.80510	9/21/2018@4:16:29 PM	
CCV	S10	0.04911	1.12189	9/21/2018@4:17:36 PM	
CCB	S8	0.00061	0.01414	9/21/2018@4:18:43 PM	
R1808565-013	61	0.05138	1.17355	9/21/2018@4:19:50 PM	
R1808565-013 MS	62	0.07689	1.75626	9/21/2018@4:20:58 PM	
R1808565-013 MSD	63	0.07598	1.73533	9/21/2018@4:22:05 PM	
R1808566-004	64	0.03961	0.90491	9/21/2018@4:23:13 PM	
R1808566-005	65	0.11859	2.70866	9/21/2018@4:24:20 PM	
R1808566-006	66	0.05862	1.33905	9/21/2018@4:25:28 PM	
R1808566-007	67	0.07154	1.63408	9/21/2018@4:26:35 PM	
R1808566-008	68	0.11073	2.52895	9/21/2018@4:27:42 PM	
R1808566-009	69	0.29188	6.66604	9/21/2018@4:28:49 PM	
R1808566-010	70	0.12246	2.79705	9/21/2018@4:29:56 PM	
CCV	S10	0.04879	1.11448	9/21/2018@4:31:03 PM	
CCB	S8	0.00057	0.01318	9/21/2018@4:32:10 PM	
R1808566-011	71	0.14078	3.21545	9/21/2018@4:33:17 PM	
R1808566-012	72	0.06679	1.52553	9/21/2018@4:34:24 PM	
R1808566-013	73	0.09198	2.10090	9/21/2018@4:35:30 PM	
R1808568-005	74	0.16066	3.66932	9/21/2018@4:36:37 PM	
R1808566-015	75	0.31115	7.10617	9/21/2018@4:37:44 PM	
R1808566-017	76	1.60628	36.68431	9/21/2018@4:38:51 PM	
R1808566-018	77	0.00249	0.05716	9/21/2018@4:39:58 PM	
R1808568-001	78	0.20121	4.59545	9/21/2018@4:41:06 PM	
R1808568-002	79	0.05407	1.23496	9/21/2018@4:42:14 PM	
R1808568-003	80	0.05024	1.14768	9/21/2018@4:43:21 PM	
CCV	S10	0.04928	1.12576	9/21/2018@4:44:29 PM	
CCB	S8	0.00041	0.00961	9/21/2018@4:45:36 PM	
R1808568-004	81	0.15873	3.62520	9/21/2018@4:46:43 PM	
PB 4	82	0.00137	0.03149	9/21/2018@4:47:51 PM	
LCS 4 INORG	83	0.02472	0.56486	9/21/2018@4:48:57 PM	
LCS 4 ORG	84	0.02413	0.55135	9/21/2018@4:50:04 PM	
R1808566-014	85	1.57978	36.07921	9/21/2018@4:51:11 PM	
R1808566-014 MS	86	1.60032	36.54815	9/21/2018@4:52:18 PM	
R1808566-014 MSD	87	1.60803	36.72435	9/21/2018@4:53:25 PM	
R1808568-006	88	0.14578	3.32964	9/21/2018@4:54:31 PM	
R1808568-006 MS	89	0.17104	3.90639	9/21/2018@4:55:38 PM	
R1808568-006 MSD	90	0.17072	3.89904	9/21/2018@4:56:45 PM	
CCV	S10	0.04924	1.12470	9/21/2018@4:57:52 PM	

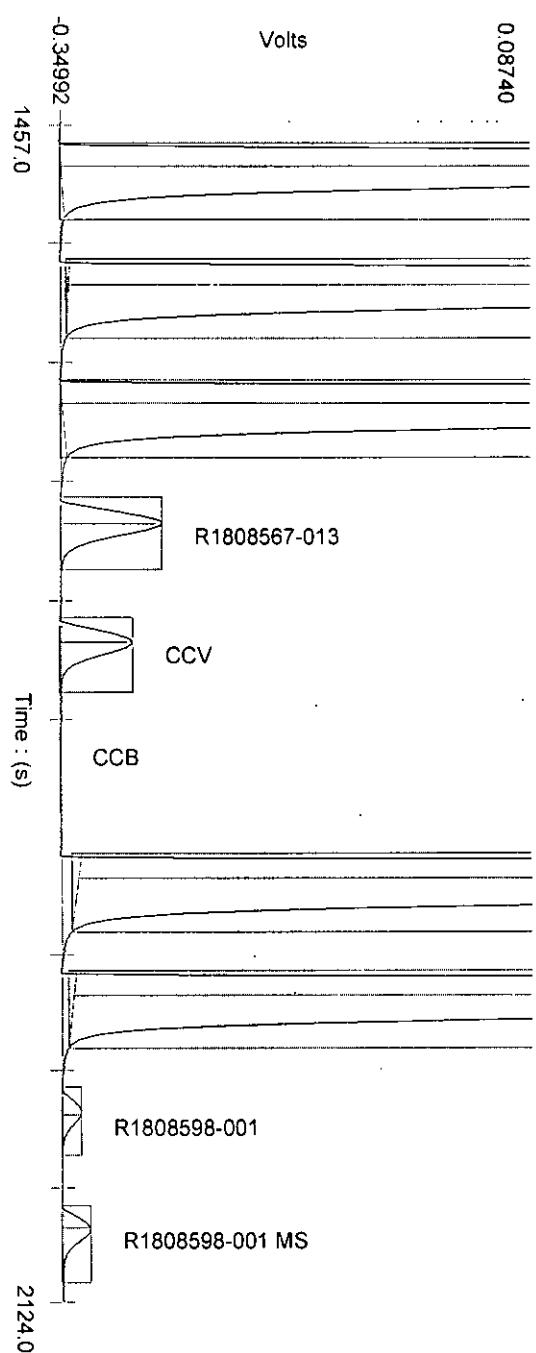
CCB	S8	0.00061	0.01420	9/21/2018@4:58:59 PM	
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R1808568-008	92	0.05610	1.28146	9/21/2018@5:01:13 PM	
R1808568-009	93	0.00295	0.06759	9/21/2018@5:02:21 PM	
R1808568-010	94	0.06667	1.52274	9/21/2018@5:03:28 PM	
R1808568-011	95	0.10222	2.33462	9/21/2018@5:04:35 PM	
R1808568-012	96	0.06643	1.51739	9/21/2018@5:05:42 PM	
R1808568-013	97	0.12961	2.96020	9/21/2018@5:06:50 PM	
R1808568-014	98	0.09504	2.17081	9/21/2018@5:07:57 PM	
R1808568-015	99	0.18801	4.29409	9/21/2018@5:09:04 PM	
R1808568-016	100	0.10465	2.39028	9/21/2018@5:10:11 PM	
CCV	S10	0.04880	1.11472	9/21/2018@5:11:18 PM	
CCB	S8	0.00100	0.02309	9/21/2018@5:12:25 PM	
R1808653-001	101	0.00953	0.21795	9/21/2018@5:13:32 PM	
R1808653-002	102	0.00921	0.21051	9/21/2018@5:14:39 PM	
R1808653-003	103	0.90065	20.56923	9/21/2018@5:15:45 PM	
R1808738-001	104	0.09861	2.25226	9/21/2018@5:16:52 PM	
R1808738-003	105	0.03067	0.70065	9/21/2018@5:17:59 PM	
R1808738-005	106	0.04407	1.00676	9/21/2018@5:19:07 PM	
R1808738-007	107	0.04167	0.95177	9/21/2018@5:20:14 PM	
R1808738-009	108	0.07510	1.71542	9/21/2018@5:21:22 PM	
R1808567-007 RPT	109	1.40535	0.32116	9/21/2018@5:22:30 PM	100.00
R1808567-009 RPT	110	1.87306	0.42798	9/21/2018@5:23:37 PM	100.00
CCV	S10	0.04879	1.11446	9/21/2018@5:24:45 PM	
CCB	S8	0.00070	0.01616	9/21/2018@5:25:52 PM	
R1808567-011 RPT	111	2.32504	0.53120	9/21/2018@5:26:59 PM	100.00
R1808567-015 RPT	112	3.41861	0.39058	9/21/2018@5:28:06 PM	200.00
R1808567-017 RPT	113	2.35115	0.53717	9/21/2018@5:29:13 PM	100.00
R1808565-001 RPT	114	0.10840	1.23806	9/21/2018@5:30:20 PM	2.00
R1808565-005 RPT	115	0.14292	0.65301	9/21/2018@5:31:27 PM	5.00
R1808565-006 RPT	116	0.81374	0.92942	9/21/2018@5:32:34 PM	20.00
R1808565-007 RPT	117	0.16675	0.76187	9/21/2018@5:33:41 PM	5.00
R1808566-001 RPT	118	0.12121	0.55383	9/21/2018@5:34:48 PM	5.00
R1808566-005 RPT	119	0.12004	1.37090	9/21/2018@5:35:55 PM	2.00
R1808566-008 RPT	120	0.10940	1.24943	9/21/2018@5:37:02 PM	2.00
CCV	S10	0.04953	1.13128	9/21/2018@5:38:10 PM	
CCB	S8	0.00137	0.03148	9/21/2018@5:39:17 PM	
R1808566-009 RPT	121	0.28360	0.64790	9/21/2018@5:40:24 PM	10.00
R1808566-010 RPT	122	0.12946	0.59155	9/21/2018@5:41:31 PM	5.00
R1808566-011 RPT	123	0.13850	0.63282	9/21/2018@5:42:39 PM	5.00
R1808568-005 RPT	124	0.15406	0.70388	9/21/2018@5:43:47 PM	5.00
R1808566-015 RPT	125	0.30402	0.69452	9/21/2018@5:44:54 PM	10.00
R1808566-017 RPT	126	1.64123	0.37503	9/21/2018@5:46:02 PM	100.00
R1808568-001 RPT	127	0.22322	1.01981	9/21/2018@5:47:09 PM	5.00
R1808568-004 RPT	128	0.15966	0.72946	9/21/2018@5:48:17 PM	5.00
R1808566-014 RPT	129	1.57951	0.36094	9/21/2018@5:49:24 PM	100.00
R1808566-014 MS RPT	130	2.08489	0.47636	9/21/2018@5:50:31 PM	100.00
CCV	S10	0.04900	1.11921	9/21/2018@5:51:38 PM	
CCB	S8	0.00073	0.01677	9/21/2018@5:52:45 PM	
R1808566-014 DMS RPT	131	1.57196	0.35921	9/21/2018@5:53:52 PM	100.00
R1808568-006 RPT	132	0.14511	0.66300	9/21/2018@5:54:59 PM	5.00
R1808568-006 MS RPT	133	0.16835	0.76916	9/21/2018@5:56:06 PM	5.00
R1808568-006 DMS RPT	134	0.16963	0.77501	9/21/2018@5:57:13 PM	5.00
R1808568-011 RPT	135	0.10358	1.18300	9/21/2018@5:58:21 PM	2.00
R1808568-013 RPT	136	0.12466	1.42365	9/21/2018@5:59:28 PM	2.00
R1808568-015 RPT	137	0.17850	0.81555	9/21/2018@6:00:35 PM	5.00
R1808568-016 RPT	138	0.10078	1.15101	9/21/2018@6:01:43 PM	2.00
R1808653-003 RPT	139	0.86599	0.39576	9/21/2018@6:02:51 PM	50.00
R18085660914 DMS RPT	140	1.51606	0.34645	9/21/2018@6:03:58 PM	100.00
CCV	S10	0.04893	1.11770	9/21/2018@6:05:06 PM	
CCB	S8	0.00072	0.01669	9/21/2018@6:06:13 PM	

Analyte Properties Table for : OM_9-21-2018_02-40-43PM.OMN

Property	Channel 2
	QC8500 365.1 TPO4-LL

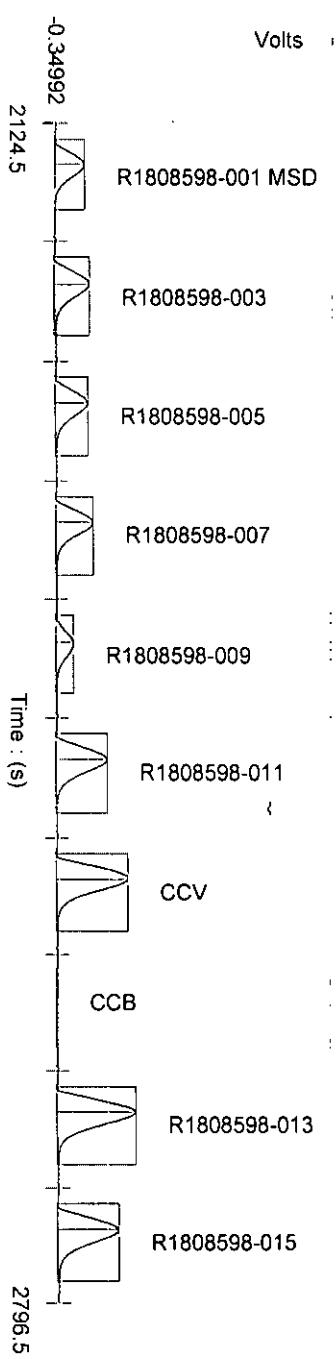
Concentration Units	mg/L
Calibration Fit Type	First Order
Clear Calibration	No
Force through Zero	No
Calibration Weighting	None
Auto Dilution Trigger	No
% of High Standard	110
Quik Chem Method	Direct/Bipolar
Chemistry	
Calibration by Height	No
Inject to Peak Start	9
Peak Base Width	46





