



September 27, 2018

Service Request No:R1808613

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 07, 2018  
For your reference, these analyses have been assigned our service request number **R1808613**.

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](mailto:Janice.Jaeger@alsglobal.com).

Respectfully submitted,

**ALS Group USA, Corp. dba ALS Environmental**

Janice Jaeger  
Project Manager

CC: Jason Fagel

**ADDRESS**

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

**PHONE** +1 585 288 5380 | **FAX** +1 585 288 8475

ALS Group USA, Corp.  
dba ALS Environmental



## Narrative Documents

**ALS Environmental—Rochester Laboratory**

1565 Jefferson Road, Building 300, Suite 360, Rochester, NY 14623

Phone (585) 288-5380 Fax (585) 288-8475

[www.alsglobal.com](http://www.alsglobal.com)



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

**Service Request:** R1808613  
**Date Received:** 09/07/2018

### 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:

Ten water samples were received for analysis at ALS Environmental on 09/07/2018. 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, appearing to read "Samanta".

Approved by \_\_\_\_\_

Date 09/27/2018

### SAMPLE DETECTION SUMMARY

<b>CLIENT ID: 18SRB009</b>	<b>Lab ID: R1808613-001</b>
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Analyte	Results	Flag	MDL	MRL	Units	Method
Alkalinity, Total as CaCO <sub>3</sub>	10.4		1.0	2.0	mg/L	SM 2320 B-1997 (2011)
Ammonia as Nitrogen, undistilled	0.0280		0.0008	0.0050	mg/L	ASTM D6919-09
Carbon, Total Organic (TOC)	9.4		0.05	1.0	mg/L	SM 5310 C-2000 (2011)
Chlorophyll A	35.7			1.6	ug/L	SM20 10200 H
Color, True	56.0			1.0	ColorUnits	SM 2120 B-2001 (2011)
Nitrate+Nitrite as Nitrogen	0.0128		0.0007	0.0020	mg/L	353.2
Nitrogen, Total Kjeldahl (TKN)	1.11		0.08	0.10	mg/L	351.2
pH of Color Analysis	7.12				pH Units	SM 2120 B-2001 (2011)
Phosphorus, Total	0.0333		0.0020	0.0050	mg/L	365.1

<b>CLIENT ID: 18SRB009 Diss</b>	<b>Lab ID: R1808613-002</b>
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Analyte	Results	Flag	MDL	MRL	Units	Method
Phosphorus, Dissolved	0.0102		0.0020	0.0050	mg/L	365.1

<b>CLIENT ID: 18SRB011</b>	<b>Lab ID: R1808613-003</b>
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Analyte	Results	Flag	MDL	MRL	Units	Method
Alkalinity, Total as CaCO <sub>3</sub>	20.8		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
Carbon, Total Organic (TOC)	6.9		0.05	1.0	mg/L	SM 5310 C-2000 (2011)
Chlorophyll A	13.6			0.80	ug/L	SM20 10200 H
Color, True	31.0			1.0	ColorUnits	SM 2120 B-2001 (2011)
Nitrate+Nitrite as Nitrogen	0.0025		0.0007	0.0020	mg/L	353.2
Nitrogen, Total Kjeldahl (TKN)	0.70		0.08	0.10	mg/L	351.2
pH of Color Analysis	7.32				pH Units	SM 2120 B-2001 (2011)
Phosphorus, Total	0.0190		0.0020	0.0050	mg/L	365.1

<b>CLIENT ID: 18SRB011 Diss</b>	<b>Lab ID: R1808613-004</b>
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Analyte	Results	Flag	MDL	MRL	Units	Method
Phosphorus, Dissolved	0.0078		0.0020	0.0050	mg/L	365.1

<b>CLIENT ID: 18SRB023</b>	<b>Lab ID: R1808613-005</b>
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Analyte	Results	Flag	MDL	MRL	Units	Method
Alkalinity, Total as CaCO <sub>3</sub>	12.8		1.0	2.0	mg/L	SM 2320 B-1997 (2011)
Ammonia as Nitrogen, undistilled	0.0209		0.0008	0.0050	mg/L	ASTM D6919-09
Carbon, Total Organic (TOC)	11.2		0.05	1.0	mg/L	SM 5310 C-2000 (2011)
Chlorophyll A	10.0			0.53	ug/L	SM20 10200 H
Color, True	110			5.0	ColorUnits	SM 2120 B-2001 (2011)

### SAMPLE DETECTION SUMMARY

<b>CLIENT ID: 18SRB023</b>	<b>Lab ID: R1808613-005</b>
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Analyte	Results	Flag	MDL	MRL	Units	Method
Nitrate+Nitrite as Nitrogen	0.0100		0.0007	0.0020	mg/L	353.2
Nitrogen, Total Kjeldahl (TKN)	0.81		0.08	0.10	mg/L	351.2
pH of Color Analysis	6.81				pH Units	SM 2120 B-2001 (2011)
Phosphorus, Total	0.0247		0.0020	0.0050	mg/L	365.1

<b>CLIENT ID: 18SRB023 Diss</b>	<b>Lab ID: R1808613-006</b>
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Analyte	Results	Flag	MDL	MRL	Units	Method
Phosphorus, Dissolved	0.0068		0.0020	0.0050	mg/L	365.1

<b>CLIENT ID: 18SRB018</b>	<b>Lab ID: R1808613-007</b>
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Analyte	Results	Flag	MDL	MRL	Units	Method
Alkalinity, Total as CaCO <sub>3</sub>	8.0		1.0	2.0	mg/L	SM 2320 B-1997 (2011)
Ammonia as Nitrogen, undistilled	0.0078		0.0008	0.0050	mg/L	ASTM D6919-09
Carbon, Total Organic (TOC)	10.6		0.05	1.0	mg/L	SM 5310 C-2000 (2011)
Chlorophyll A	12.6			0.80	ug/L	SM20 10200 H
Color, True	110			5.0	ColorUnits	SM 2120 B-2001 (2011)
Nitrogen, Total Kjeldahl (TKN)	0.62		0.08	0.10	mg/L	351.2
pH of Color Analysis	7.30				pH Units	SM 2120 B-2001 (2011)
Phosphorus, Total	0.0120		0.0020	0.0050	mg/L	365.1

<b>CLIENT ID: 18SRB097</b>	<b>Lab ID: R1808613-009</b>
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Analyte	Results	Flag	MDL	MRL	Units	Method
Alkalinity, Total as CaCO <sub>3</sub>	7.6		1.0	2.0	mg/L	SM 2320 B-1997 (2011)
Ammonia as Nitrogen, undistilled	0.0076		0.0008	0.0050	mg/L	ASTM D6919-09
Carbon, Total Organic (TOC)	10.9		0.05	1.0	mg/L	SM 5310 C-2000 (2011)
Chlorophyll A	7.60			0.80	ug/L	SM20 10200 H
Color, True	105			5.0	ColorUnits	SM 2120 B-2001 (2011)
Nitrate+Nitrite as Nitrogen	0.0022		0.0007	0.0020	mg/L	353.2
Nitrogen, Total Kjeldahl (TKN)	0.67		0.08	0.10	mg/L	351.2
pH of Color Analysis	7.11				pH Units	SM 2120 B-2001 (2011)
Phosphorus, Total	0.0101		0.0020	0.0050	mg/L	365.1



## Sample Receipt Information

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Phone (585) 288-5380 Fax (585) 288-8475

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**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018

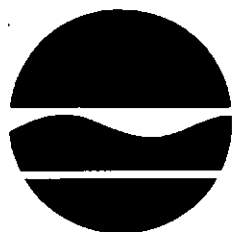
**Service Request:**R1808613

**SAMPLE CROSS-REFERENCE**

<u>SAMPLE #</u>	<u>CLIENT SAMPLE ID</u>	<u>DATE</u>	<u>TIME</u>
R1808613-001	18SRB009	9/5/2018	1600
R1808613-002	18SRB009 Diss	9/5/2018	1600
R1808613-003	18SRB011	9/6/2018	0825
R1808613-004	18SRB011 Diss	9/6/2018	0825
R1808613-005	18SRB023	9/6/2018	0952
R1808613-006	18SRB023 Diss	9/6/2018	0952
R1808613-007	18SRB018	9/6/2018	1110
R1808613-008	18SRB018 Diss	9/6/2018	1110
R1808613-009	18SRB097	9/6/2018	1110
R1808613-010	18SRB097 Diss	9/6/2018	1110