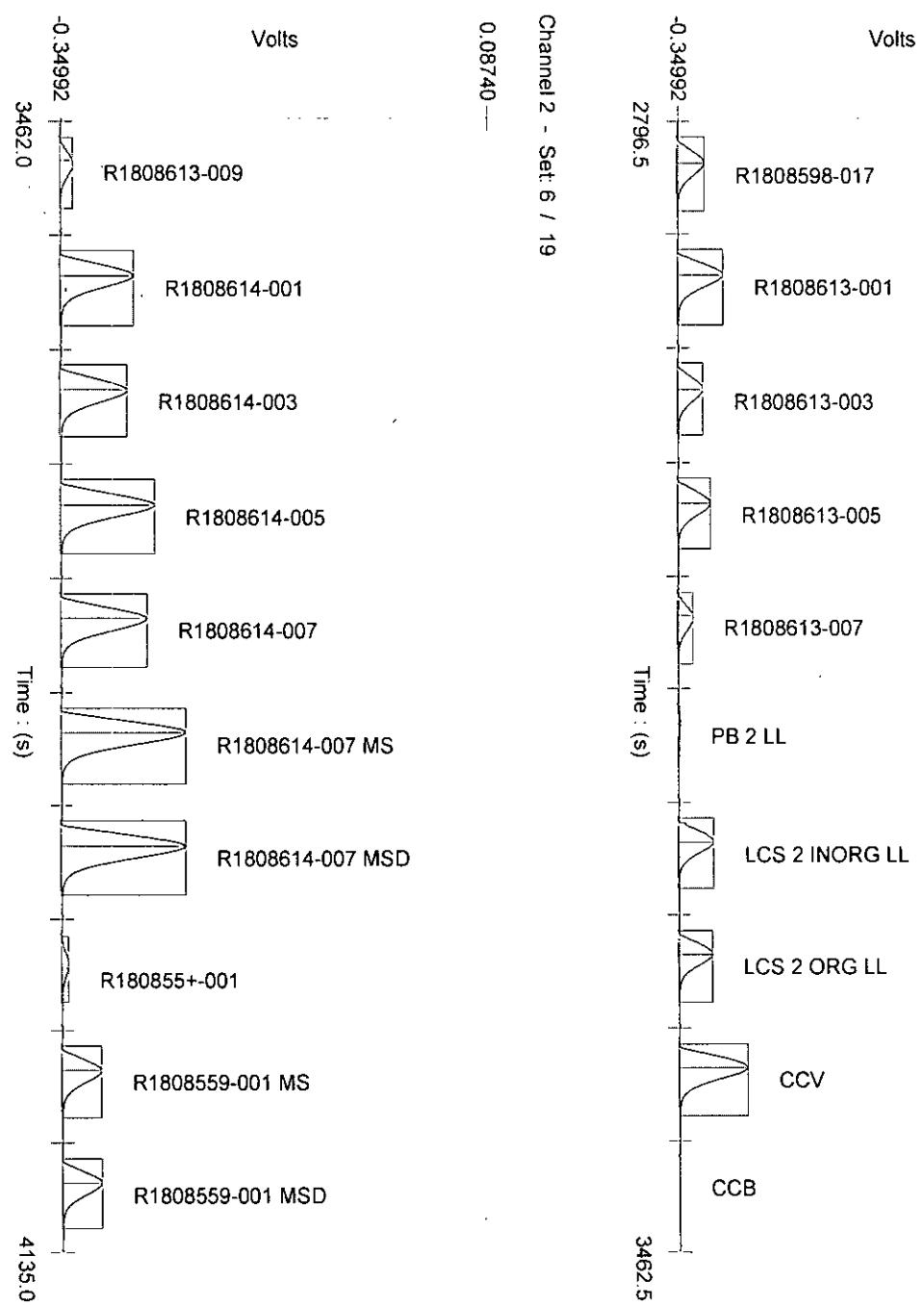
Channel 2 - Set: 4 / 19

0.08740 —



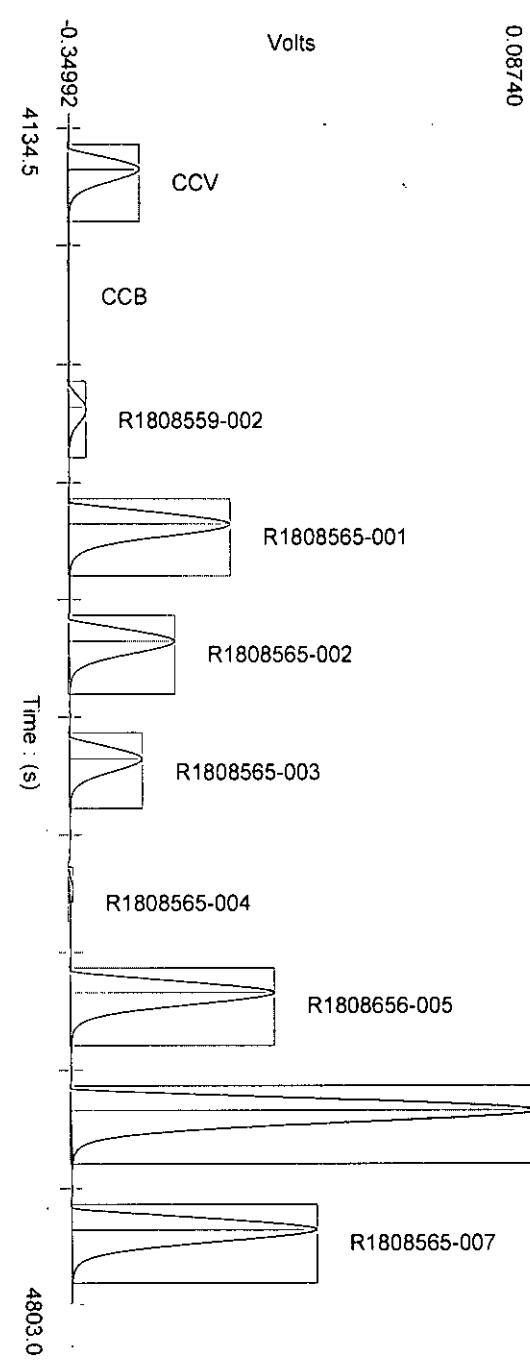
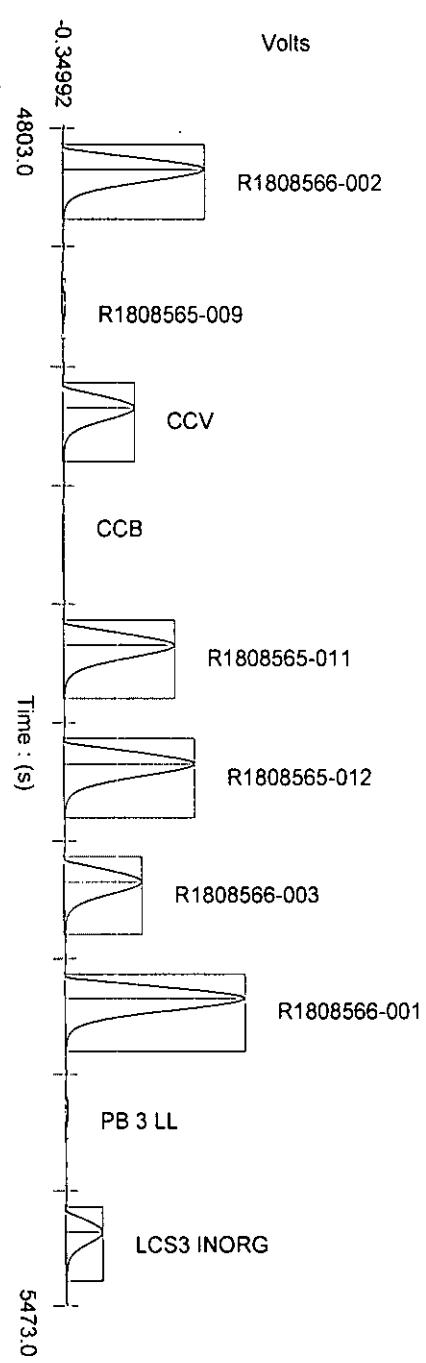
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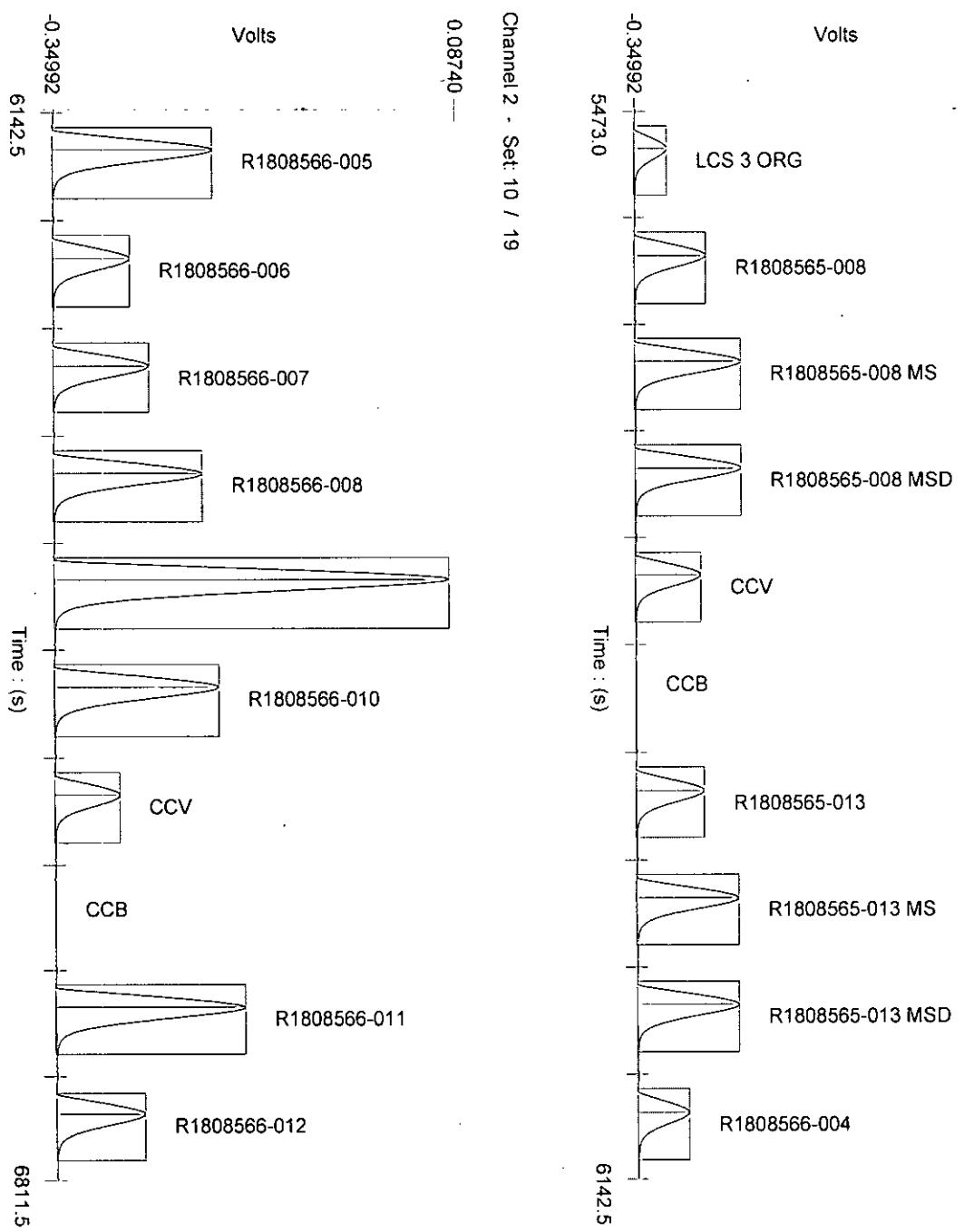
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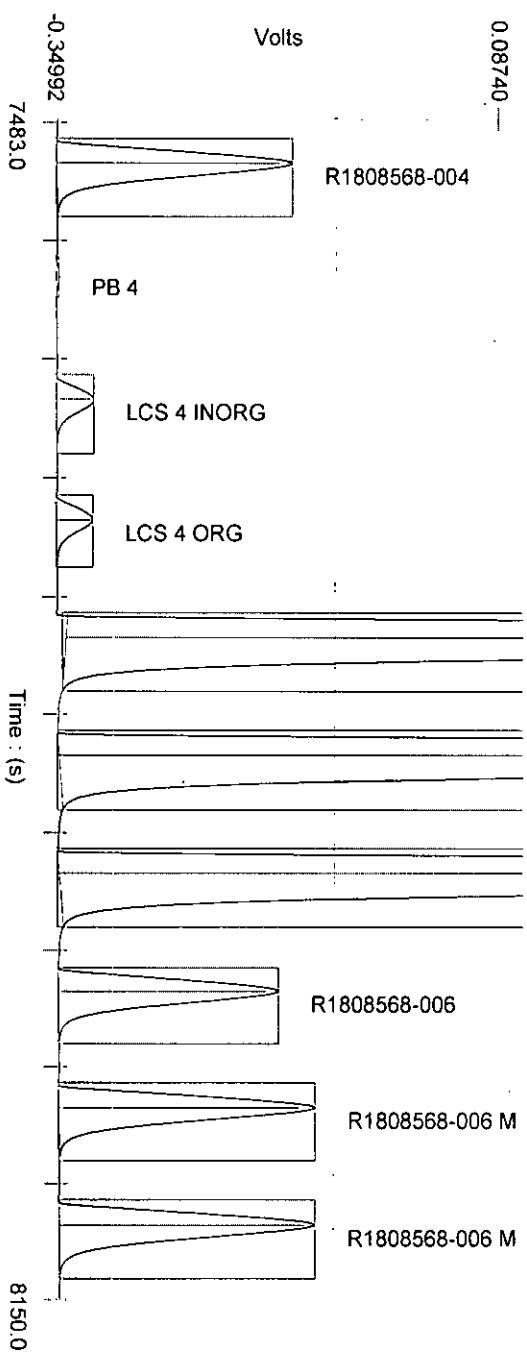
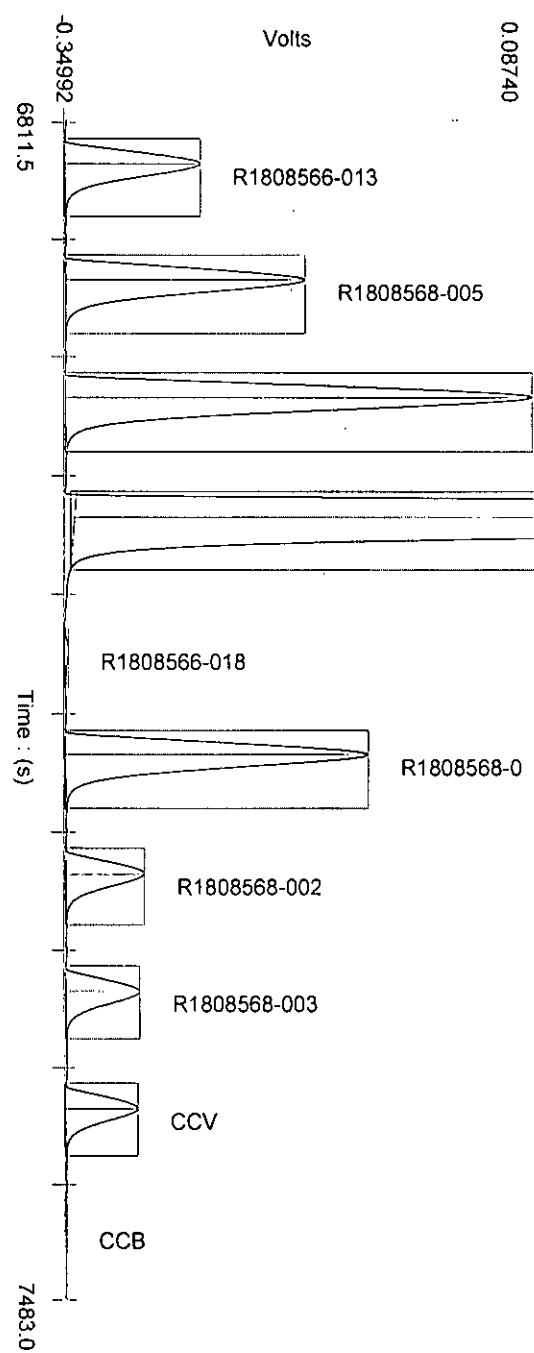