# CHAIN OF CUSTODY

Page 1 of 1



New York State Department of  
Environmental Conservation –  
Division of Water

<b>Project Name:</b> LCI	<b>Project Number:</b> LCI2018	<b>NYSDEC SDG:</b>
<b>Sampler Collector:</b> Sara Gonzalez	<b>Sampler Signature:</b> <i>[Signature]</i>	<b>Sampler Phone No.:</b> 845-216-9575
<b>Project Manager:</b> Alene Onion	<b>X Report to Project Manager</b>	<input type="checkbox"/> <b>Bill to Project Manager</b>
<b>Address:</b> 625 Broadway, 4 <sup>th</sup> Floor Albany, NY 12233-3502	<b>Report to:</b>	<b>Bill to:</b> Jason Fagel
<b>Phone:</b> (518) 402-8166	<b>Address:</b>	<b>Address:</b> 625 Broadway, 4 <sup>th</sup> Floor Albany, NY 12233-3502
<b>Email:</b> alene.onion@dec.ny.gov	<b>Phone:</b>	<b>Phone:</b> 518-402-8156
	<b>Email:</b>	<b>Email:</b> Jason.fagel@dec.ny.gov

## Matrix Codes:

- WW = Wastewater
- GW = Groundwater
- AW = Ambient Water
- SE = Sediment
- SL = Sludge
- T = Tissue
- O = Other \_\_\_\_\_

## Analyses Ordered (list)

## Preservative Codes:

- 0 = Cool to < 6°C
- 1 = HCL
- 2 = HNO<sub>3</sub>
- 3 = H<sub>2</sub>SO<sub>4</sub>
- 4 = NaOH
- 5 = Zn. Acetate
- 6 = MeOH
- 7 = NaHSO<sub>4</sub>
- 8 = Other \_\_\_\_\_

## NYSDEC LCI Sample ID

Collection Date

Collection Time

Matrix Code

No. of Containers

3		2		0	3		0		0	
TP, NH4, NOx, TKN		ANC			ANC					
TP, NH4, NOx, TKN, NO3		ANC								
Dissolved TOP4										
Fe, Mn, As,										
Ca, Mg, Na, K										
Fe, Mn, As, Ca, Mg, Na, K										
Color										
TOC										
DOC										
Alkalinity										
SO4 & UV-254										
SO4, Cl		ANC								
SO4, Cl, UV-254										
Chlorophyll a   Vol (ml)										

## Location Info

18SRB009	09/05	16:00	AW	6	X		X				X	X		X	250	Greenwood L, epi
18SRB011	09/06	8:25	AW	6	X		X				X	X		X	500	High L, epi
18SRB023	09/06	9:52	AW	6	X		X				X	X		X	250	Whaleys P, epi
18SRB018	09/06	11:10	AW	6	X		X				X	X		X	500	Round P, epi
18SRB097	09/06	11:10	AW	6	X		X				X	X		X	500	Round P, epi

## Special Analysis Instructions:

<b>Relinquished by Sampler:</b> Sara Gonzalez	<b>Date:</b> 09/06	<b>Time:</b> 1410	<b>Received by:</b> <i>[Signature]</i>	<b>Date:</b> 9/6/18	<b>Time:</b> 1410	<b>Laboratory Receipt Notes:</b>
<b>Relinquished by:</b> <i>[Signature]</i>	<b>Date:</b> 9/6/18	<b>Time:</b> 1600	<b>Received by:</b> <i>[Signature]</i>	<b>Date:</b>	<b>Time:</b>	
<b>Relinquished by:</b>	<b>Date:</b>	<b>Time:</b>	<b>Received by Laboratory:</b> <i>[Signature]</i>	<b>Date:</b> 9/6/18	<b>Time:</b> 0900	

Sample T  
Properly  
Samples

R1808613

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New York State DEC  
LCI 2018







## Cooler Receipt and Preservation Check Form

R1808613

New York State DEC  
LCI 2018

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Project/Client LCE Folder Number \_\_\_\_\_Cooler received on 9/7/18 by: @COURIER: ALS UPS FEDEX 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?	Y N <u>NA</u>
5b	Did VOA vials, <u>Alk</u> or Sulfide have sig* bubbles?	Y <u>N</u> NA
6	Where did the bottles originate?	<u>ALS/ROC</u> CLIENT
7	Soil VOA received as: Bulk Encore 5035set	<u>NA</u>