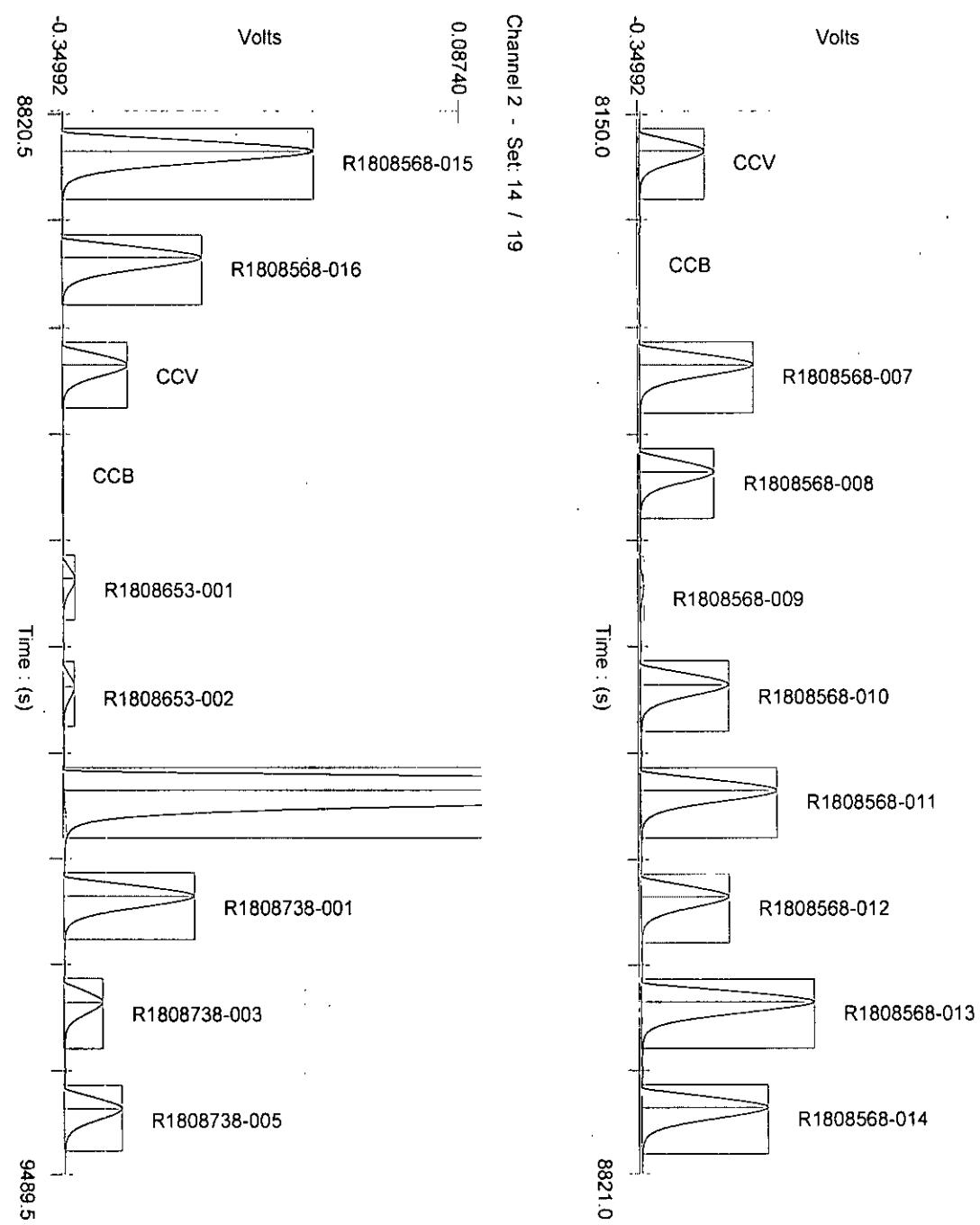
Channel 2 - Set: 7 / 19

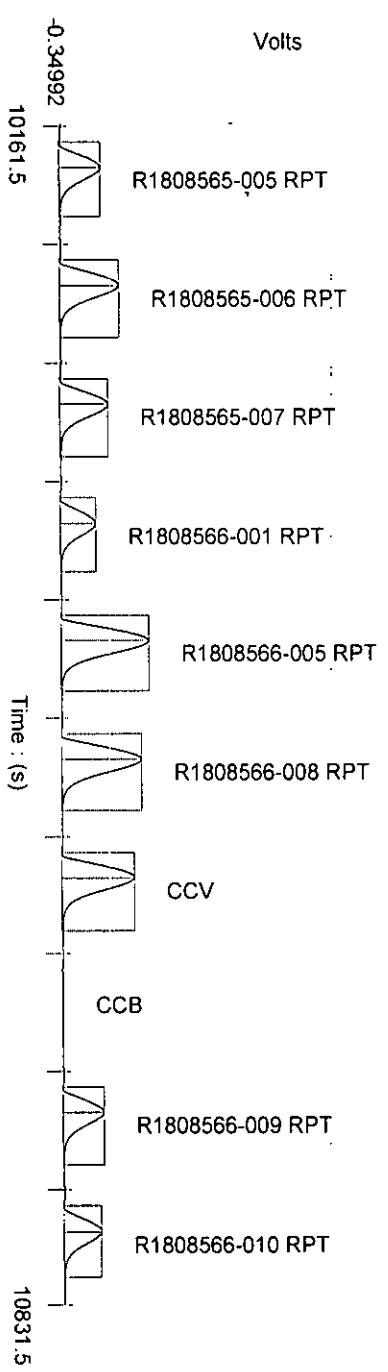
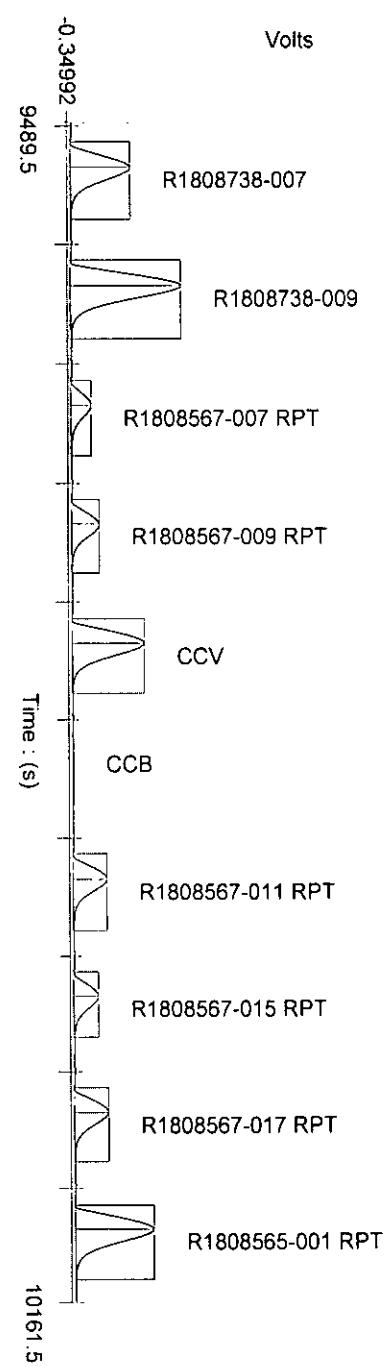
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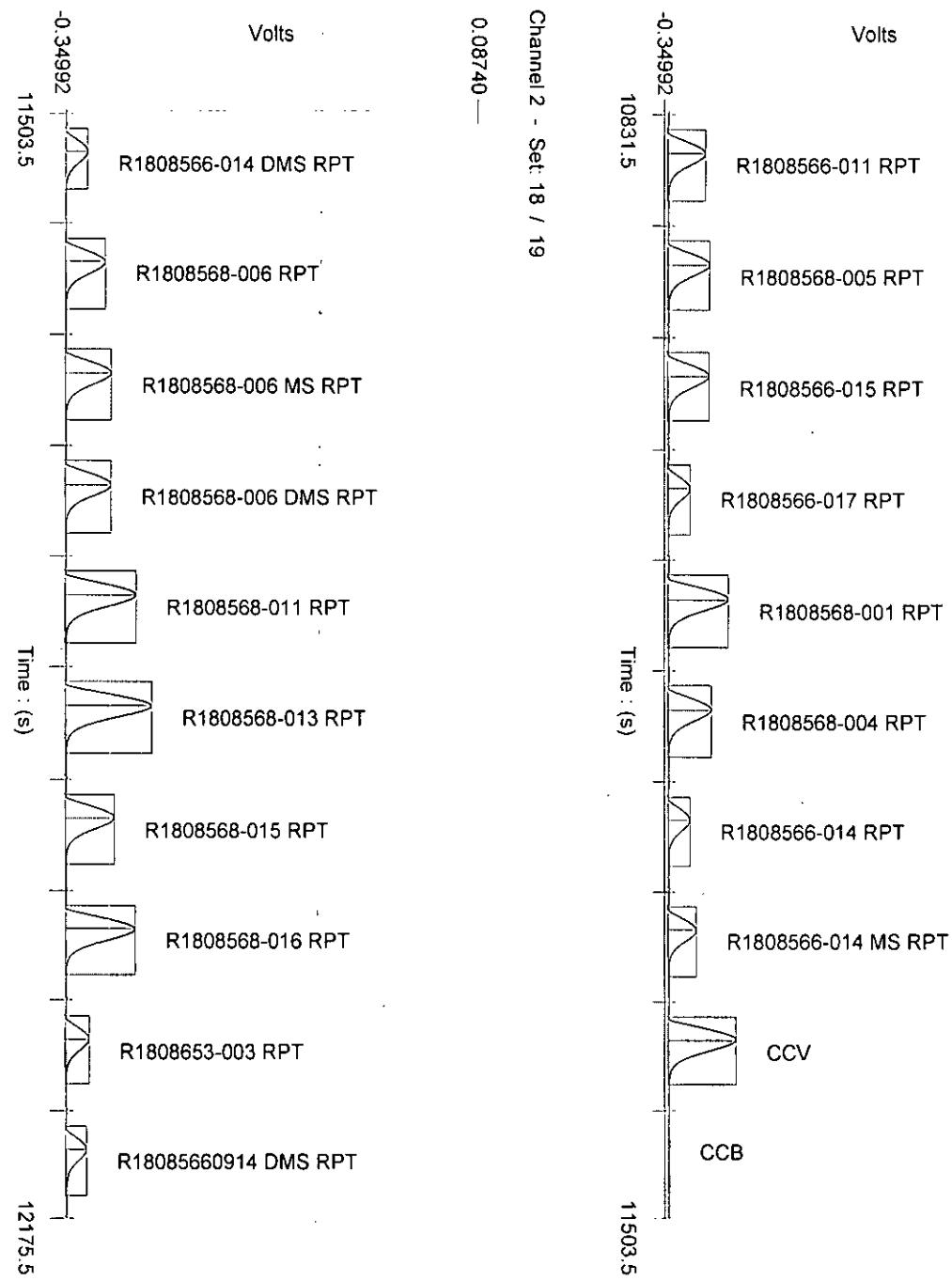






Channel 2 - Set: 17 / 19

0.08740



Channel 2 - Set: 19 / 19

0.08740

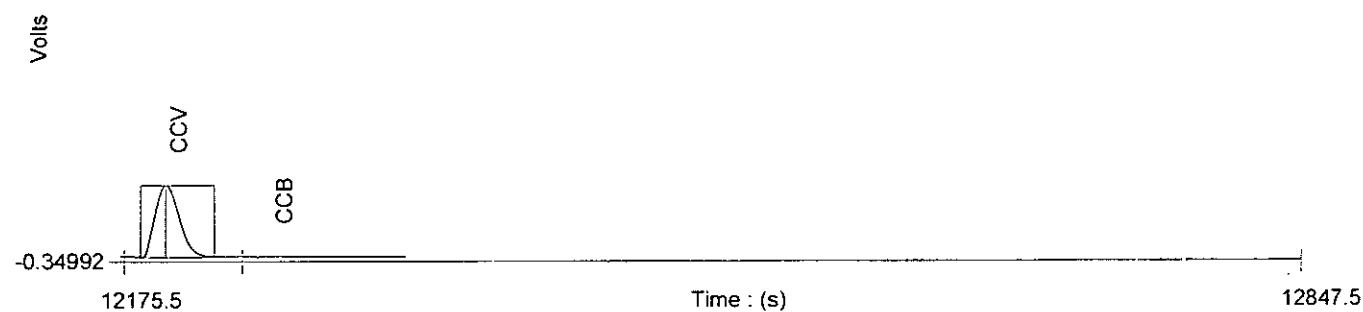
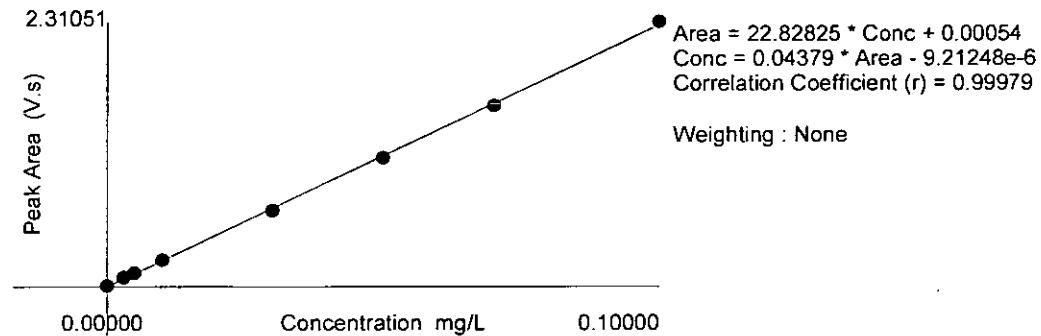


Table : 1 (QC8500 365.1 TPO4-LL)

	Known Conc. (mg/L)	Rep.	Peak Area (V.s)	Peak Height (V)	% RSD	% Residual	Det. Conc (mg/L)	Detection Date	Detection Time
1	0.10000	1	2.31051	0.14792	0.0	-1.2	0.10116	9/21/2018	2:42:30 PM
2	0.07000	1	1.57999	0.10054	0.0	1.2	0.06917	9/21/2018	2:43:37 PM
3	0.05000	1	1.12390	0.07203	0.0	1.6	0.04920	9/21/2018	2:44:44 PM
4	0.03000	1	0.66486	0.04191	0.0	3.0	0.02910	9/21/2018	2:45:51 PM
5	0.01000	1	0.23232	0.01359	0.0	-1.5	0.01016	9/21/2018	2:46:58 PM
6	0.00500	1	0.12037	0.00716	0.0	-5.0	0.00526	9/21/2018	2:48:05 PM
7	0.00300	1	0.08127	0.00452	0.0	-17.7	0.00355	9/21/2018	2:49:12 PM
8	0.00000	1	0.00904	0.00051			0.00039	9/21/2018	2:50:18 PM

Figure : 1 (QC8500 365.1 TPO4-LL)



ALS Environmental
1565 Jefferson Rd., Rochester, NY 14623

General Chemistry Analytical Run Cover Sheet

Analyst: MAR

Date: 9/21/18

Analysis: Total Phosphorus, Low Level, EPA 365.1

Instrument: Lachat

PRIMARY STOCKS	Log # Prep/Exp. Dates	Reagent	Weight (g)	Final Vol. (mLs)	Conc. (mg/L)
Standards *	193359 Recieved: Expires: 12/31/19				
Reference *	185400 Received: Expires: 7/31/20				
Organic LCS	See Digest Sheet 181751 Exp: 6/06/2022	***	0.9885	1000	100

*** Disodium B-Glycerophosphate Pentahydrate

Working Stock Prep	Fresh daily	Serial Dilutions**			True Value (mg/L)
		Stock Soln (mLs)	Stock Soln (mg/L)	Final Volume (mLs)	
Standard	1	1000	1000	10	100
	1	100	100	10	10 (A)
	1	10	10	10	1 (B)
Reference	1	1000	1000	10	100
	1	100	100	10	10
	1	10	10	10	1 (C)
Organic LCS	1	100	100	10	10 (D)
Quality Control	spiked at prep				
LCS/MS		0.05	10 (A)	20	0.025
Organic LCS		0.05	10 (D)	20	0.025

Standard Curve Prep	Fresh daily	Graduated Disposable Pipet Lot:	N/A
Pipet ID:	THOR,curly		
DOD pipet Verification	N/A		
	Concentration (mg/L)	mLs Carrier Sol'n	mLs 1 mg/L Working Stock (B)
	0.100	9.00	1.00
	0.070	9.30	0.70
	0.050	9.50	0.50
	0.030	9.70	0.30
	0.010	1/10 dil'n of 0.100	
	0.005	1/10 dil'n of 0.050	
	0.003	1/10 dil'n of 0.030	
	0.000	10	0.00
			mLs 1 mg/L Ref Stock (C)
I/CCV	0.050	9.5	0.50

REAGENTS	Log ID	Expiration Date
Carrier/ Diluent **	fresh daily	
Ascorbic Acid	193247	9/21/2018
Molybdate Reagent	193386	5/21/2019

COMMENTS

Instrument Log filled in? (Y) (N)

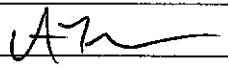
Analysis: NH₃
ICAL Date: 5-14-18
Instrument: IC# 9
Curve Type: Linear Quadratic

IC Initial Calibration Checklist

1. Is the required documentation in the ICAL file?
 IC Cover Sheet – correct?
 Logbook Copies Complete
 Method Parameters Report
 Plots of all analytes
 Chromatograms of all curve points, ICV, ICB
2. Was the ICAL performed continuously (i.e., not interrupted for maintenance or for sample analysis)?
 3. For any reanalyzed points, was reanalysis within 8 hours of the final standard of the original ICAL?
 4. Are all the analytes in the blank analysis < MRL?
 5. Have the retention times been updated from the mid-point calibration standard?
 6. Does each analyte's ICAL include, consecutively, the minimum number of concentration levels (3 for linear regression for 300.0, 9056, 7199, 218.6; six for 218.7; six plus blank for any quadratic curve)?
 7. For each analyte, is the lowest standard's concentration at or below the analyte's MRL?
 8. For each analyte, are there no levels skipped?
 9. For each analyte, does a check of the linearity meet a correlation coefficient of ≥ 0.995 (Method 300/9056) or ≥ 0.999 (Methods 7199/218.6/218.7)?
 10. For the ICV analysis, is the percent recovery for each analyte 90 – 110% (300.0/9056/7199); 95-105% (218.6); 85-115 (218.7)?
 11. Are all peak integrations acceptable?
 12. Do the peak areas match the Method Parameters Report (has the ICAL file been saved correctly)?
 13. For each analyte, were the appropriate standards re-quantitated and printed?
 Did the LLOQ meet 50-150% recovery limits at the MRL level standard?
 Are recoveries of all standards greater than the MRL standard within (10% for 300.0/9056A; 15% for 218.7) of the true value? If a quadratic curve was used for 218.6/7199, are recoveries of all standards greater than the MRL within 10% of the true value?

COMMENTS

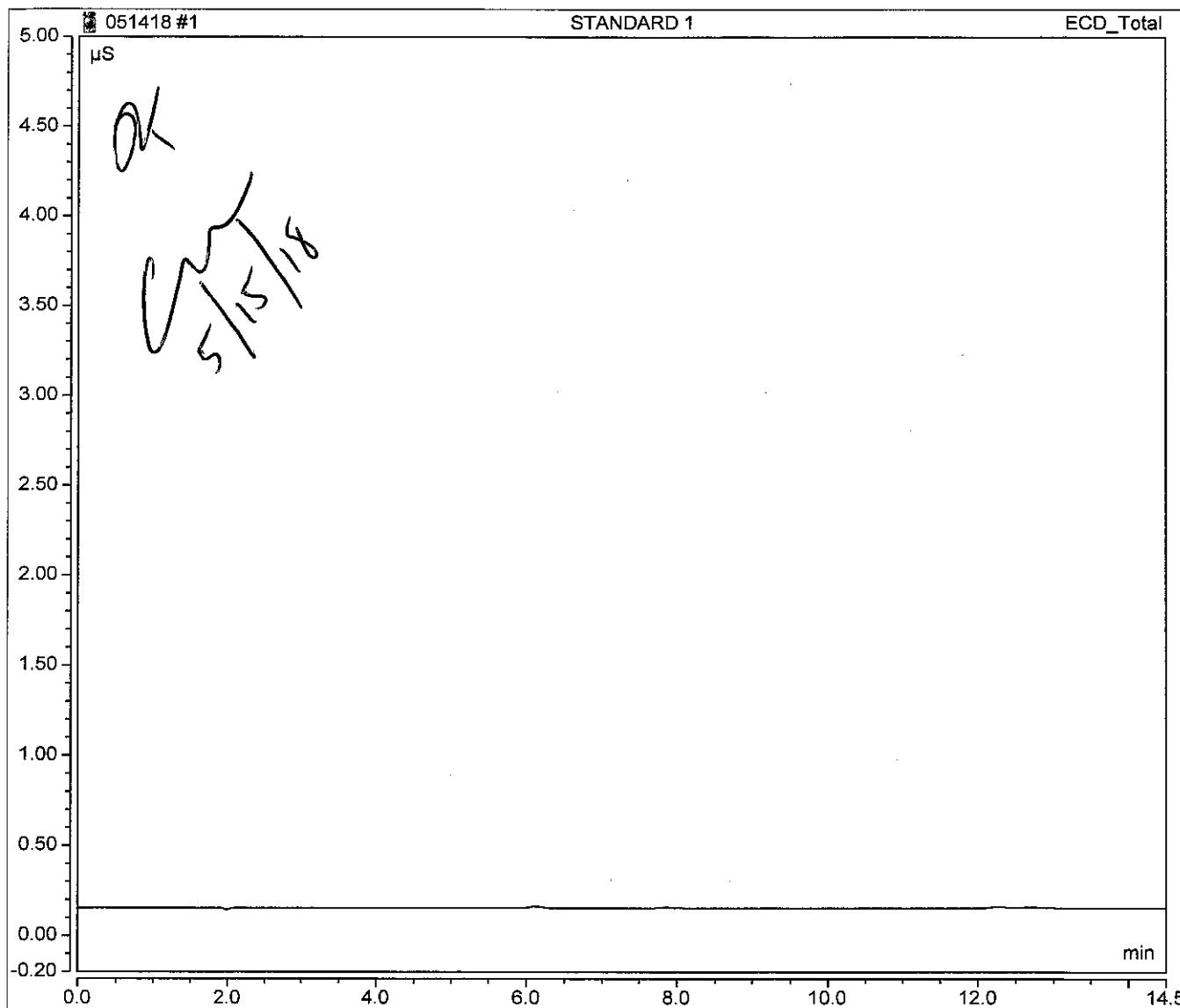
9-051418

Analyst:  Date: 5/15/18
Secondary Reviewer:  Date: 5/15/18

Peak Integration Report

Sample Name:	STANDARD 1	Inj. No.:	1
File ID:	Instrument Data\IC9\Data\2018\05May2018		
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (μ L):	50.00
Inj. Date / Time:	14-May-2018 / 09:34	Comments:	ASTM D6919-09 Ammonia