8. Temperature Readings Date: 9/7/18 Time: 0910 ID: IR#7 IR#9 From: Temp Blank Sample Bottle

Observed Temp (°C)	<u>3.4</u>							
Correction Factor (°C)	<u>+1.0</u>							
Corrected Temp (°C)	<u>4.4</u>							
Temp from: Type of bottle	<u>Conf tubes</u>							
Within 0-6°C?	<u>Y</u> N	Y N	Y N	Y N	Y N	Y N	Y N	Y N
If <0°C, were samples frozen?	Y N	Y N	Y N	Y N	Y N	Y N	Y N	Y N

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

&amp; Client Approval to Run Samples: \_\_\_\_\_ Standing Approval Client aware at drop-off Client notified by: \_\_\_\_\_

All samples held in storage location: R-002 by @ on 9/7/18 at 0915  
5035 samples placed in storage location: \_\_\_\_\_ by \_\_\_\_\_ on \_\_\_\_\_ at \_\_\_\_\_Cooler Breakdown/Preservation Check\*\*: Date: 9/10/18 Time: 1205 by: @

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 NG
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 <sub>3</sub>								
≤2	<u>209318</u>	H <sub>2</sub> SO <sub>4</sub>			<u>190642</u>	<u>7/19</u>				
<4		NaHSO <sub>4</sub>			<u>24B0071</u>	<u>6/19</u>				
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub> (625, 608, CN), ascorbic (phenol).					
		Na <sub>2</sub> S <sub>2</sub> O <sub>3</sub>								
		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: 070218-2AA2 8-077-001

Explain all Discrepancies/ Other Comments:

nutrient & alk.  
~~18SRB018~~ bottle  
says 18SRB018  
but time matches  
18SRB018

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

Labels secondary reviewed by: 2409 9/11/18  
PC Secondary Review: \_\_\_\_\_

\*significant air bubbles: VOA &gt; 5-6 mm : WC &gt; 1 in. diameter



## Miscellaneous Forms

**ALS Environmental—Rochester Laboratory**

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## REPORT QUALIFIERS AND DEFINITIONS

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.	+	Correlation coefficient for MSA is <0.995.
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).	N	Inorganics- Matrix spike recovery was outside laboratory limits.
B	Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.	N	Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
E	Inorganics- Concentration is estimated due to the serial dilution was outside control limits.	S	Concentration has been determined using Method of Standard Additions (MSA).
E	Organics- Concentration has exceeded the calibration range for that specific analysis.	W	Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
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	Concentration >40% difference between the two GC columns.
*	Indicates that a quality control parameter has exceeded laboratory limits. Under the "Notes" column of the Form I, this qualifier denotes analysis was performed out of Holding Time.	C	Confirmed by GC/MS
H	Analysis was performed out of hold time for tests that have an "immediate" hold time criteria.	Q	DoD reports: indicates a pesticide/Aroclor is not confirmed (×100% Difference between two GC columns).
#	Spike was diluted out.	X	See Case Narrative for discussion.
		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.
		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).
		LOD	Limit of Detection. A value at or above the MDL which has been verified to be detectable.
		ND	Non-Detect. Analyte was not detected at the concentration listed. Same as U qualifier.



### Rochester Lab ID # for State Certifications<sup>1</sup>

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

<sup>1</sup> 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

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## 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.

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018

**Service Request:** R1808613

**Non-Certified Analytes**

**Certifying Agency:** New York Department of Health

Method	Matrix	Analyte
SM20 10200 H	Water	Chlorophyll A

**ALS Group USA, Corp.**

dba ALS Environmental

## Analyst Summary report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018

**Service Request:** R1808613

**Sample Name:** 18SRB009  
**Lab Code:** R1808613-001  
**Sample Matrix:** Water

**Date Collected:** 09/5/18  
**Date Received:** 09/7/18

Analysis Method	Extracted/Digested By	Analyzed By
351.2	NSMITH	GNITAJOUPPI
353.2		AMOSSES
365.1	MROGERSON	MROGERSON
ASTM D6919-09		BKALKMAN
SM 2120 B-2001(2011)		SCYMBAL
SM 2320 B-1997(2011)		CWOODS
SM 5310 C-2000(2011)		CWOODS
SM20 10200 H		JQUACKENBUSH

**Sample Name:** 18SRB009 Diss  
**Lab Code:** R1808613-002  
**Sample Matrix:** Water

**Date Collected:** 09/5/18  
**Date Received:** 09/7/18

Analysis Method	Extracted/Digested By	Analyzed By
365.1	KWONG	GNITAJOUPPI

**Sample Name:** 18SRB011  
**Lab Code:** R1808613-003  
**Sample Matrix:** Water

**Date Collected:** 09/6/18  
**Date Received:** 09/7/18

Analysis Method	Extracted/Digested By	Analyzed By
351.2	NSMITH	GNITAJOUPPI
353.2		AMOSSES
365.1	MROGERSON	MROGERSON
ASTM D6919-09		BKALKMAN
SM 2120 B-2001(2011)		SCYMBAL
SM 2320 B-1997(2011)		CWOODS
SM 5310 C-2000(2011)		CWOODS
SM20 10200 H		JQUACKENBUSH

**ALS Group USA, Corp.**

dba ALS Environmental

## Analyst Summary report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018

**Service Request:** R1808613

**Sample Name:** 18SRB011 Diss  
**Lab Code:** R1808613-004  
**Sample Matrix:** Water

**Date Collected:** 09/6/18  
**Date Received:** 09/7/18

**Analysis Method**

365.1

**Extracted/Digested By**

KWONG

**Analyzed By**

GNITAJOUPPI

**Sample Name:** 18SRB023  
**Lab Code:** R1808613-005  
**Sample Matrix:** Water

**Date Collected:** 09/6/18  
**Date Received:** 09/7/18

**Analysis Method**

351.2

353.2

365.1

ASTM D6919-09

SM 2120 B-2001(2011)

SM 2320 B-1997(2011)

SM 5310 C-2000(2011)

SM20 10200 H

**Extracted/Digested By**

NSMITH

MROGERSON

**Analyzed By**

GNITAJOUPPI

AMOSSES

MROGERSON

BKALKMAN

SCYMBAL

CWOODS

CWOODS

JQUACKENBUSH

**Sample Name:** 18SRB023 Diss  
**Lab Code:** R1808613-006  
**Sample Matrix:** Water

**Date Collected:** 09/6/18  
**Date Received:** 09/7/18

**Analysis Method**

365.1

**Extracted/Digested By**

KWONG

**Analyzed By**

GNITAJOUPPI

**Sample Name:** 18SRB018  
**Lab Code:** R1808613-007  
**Sample Matrix:** Water

**Date Collected:** 09/6/18  
**Date Received:** 09/7/18

**Analysis Method**

351.2

353.2

365.1

**Extracted/Digested By**

NSMITH

MROGERSON

**Analyzed By**

GNITAJOUPPI

AMOSSES

MROGERSON

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Analyst Summary report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018

**Service Request:** R1808613

**Sample Name:** 18SRB018  
**Lab Code:** R1808613-007  
**Sample Matrix:** Water

**Date Collected:** 09/6/18  
**Date Received:** 09/7/18

Analysis Method	Extracted/Digested By	Analyzed By
ASTM D6919-09		BKALKMAN
SM 2120 B-2001(2011)		SCYMBAL
SM 2320 B-1997(2011)		CWOODS
SM 5310 C-2000(2011)		CWOODS
SM20 10200 H		JQUACKENBUSH

**Sample Name:** 18SRB018 Diss  
**Lab Code:** R1808613-008  
**Sample Matrix:** Water

**Date Collected:** 09/6/18  
**Date Received:** 09/7/18

Analysis Method	Extracted/Digested By	Analyzed By
365.1	KWONG	GNITAJOUPPI

**Sample Name:** 18SRB097  
**Lab Code:** R1808613-009  
**Sample Matrix:** Water

**Date Collected:** 09/6/18  
**Date Received:** 09/7/18

Analysis Method	Extracted/Digested By	Analyzed By
351.2	NSMITH	GNITAJOUPPI
353.2		AMOSSES
365.1	MROGERSON	MROGERSON
ASTM D6919-09		BKALKMAN
SM 2120 B-2001(2011)		SCYMBAL
SM 2320 B-1997(2011)		CWOODS
SM 5310 C-2000(2011)		CWOODS
SM20 10200 H		JQUACKENBUSH



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Analyst Summary report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018

**Service Request:** R1808613

**Sample Name:** 18SRB097 Diss  
**Lab Code:** R1808613-010  
**Sample Matrix:** Water

**Date Collected:** 09/6/18  
**Date Received:** 09/7/18

**Analysis Method**  
365.1

**Extracted/Digested By**  
KWONG

**Analyzed By**  
GNITAJOUPPI



## 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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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water  
  