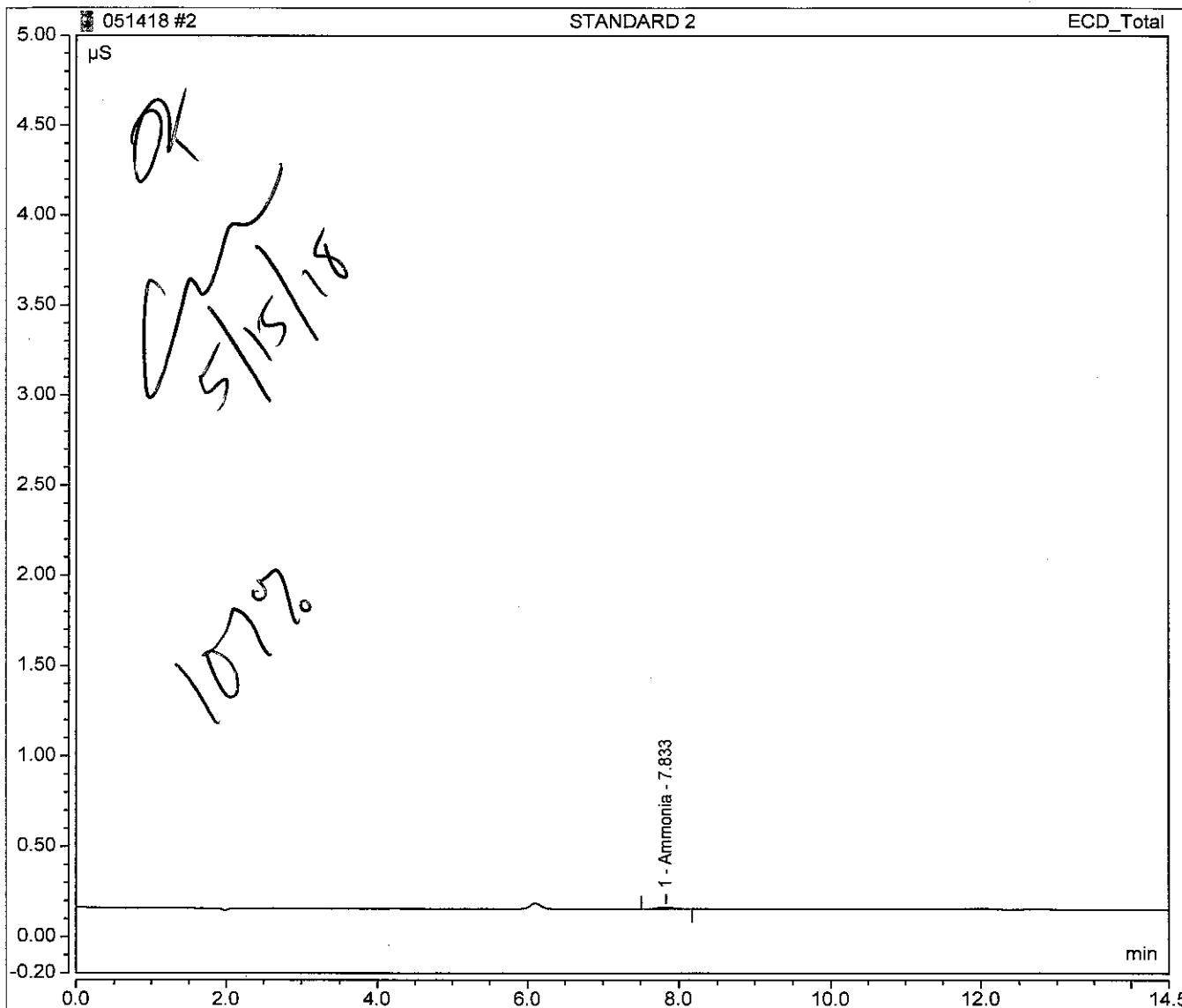
No.	Time min	Peak Name	Peak Type	Area μ S*min	Height μ S	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	STANDARD 2	Inj. No.:	2
File ID:	Instrument Data\IC9\Data\2018\05May2018		
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	14-May-2018 / 10:04	Comments:	ASTM D6919-09 Ammonia

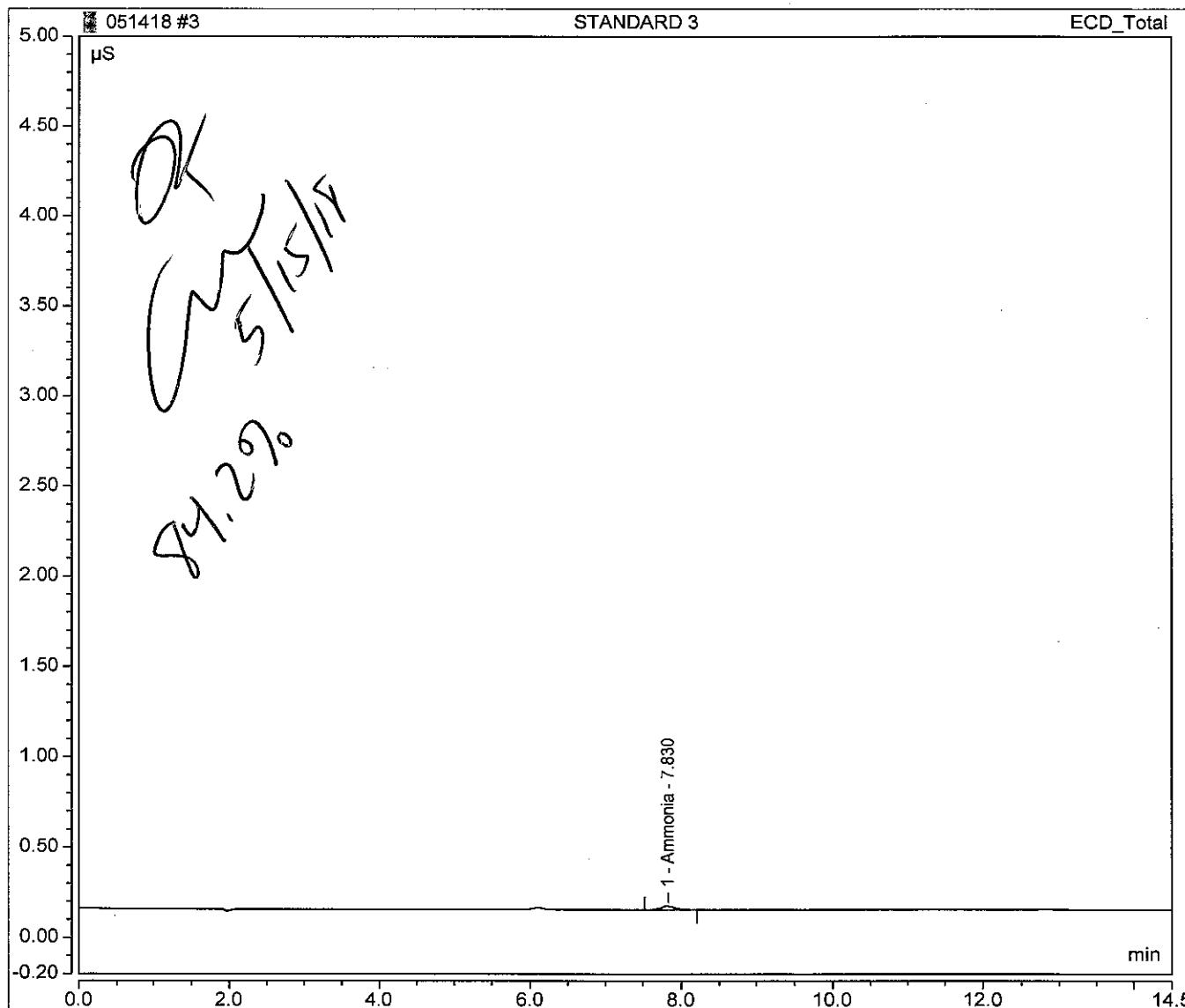
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	7.83	Ammonia	BMB	0.002	0.010	0.00107
TOTAL:				0.00	0.01	0.00



Peak Integration Report

Sample Name:	STANDARD 3	Inj. No.:	3
File ID:	Instrument Data\IC9\Data\2018\05May2018		
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (μL):	50.00
Inj. Date / Time:	14-May-2018 / 10:34	Comments:	ASTM D6919-09 Ammonia

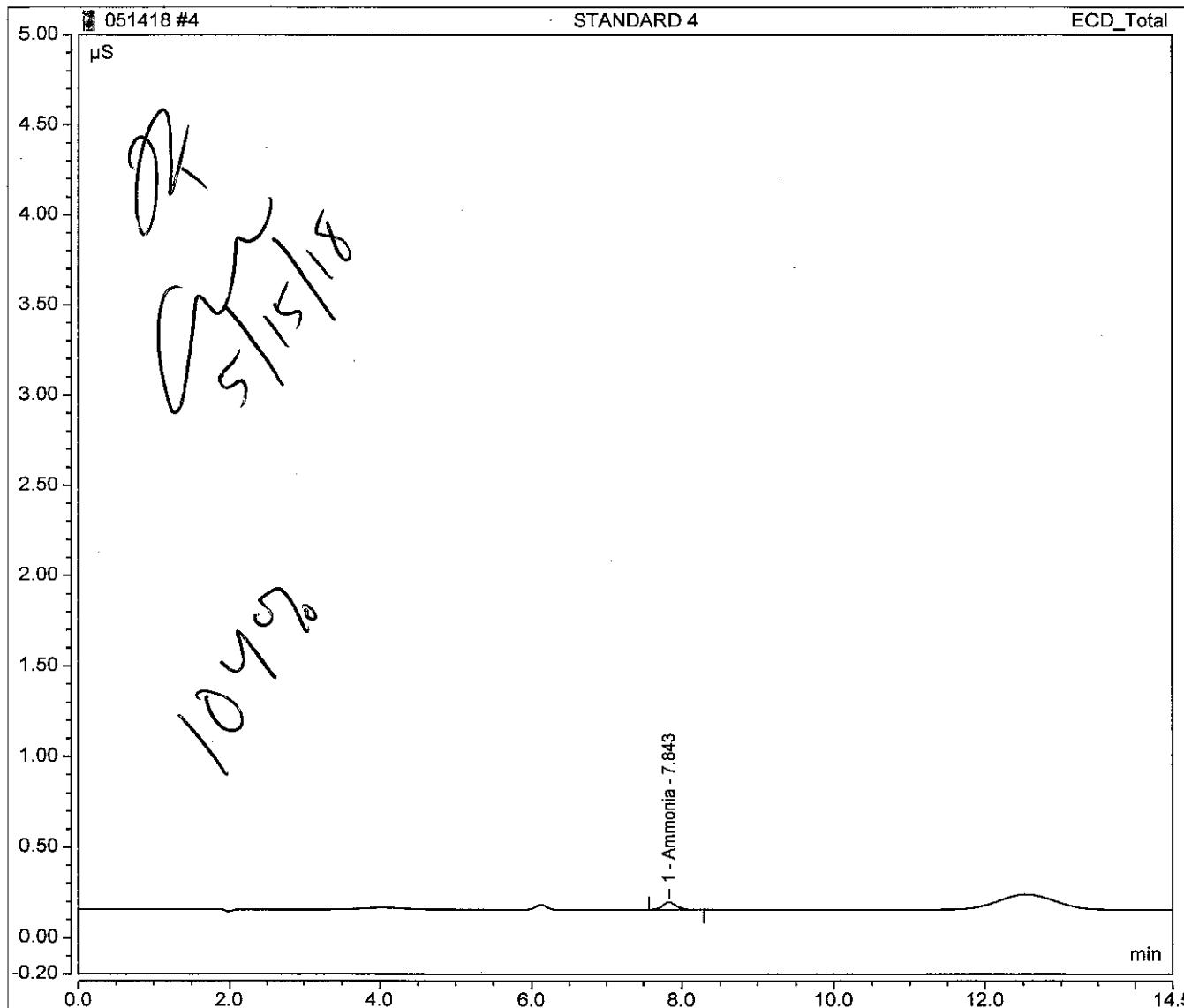
No.	Time min	Peak Name	Peak Type	Area $\mu S \cdot min$	Height μS	Amount (mg/L)
1	7.83	Ammonia	BMB	0.004	0.021	0.00421
TOTAL:				0.00	0.02	0.00



Peak Integration Report

Sample Name:	STANDARD 4	Inj. No.:	4
File ID:	Instrument Data\IC9\Data\2018\05May2018		
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	14-May-2018 / 10:49	Comments:	ASTM D6919-09 Ammonia

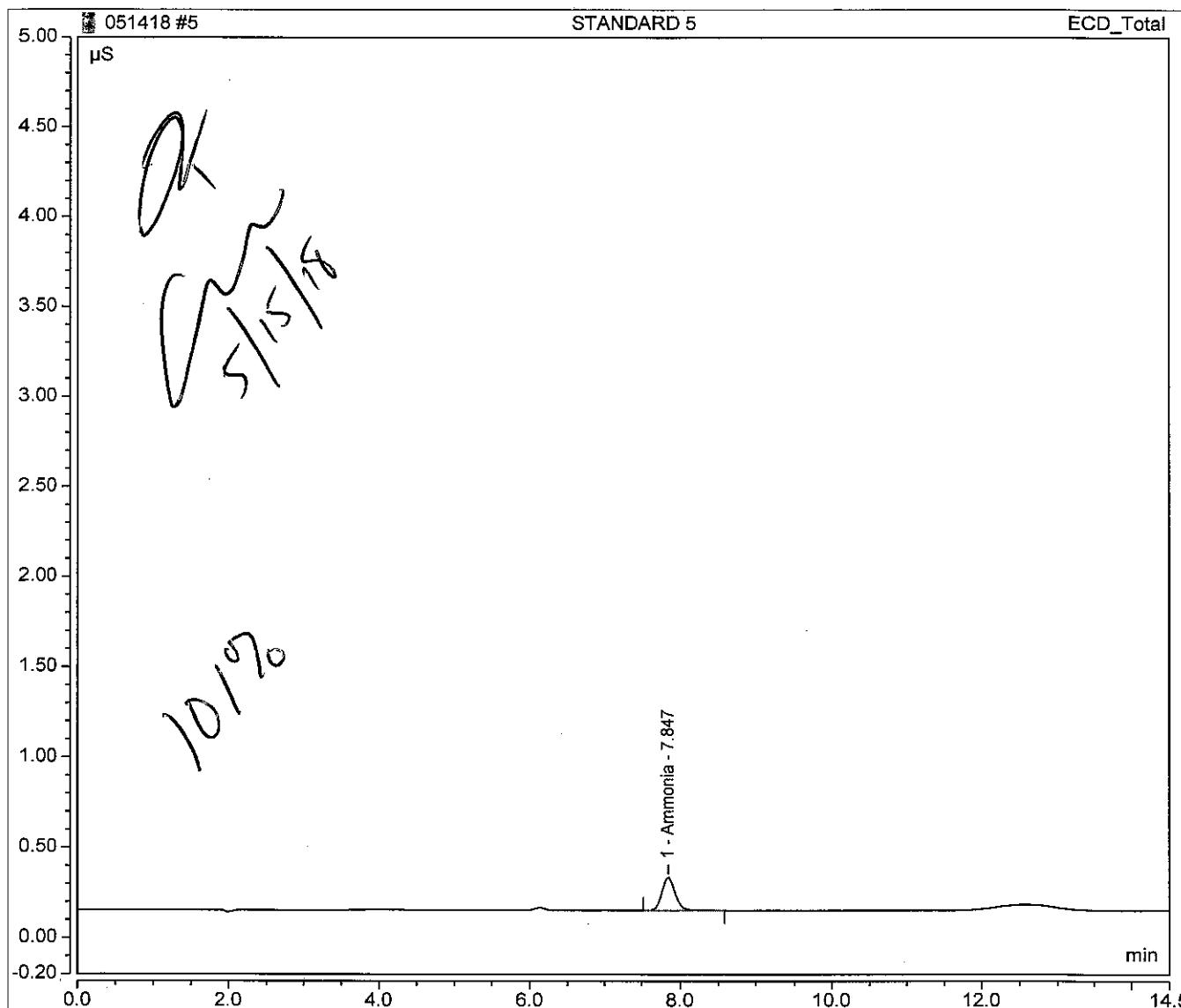
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	7.84	Ammonia	BMB	0.009	0.044	0.01043
TOTAL:				0.01	0.04	0.01



Peak Integration Report

Sample Name:	STANDARD 5	Inj. No.:	5
File ID:	Instrument Data\IC9\Data\2018\05May2018		
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (μ L):	50.00
Inj. Date / Time:	14-May-2018 / 11:03	Comments:	ASTM D6919-09 Ammonia

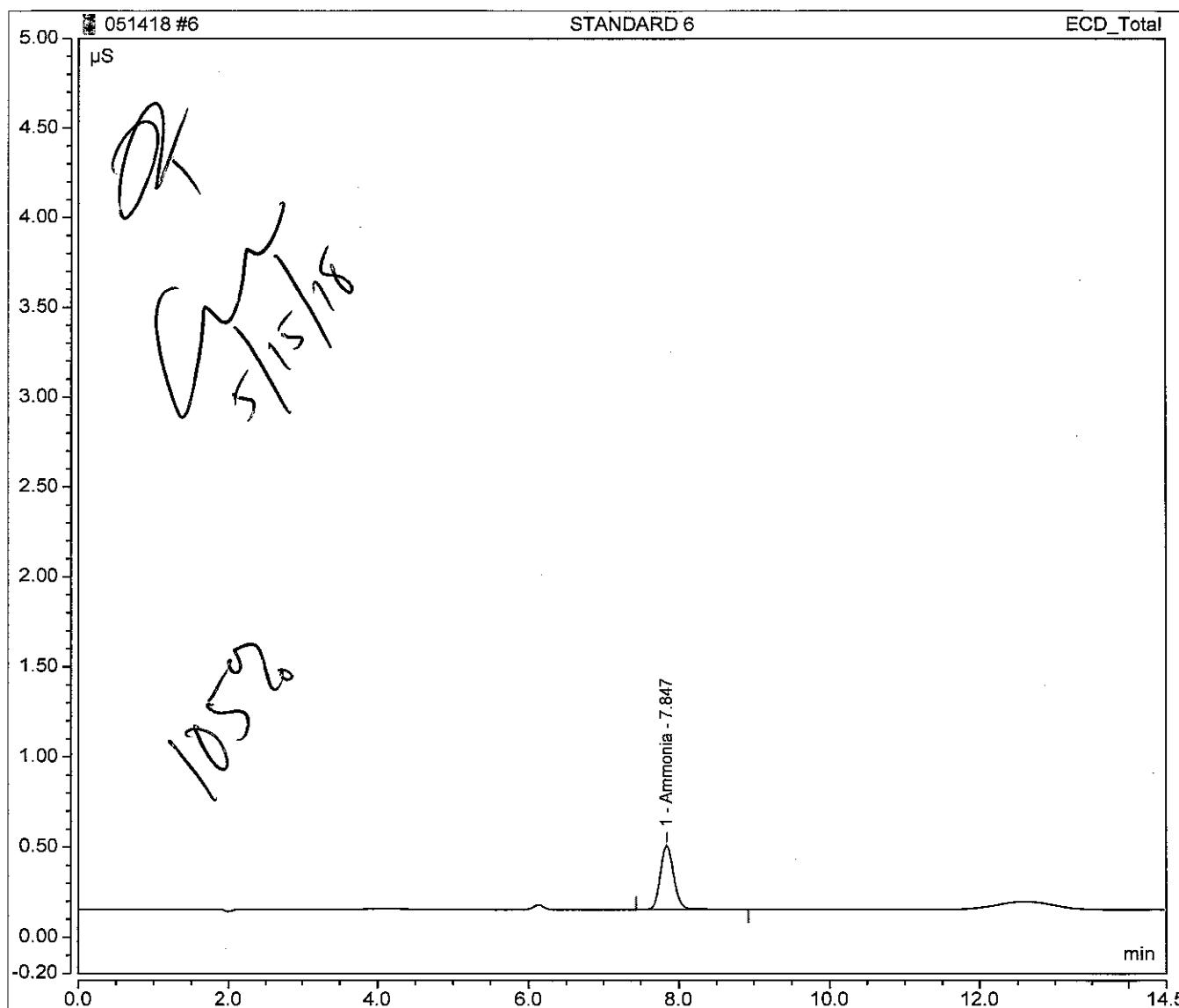
No.	Time min	Peak Name	Peak Type	Area μ S*min	Height μ S	Amount (mg/L)
1	7.85	Ammonia	BMB	0.037	0.183	0.05056
TOTAL:				0.04	0.18	0.05



Peak Integration Report

Sample Name:	STANDARD 6	Inj. No.:	6
File ID:	Instrument Data\IC9\Data\2018\05May2018		
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (μ L):	50.00
Inj. Date / Time:	14-May-2018 / 11:18	Comments:	ASTM D6919-09 Ammonia

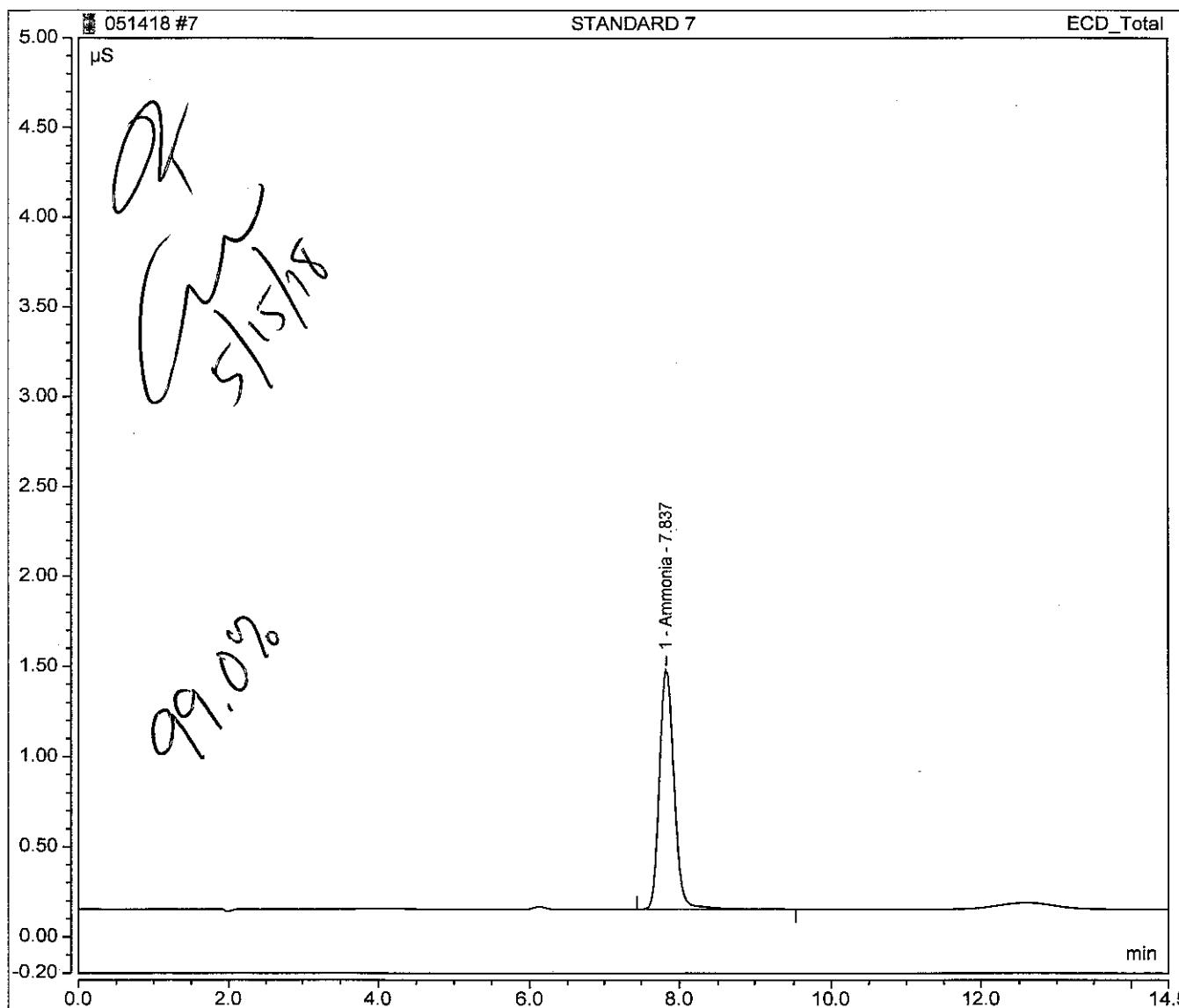
No.	Time min	Peak Name	Peak Type	Area μ S*min	Height μ S	Amount (mg/L)
1	7.85	Ammonia	BMB	0.074	0.356	0.10466
TOTAL:				0.07	0.36	0.10



Peak Integration Report

<u>Sample Name:</u>	STANDARD 7	<u>Inj. No.:</u>	7
<u>File ID:</u>	Instrument Data\IC9\Data\2018\05May2018		
<u>Injection Type:</u>	Calibration Standard	<u>Dilution Factor:</u>	1.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	14-May-2018 / 11:32	<u>Comments:</u>	ASTM D6919-09 Ammonia

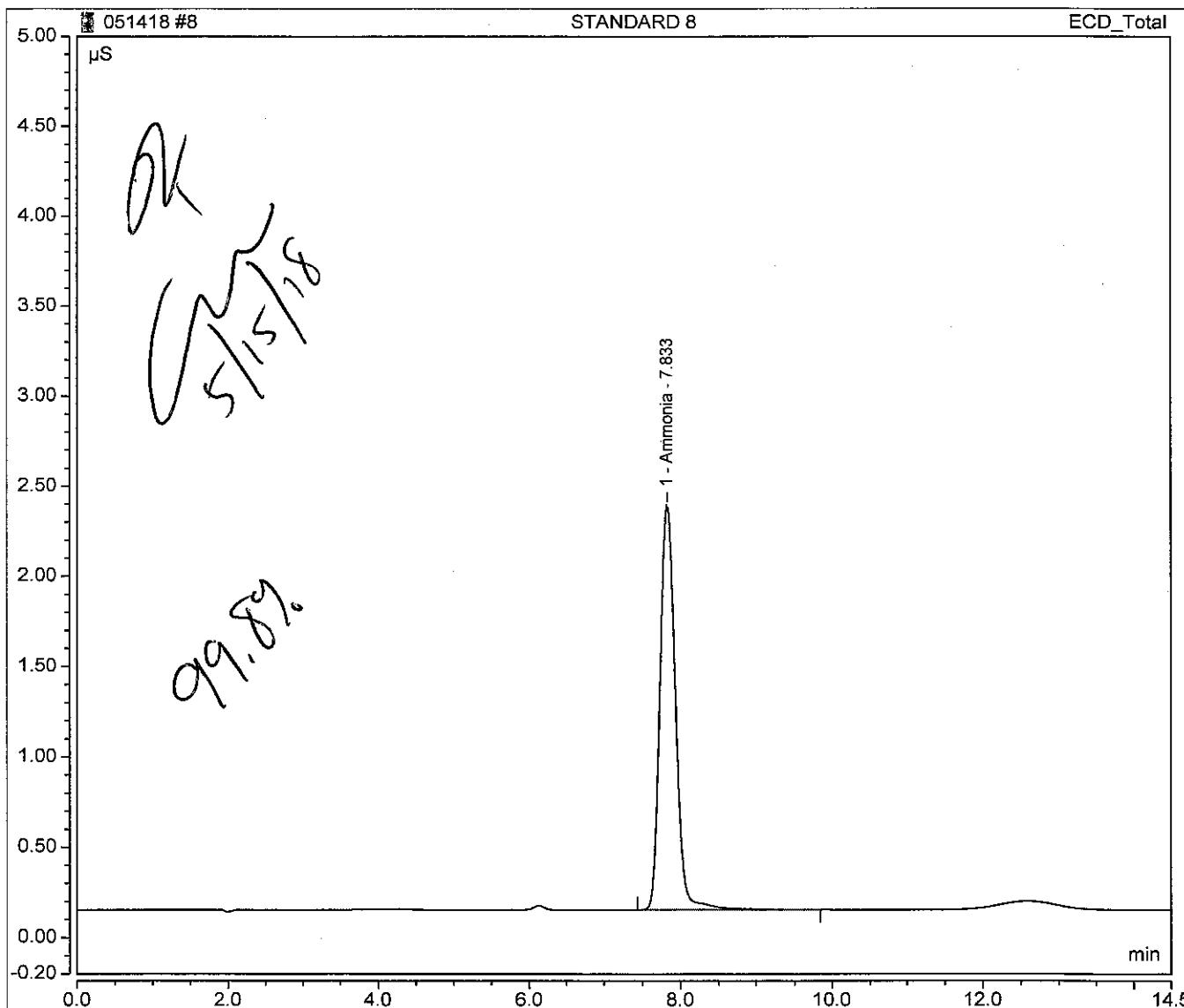
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	7.84	Ammonia	BMB	0.299	1.332	0.49524
TOTAL:				0.30	1.33	0.50