**Sample Name:** 18SRB009  
**Lab Code:** R1808613-001

**Service Request:** R1808613  
**Date Collected:** 09/05/18 16:00  
**Date Received:** 09/07/18 09:00  
  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	10.4	mg/L	2.0	1	09/11/18 00:34	NA	
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0280	mg/L	0.0050	1	09/14/18 00:50	NA	
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	9.4	mg/L	1.0	1	09/12/18 14:52	NA	
Chlorophyll A	SM20 10200 H	35.7	ug/L	1.6	10	09/19/18 18:10	NA	
Color, True	SM 2120 B-2001(2011)	56.0	ColorUnits	1.0	1	09/07/18 11:30	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0128	mg/L	0.0020	1	09/13/18 17:25	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	1.11	mg/L	0.10	1	09/20/18 12:02	09/19/18	
pH of Color Analysis	SM 2120 B-2001(2011)	7.12	pH Units	-	1	09/08/18 08:30	NA	*
Phosphorus, Total	365.1	0.0333	mg/L	0.0050	1	09/21/18 15:29	09/19/18	

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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water  
  
**Sample Name:** 18SRB009 Diss  
**Lab Code:** R1808613-002

**Service Request:** R1808613  
**Date Collected:** 09/05/18 16:00  
**Date Received:** 09/07/18 09:00  
  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Phosphorus, Dissolved	365.1	0.0102	mg/L	0.0050	1	09/17/18 10:14	09/14/18	

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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water

**Service Request:** R1808613  
**Date Collected:** 09/06/18 08:25  
**Date Received:** 09/07/18 09:00

**Sample Name:** 18SRB011  
**Lab Code:** R1808613-003

**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	20.8	mg/L	2.0	1	09/11/18 00:38	NA	
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0073	mg/L	0.0050	1	09/14/18 01:06	NA	
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	6.9	mg/L	1.0	1	09/13/18 15:24	NA	
Chlorophyll A	SM20 10200 H	13.6	ug/L	0.80	10	09/19/18 18:10	NA	
Color, True	SM 2120 B-2001(2011)	31.0	ColorUnits	1.0	1	09/07/18 11:30	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0025	mg/L	0.0020	1	09/13/18 17:27	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	0.70	mg/L	0.10	1	09/20/18 12:44	09/19/18	
pH of Color Analysis	SM 2120 B-2001(2011)	7.32	pH Units	-	1	09/08/18 08:30	NA	*
Phosphorus, Total	365.1	0.0190	mg/L	0.0050	1	09/21/18 15:30	09/19/18	

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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water  
  
**Sample Name:** 18SRB011 Diss  
**Lab Code:** R1808613-004

**Service Request:** R1808613  
**Date Collected:** 09/06/18 08:25  
**Date Received:** 09/07/18 09:00  
  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Phosphorus, Dissolved	365.1	0.0078	mg/L	0.0050	1	09/17/18 10:15	09/14/18	



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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water  
**Sample Name:** 18SRB023  
**Lab Code:** R1808613-005

**Service Request:** R1808613  
**Date Collected:** 09/06/18 09:52  
**Date Received:** 09/07/18 09:00  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO <sub>3</sub>	SM 2320 B-1997(2011)	12.8	mg/L	2.0	1	09/11/18 00:42	NA	
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0209	mg/L	0.0050	1	09/14/18 01:22	NA	
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	11.2	mg/L	1.0	1	09/13/18 19:22	NA	
Chlorophyll A	SM20 10200 H	10.0	ug/L	0.53	10	09/19/18 18:10	NA	
Color, True	SM 2120 B-2001(2011)	110	ColorUnits	5.0	5	09/07/18 11:30	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0100	mg/L	0.0020	1	09/13/18 17:28	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	0.81	mg/L	0.10	1	09/20/18 12:04	09/19/18	
pH of Color Analysis	SM 2120 B-2001(2011)	6.81	pH Units	-	5	09/08/18 08:30	NA	
Phosphorus, Total	365.1	0.0247	mg/L	0.0050	1	09/21/18 15:31	09/19/18	

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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water  
  
**Sample Name:** 18SRB023 Diss  
**Lab Code:** R1808613-006

**Service Request:** R1808613  
**Date Collected:** 09/06/18 09:52  
**Date Received:** 09/07/18 09:00  
  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Phosphorus, Dissolved	365.1	0.0068	mg/L	0.0050	1	09/17/18 10:16	09/14/18	

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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water  
**Sample Name:** 18SRB018  
**Lab Code:** R1808613-007