Peak Integration Report

Sample Name:	STANDARD 8	Inj. No.:	8
File ID:	Instrument Data\IC9\Data\2018\05May2018		
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (μL):	50.00
Inj. Date / Time:	14-May-2018 / 11:47	Comments:	ASTM D6919-09 Ammonia

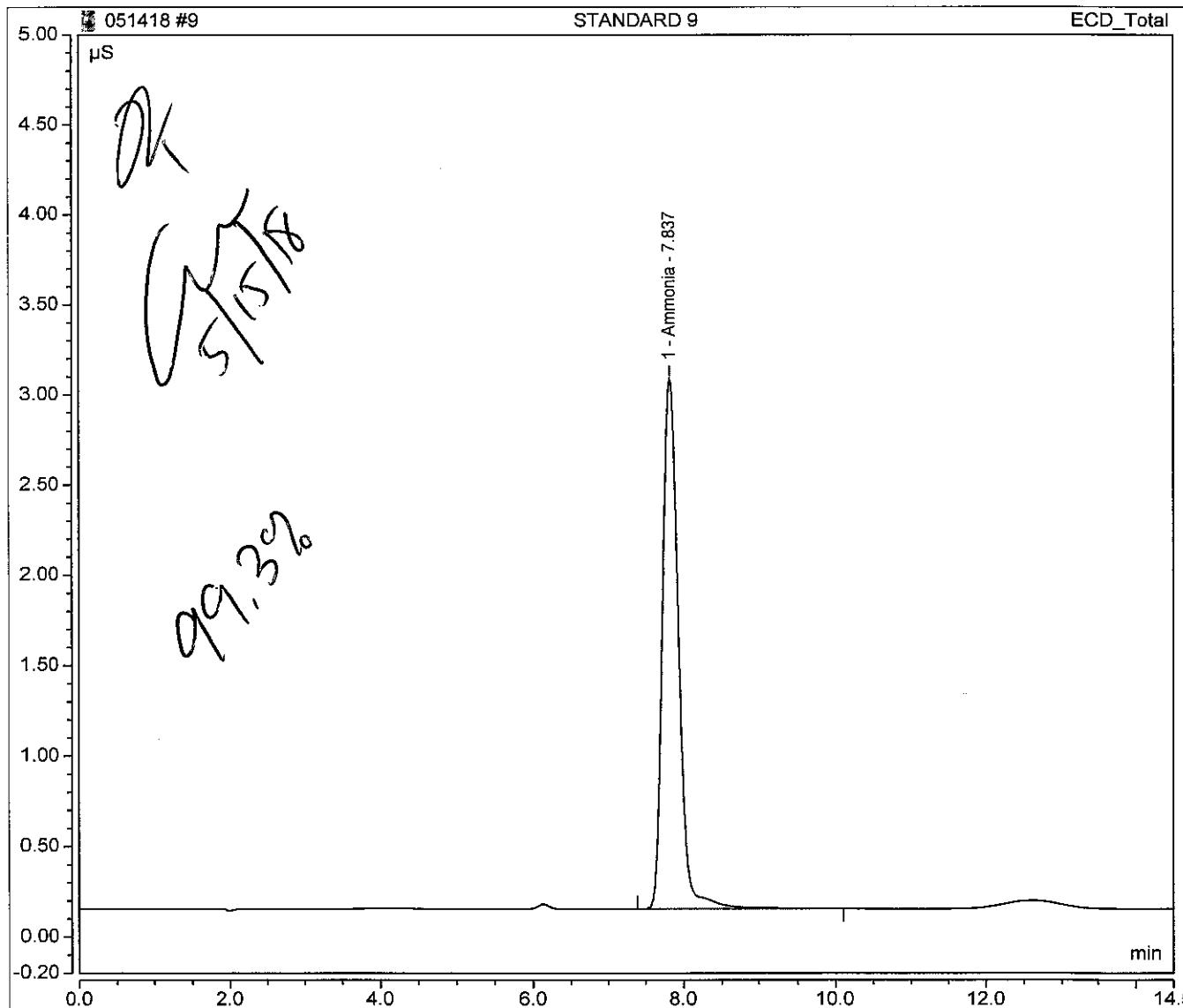
No.	Time min	Peak Name	Peak Type	Area $\mu S \cdot min$	Height μS	Amount (mg/L)
1	7.83	Ammonia	BMB	0.530	2.238	0.99785
TOTAL:				0.53	2.24	1.00



Peak Integration Report

Sample Name:	STANDARD 9	Inj. No.:	9
File ID:	Instrument Data\IC9\Data\2018\05May2018		
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	14-May-2018 / 12:02	Comments:	ASTM D6919-09 Ammonia

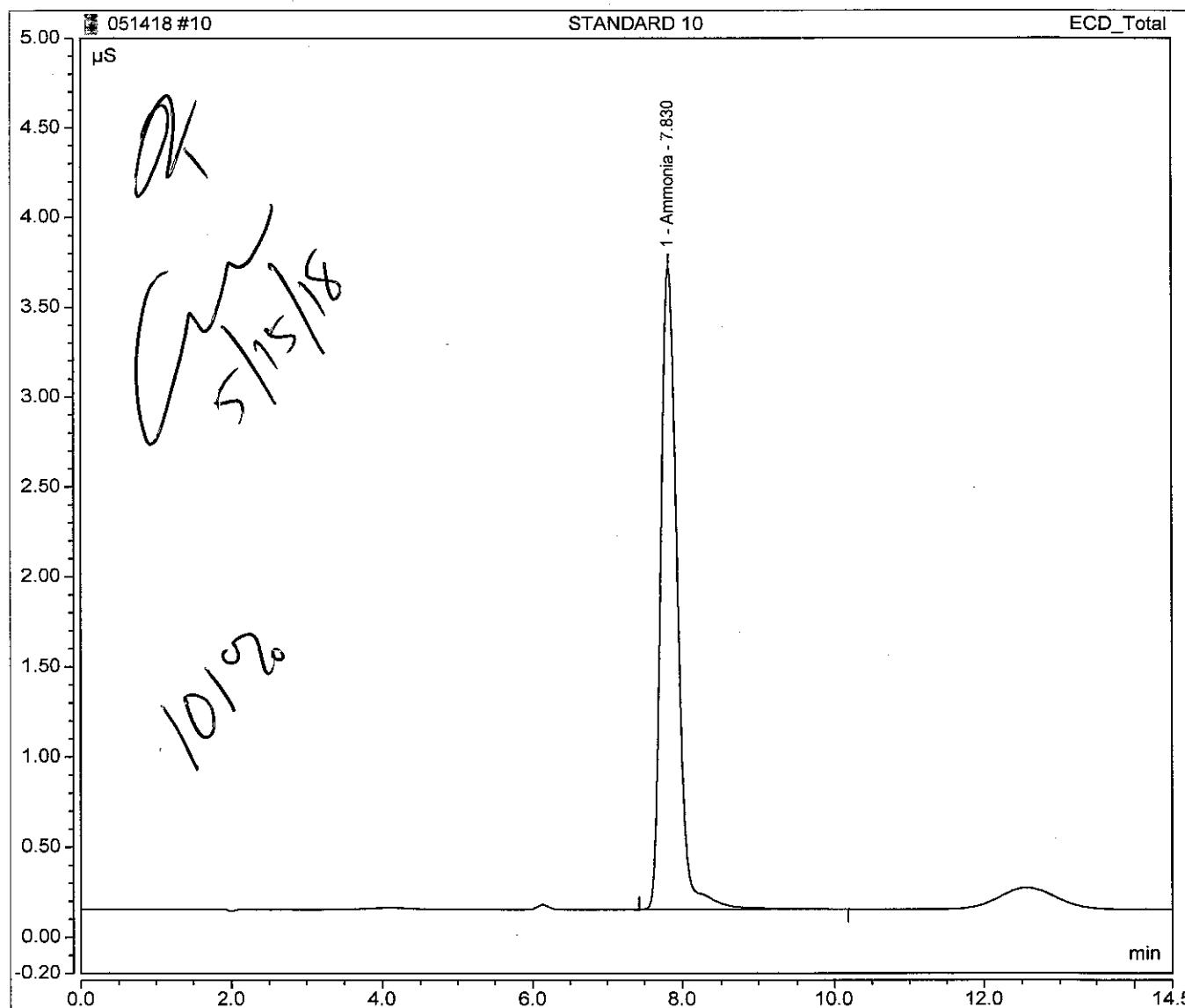
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	7.84	Ammonia	BMB	0.720	2.933	1.48930
TOTAL:				0.72	2.93	1.49



Peak Integration Report

<u>Sample Name:</u>	STANDARD 10	<u>Inj. No.:</u>	10
<u>File ID:</u>	Instrument Data\IC9\Data\2018\05May2018		
<u>Injection Type:</u>	Calibration Standard	<u>Dilution Factor:</u>	1.0000
<u>Method:</u>	9-051418	<u>Inj. Vol. (uL):</u>	50.00
<u>Inj. Date / Time:</u>	14-May-2018 / 12:16	<u>Comments:</u>	ASTM D6919-09 Ammonia

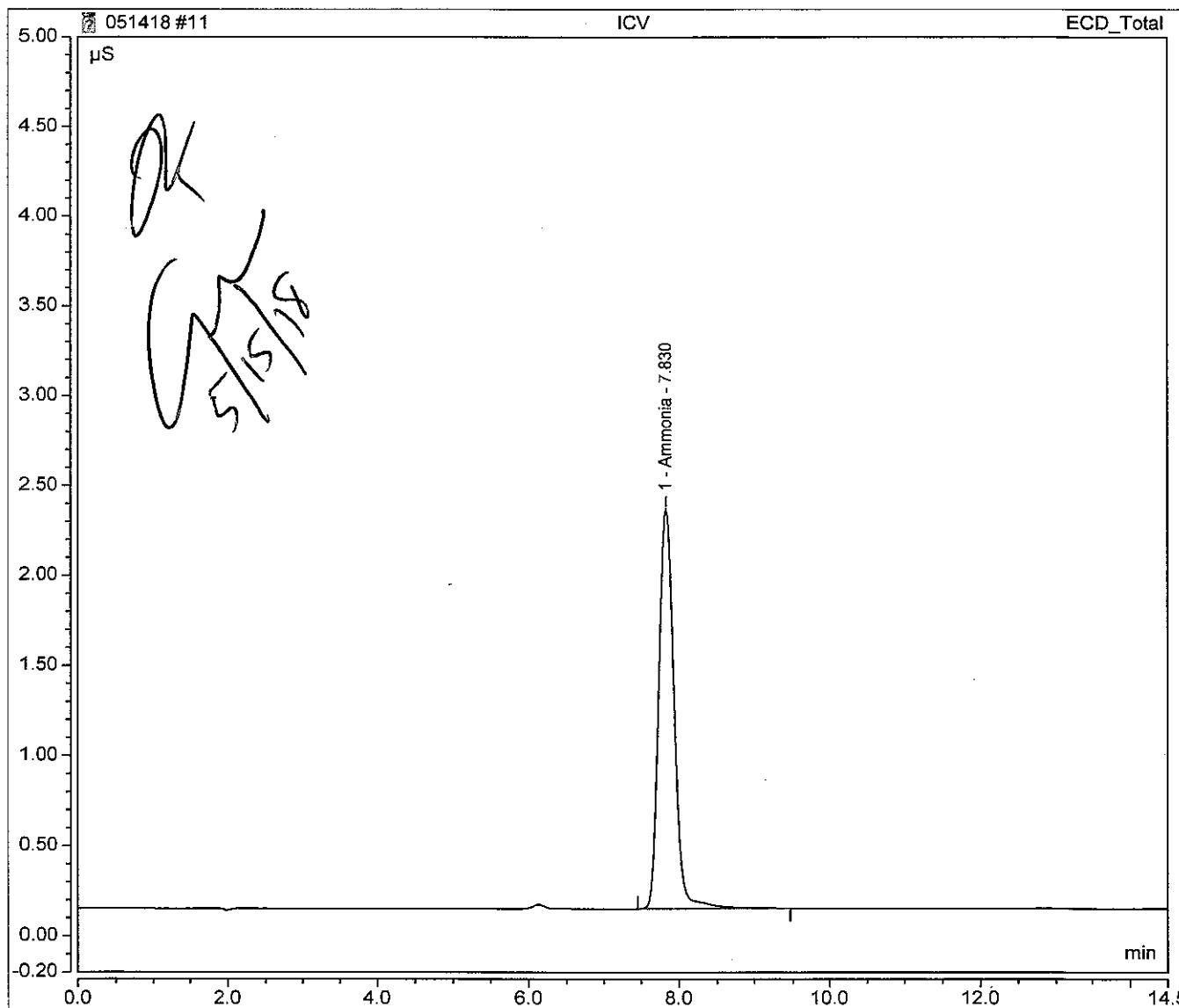
No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
1	7.83	Ammonia	BMB	0.898	3.570	2.01211
TOTAL:				0.90	3.57	2.01



Peak Integration Report

Sample Name:	ICV	Inj. No.:	11
File ID:	Instrument Data\IC9\Data\2018\05May2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (μL):	50.00
Inj. Date / Time:	14-May-2018 / 14:04	Comments:	ASTM D6919-09 Ammonia

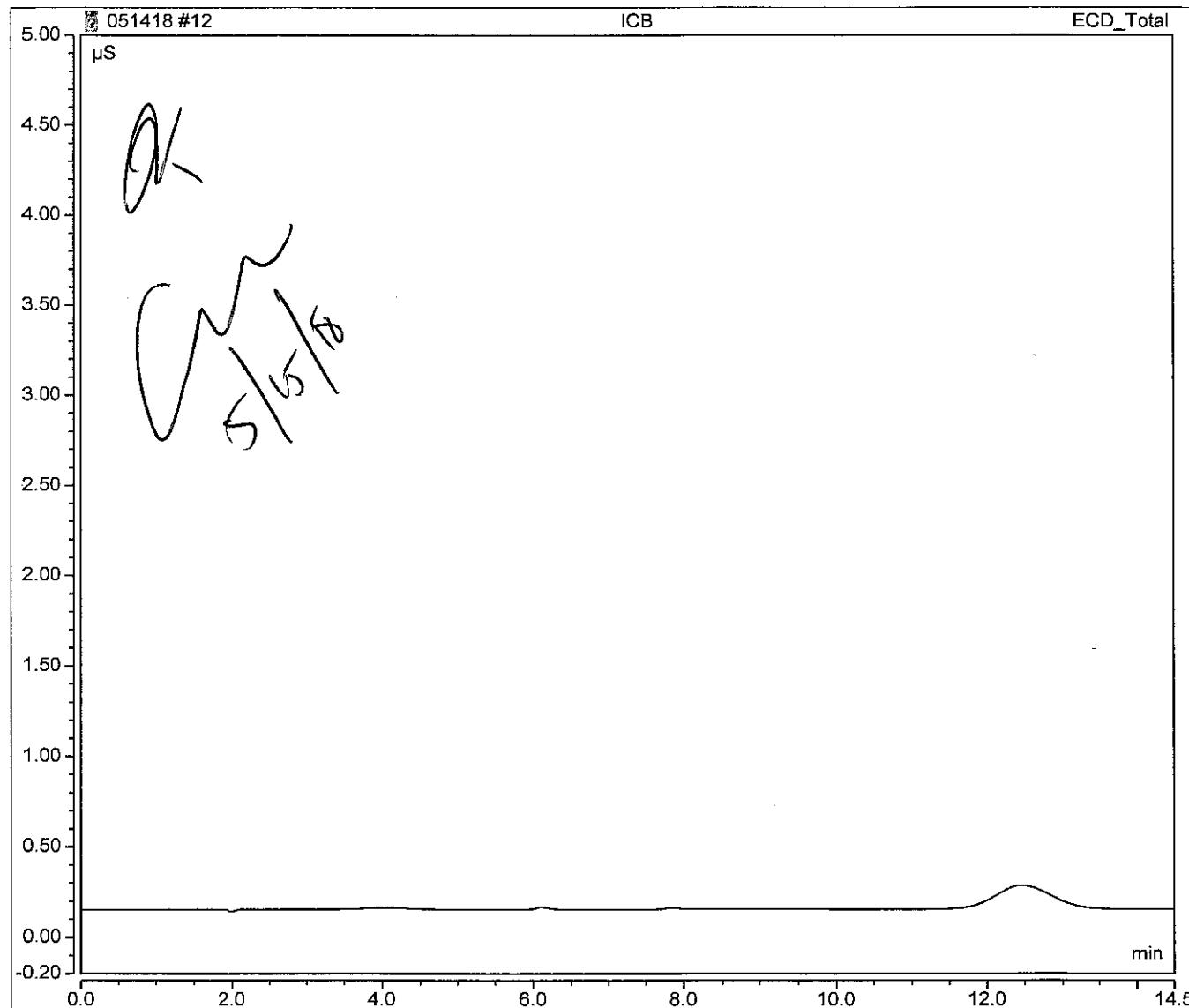
No.	Time min	Peak Name	Peak Type	Area $\mu S \cdot min$	Height μS	Amount (mg/L)
1	7.83	Ammonia	BMB	0.523	2.215	0.98251
TOTAL:				0.52	2.22	0.98



Peak Integration Report

Sample Name:	ICB	Inj. No.:	12
File ID:	Instrument Data\IC9\Data\2018\05May2018		
Injection Type:	Unknown	Dilution Factor:	1.0000
Method:	9-051418	Inj. Vol. (uL):	50.00
Inj. Date / Time:	14-May-2018 / 14:19	Comments:	ASTM D6919-09 Ammonia

No.	Time min	Peak Name	Peak Type	Area $\mu\text{S}^*\text{min}$	Height μS	Amount (mg/L)
n.a.	n.a.	Ammonia	n.a.	n.a.	n.a.	n.a.
TOTAL:				0.00	0.00	0.00

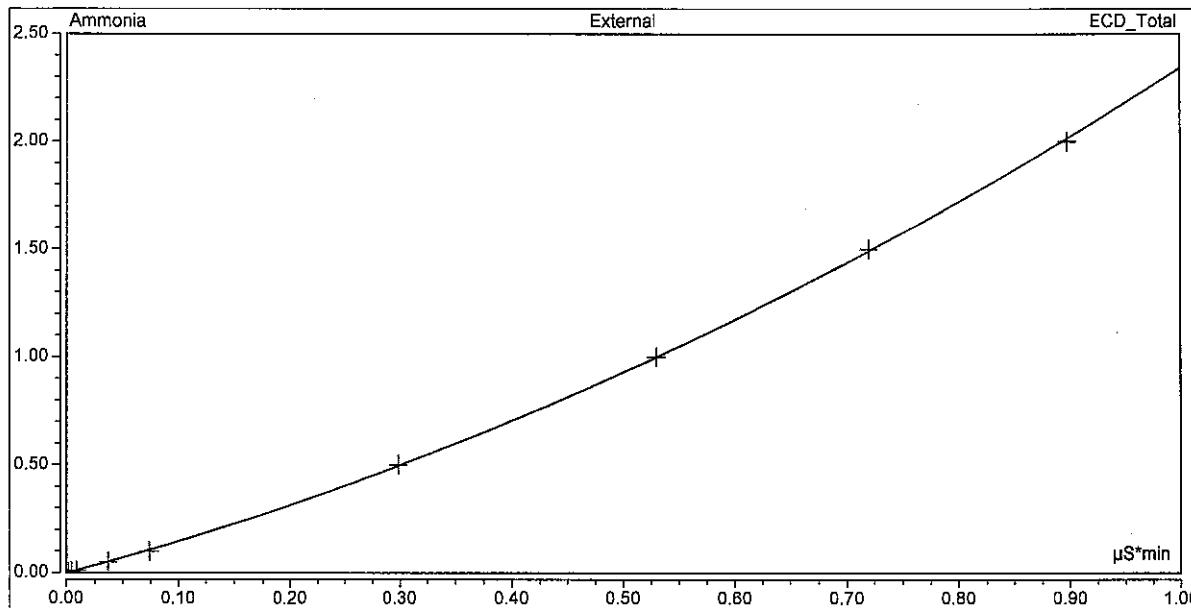


Calibration Batch Report

Sequence:	051418	Injection Volume:	50.00
Instrument Method:	9-051418	Operator:	ALRCE.GENCHEM02
Inj. Date / Time:	14-May-2018 / 14:04	Run Time:	14.5

Calibration Summary							
Peak Name	Eval.Type	Cal.Type	Points	Offset (C0)	Slope (C1)	Curve (C2)	Coeff.Det. %
Ammonia	Area	Quad, WithOffset, 1/A	9.000	-0.002	1.375	0.967	99.9888
		AVERAGE:		-0.0017	1.3755	0.9674	99.9888

Injection Name	Ret.Time min	Area $\mu\text{S} \cdot \text{min}$	Height μS	Amount
Ammonia	Ammonia	Ammonia	Ammonia	Ammonia
STANDARD 1	ECD_Total n.a.	ECD_Total n.a.	ECD_Total n.a.	ECD_Total n.a.
STANDARD 2	7.833	0.0020	0.010	0.00107
STANDARD 3	7.830	0.0043	0.021	0.00421
STANDARD 4	7.843	0.0088	0.044	0.01043
STANDARD 5	7.847	0.0370	0.183	0.05056
STANDARD 6	7.847	0.0735	0.356	0.10466
STANDARD 7	7.837	0.2986	1.332	0.49524
STANDARD 8	7.833	0.5295	2.238	0.99785
STANDARD 9	7.837	0.7197	2.933	1.48930
STANDARD 10	7.830	0.8975	3.570	2.01211
Average	7.837			
Rel. Std. Dev.	0.084 %			



ALS Environmental
1575 Jefferson Road, Building 300, Suite 360, Rochester, New York 14623

Ion Chromatography Cover Sheet

Method: Ammonia (NH₃) by ASTM D6919-09
Instrument: Dionex ICS-2100 (IC#9)
Column: Dionex CS-16 (S/N 180723024) /CG-16 (S/N 170316176), Installed 02/23/2018

Curve Date: 05/14/18 **Loop size:** 50 uL

Analyst: CWoods **Analysis Date:** 5/14/18

Method Filename: 9-051418

Standards Prep Dates & Log ID's:

Pipet: TOC / TOX

<i>Std Type</i>	<i>Prep Date</i>	<i>Log ID</i>	<i>Std Type</i>	<i>Prep Date</i>	<i>Log ID</i>
Calibration	Purchased	182558	Working	05/14/18	Same As
Intermediate	7/11/17		Calibration Stds		WC161012C
LCS / MS	Purchased	188275	Working LCS	Fresh Daily	182558
Intermediate	7/11/17		Standard		
ICV	Purchased	185402	Working ICV	Fresh Daily	185402
Intermediate	3/21/17		Standard		
CCV	Purchased	185402	Working CCV	Fresh Daily	185402
Intermediate	3/21/17		Standard		

Curve includes a 0.001ppm point, which is less than our MRL of 0.005ppm.

Original Retention Time for this method is 7.847 minutes, based on Standard 6.

Curve is Quadratic as per ASTM D6919-09 Method.

Additional Comments: 100 ppm MS Standard Made From: 188275, Prepared Fresh Daily

1000ppm Standard Stock Used: 188275 (Expires 02/28/2019)

1000ppm Reference Stock Used: 185402 (Expires 06/30/2018)

TITLE NH₃ Calibration on IC#9 performed on 7/7/16

7/8/16 (A) 10ppm NH₃ Working Standard Solution

NM Make two serial 1/10 dilutions of 1000ppm NH₃ Standard (83839) with DI. Prepare fresh.

(B) 100ppm NH₃ MS Working Solution

In a 100ml vol. flask add 10ml of 1000ppm NH₃ Standard (83839) and bring to volume with DI. Expires 1 month.

(C) Standards

Std. #	ml DI	ml 10ppm Std (WCI61012A)	Final Conc. (mg/l)
1	10ml	0ml	0
2	1/10 dilution of Std. #1		0.005
3	1/10 dilution of Std. #2		0.01
4	1/10 dilution of Std. #3		0.05
5	1/10 dilution of Std. #4		0.1
6	9.5ml	0.5ml	0.5
7	9ml	1ml	1.0
8	8.5ml	1.5ml	1.5
9	8ml	2ml	2.0

(D) ICV/CCV

In a 250ml vol. flask add 0.25ml 1000ppm NH₃ Reference (87381) and bring to volume with DI. Transfer to H₂SO₄ preserved 250ml plastic bottle. Expires 1 month.

(E) LCS

In a 250ml vol. flask add 0.125ml of 1000ppm NH₃ Standard Stock (83839) and bring to volume with DI. Transfer to H₂SO₄ preserved 250ml plastic bottle. Expires 1 mo

(F) Matrix Spike

To 5ml of sample add 0.025ml of 100ppm NH₃ MS Working Solution (WCI61012B). TV = 0.5 x dilution.

NM 7/8/16

Sign and date after each entry.

Standard Solution Logbook - Inventory ID Summary

Inventory ID: 185402 Date Received: 11/7/17
Standard Name: Ammonia 1000 ppm N (1.0 mg/mL N) NH₃ Expiration Date: 6/30/19
Standard Type: Stock Standard Source: Thermo Electron Spectroscopy
ALS Lab: ROCHESTER Catalog #: 984720
ALSTeam: GenChem Lot #: S2977
Container ID: Ammonium (as N) Std Amount Prepared: 1.00 mL
Location: Gen Chem

Component Name	Amount	Units	Method / Test Name
Ammonia as Nitrogen	1000	mg/L	350.1M / Ammonia
Nitrogen	1000	mg/L	351.2 / TKN

Standard Solution Logbook - Inventory ID Summary

Inventory ID: 182558 Date Received: 7/11/17
Standard Name: Ammonia 1000 ppm N (1.0 mg/mL N) NH₃ Expiration Date: 4/21/18
Standard Type: Stock Standard Source: Environmental Express
ALS Lab: ROCHESTER Catalog #: IC-NT-M
ALSTeam: GenChem Lot #: 1633411
Container ID: 182558 Amount Prepared: 1.00 mL
Location: Wetchem

Component Name	Amount	Units	Method / Test Name
Ammonia as Nitrogen	1000	mg/L	350.1 / Ammonia T
Nitrogen	1000	mg/L	351.2 / TKN