**Service Request:** R1808613  
**Date Collected:** 09/06/18 11:10  
**Date Received:** 09/07/18 09:00  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	8.0	mg/L	2.0	1	09/11/18 00:46	NA	
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0078	mg/L	0.0050	1	09/14/18 01:38	NA	
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	10.6	mg/L	1.0	1	09/13/18 19:43	NA	
Chlorophyll A	SM20 10200 H	12.6	ug/L	0.80	10	09/19/18 18:10	NA	
Color, True	SM 2120 B-2001(2011)	110	ColorUnits	5.0	5	09/07/18 11:30	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0020	U mg/L	0.0020	1	09/13/18 17:29	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	0.62	mg/L	0.10	1	09/20/18 12:05	09/19/18	
pH of Color Analysis	SM 2120 B-2001(2011)	7.30	pH Units	-	5	09/08/18 08:30	NA	
Phosphorus, Total	365.1	0.0120	mg/L	0.0050	1	09/21/18 15:32	09/19/18	

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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water  
  
**Sample Name:** 18SRB018 Diss  
**Lab Code:** R1808613-008

**Service Request:** R1808613  
**Date Collected:** 09/06/18 11:10  
**Date Received:** 09/07/18 09:00  
  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Phosphorus, Dissolved	365.1	0.0050 U	mg/L	0.0050	1	09/17/18 10:23	09/14/18	

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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water  
  
**Sample Name:** 18SRB097  
**Lab Code:** R1808613-009

**Service Request:** R1808613  
**Date Collected:** 09/06/18 11:10  
**Date Received:** 09/07/18 09:00  
  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Alkalinity, Total as CaCO3	SM 2320 B-1997(2011)	7.6	mg/L	2.0	1	09/11/18 01:08	NA	
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0076	mg/L	0.0050	1	09/14/18 01:54	NA	
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	10.9	mg/L	1.0	1	09/13/18 20:45	NA	
Chlorophyll A	SM20 10200 H	7.60	ug/L	0.80	10	09/19/18 18:10	NA	
Color, True	SM 2120 B-2001(2011)	105	ColorUnits	5.0	5	09/07/18 11:30	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0022	mg/L	0.0020	1	09/13/18 17:31	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	0.67	mg/L	0.10	1	09/20/18 12:07	09/19/18	
pH of Color Analysis	SM 2120 B-2001(2011)	7.11	pH Units	-	5	09/08/18 08:30	NA	
Phosphorus, Total	365.1	0.0101	mg/L	0.0050	1	09/21/18 15:39	09/19/18	

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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water  
  
**Sample Name:** 18SRB097 Diss  
**Lab Code:** R1808613-010

**Service Request:** R1808613  
**Date Collected:** 09/06/18 11:10  
**Date Received:** 09/07/18 09:00  
  
**Basis:** NA

Inorganic Parameters

Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Date Extracted	Q
Phosphorus, Dissolved	365.1	0.0050 U	mg/L	0.0050	1	09/17/18 10:26	09/14/18	



## QC Summary Forms

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## General Chemistry

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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1808613-MB1

**Service Request:** R1808613  
**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 CaCO3	SM 2320 B-1997(2011)	2.0 U	mg/L	2.0	1	09/10/18 22:53	NA	
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.0050 U	mg/L	0.0050	1	09/14/18 00:18	NA	
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	1.0 U	mg/L	1.0	1	09/12/18 11:15	NA	
Chlorophyll A	SM20 10200 H	4.0 U	ug/L	4.0	1	09/19/18 18:10	NA	
Color, True	SM 2120 B-2001(2011)	1.0	ColorUnits	1.0	1	09/07/18 11:30	NA	
Nitrate+Nitrite as Nitrogen	353.2	0.0020 U	mg/L	0.0020	1	09/13/18 17:05	NA	
Nitrogen, Total Kjeldahl (TKN)	351.2	0.10 U	mg/L	0.10	1	09/20/18 11:55	09/19/18	
Phosphorus, Dissolved	365.1	0.0050 U	mg/L	0.0050	1	09/17/18 09:43	09/14/18	
Phosphorus, Total	365.1	0.0050 U	mg/L	0.0050	1	09/21/18 14:59	09/19/18	

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Analytical Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water  
**Sample Name:** Method Blank  
**Lab Code:** R1808613-MB2

**Service Request:** R1808613  
**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 CaCO3	SM 2320 B-1997(2011)	2.0 U	mg/L	2.0	1	09/11/18 00:54	NA	
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	1.0 U	mg/L	1.0	1	09/13/18 13:39	NA	
Phosphorus, Dissolved	365.1	0.0050 U	mg/L	0.0050	1	09/17/18 10:17	09/14/18	
Phosphorus, Total	365.1	0.0050 U	mg/L	0.0050	1	09/21/18 15:34	09/19/18	

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QA/QC Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water

**Service Request:** R1808613  
**Date Collected:** 09/06/18  
**Date Received:** 09/07/18  
**Date Analyzed:** 09/13/18

**Duplicate Matrix Spike Summary**  
**Carbon, Total Organic (TOC)**

**Sample Name:** 18SRB018  
**Lab Code:** R1808613-007  
**Analysis Method:** SM 5310 C-2000(2011)

**Units:** mg/L  
**Basis:** NA

Analyte Name	Sample Result	Matrix Spike R1808613-007MS			Duplicate Matrix Spike R1808613-007DMS			% Rec Limits	RPD	RPD Limit
		Result	Spike Amount	% Rec	Result	Spike Amount	% Rec			
Carbon, Total Organic (TOC)	10.6	21.8	10.0	111	21.2	10.0	106	75-125	2	20

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

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

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

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QA/QC Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water

**Service Request:** R1808613  
**Date Collected:** 09/06/18  
**Date Received:** 09/07/18  
**Date Analyzed:** 09/17/18  
**Date Extracted:** 09/14/18

**Duplicate Matrix Spike Summary**  
**Phosphorus, Dissolved**

**Sample Name:** 18SRB018 Diss  
**Lab Code:** R1808613-008  
**Analysis Method:** 365.1  
**Prep Method:** Method

**Units:** mg/L  
**Basis:** NA

Analyte Name	Sample Result	Result	Matrix Spike		Duplicate Matrix Spike		% Rec	Limits	RPD	RPD Limit
			Spike Amount	% Rec	Result	Spike Amount	% Rec			
Phosphorus, Dissolved	0.0050 U	0.0273	0.0250	109	0.0268	0.0250	107	75-125	2	20

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

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

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

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## QA/QC Report

**Client:** New York State DEC  
**Project** LCI 2018/LCI2018  
**Sample Matrix:** Water

**Service Request:** R1808613  
**Date Collected:** 09/06/18  
**Date Received:** 09/07/18  
**Date Analyzed:** 09/11/18

**Replicate Sample Summary**  
**General Chemistry Parameters**

**Sample Name:** 18SRB097  
**Lab Code:** R1808613-009

**Units:** mg/L  
**Basis:** NA

					Duplicate Sample R1808613- 009DUP		
Analyte Name	Analysis Method	MRL	Sample Result	Result	Average	RPD	RPD Limit
Alkalinity, Total as CaCO <sub>3</sub>	SM 2320 B-1997(2011)	2.0	7.6	8.0	7.80	5	20

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

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

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

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QA/QC Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water

**Service Request:** R1808613  
**Date Analyzed:** 09/10/18 - 09/21/18

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
R1808613-LCS1

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Alkalinity, Total as CaCO <sub>3</sub>	SM 2320 B-1997(2011)	17.6	20.0	88	70-130
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.512	0.500	102	70-130
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	9.90	10.0	99	70-130
Nitrate+Nitrite as Nitrogen	353.2	0.530	0.500	106	70-130
Nitrogen, Total Kjeldahl (TKN)	351.2	2.26	2.50	90	70-130
Phosphorus, Dissolved	365.1	0.0241	0.0250	97	70-130
Phosphorus, Total	365.1	0.0239	0.0250	96	70-130

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QA/QC Report

**Client:** New York State DEC  
**Project:** LCI 2018/LCI2018  
**Sample Matrix:** Water

**Service Request:** R1808613  
**Date Analyzed:** 09/11/18 - 09/21/18

**Lab Control Sample Summary**  
**General Chemistry Parameters**

**Units:**mg/L  
**Basis:**NA

**Lab Control Sample**  
R1808613-LCS2

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Alkalinity, Total as CaCO <sub>3</sub>	SM 2320 B-1997(2011)	17.2	20.0	86	70-130
Carbon, Total Organic (TOC)	SM 5310 C-2000(2011)	10.1	10.0	101	70-130
Phosphorus, Dissolved	365.1	0.0241	0.0250	96	70-130
Phosphorus, Total	365.1	0.0247	0.0250	99	70-130