

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

Janice Jaeger Project Manager

Jamansto

CC: Jason Fagel



## **Narrative Documents**



Client: New York State DEC Service Request: R1808653

Project: LCI 2018 Date Received: 09/11/2018

Sample Matrix: Water

#### **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.

	Janan Sox
Approved by	<u> </u>

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Date	09/28/2018
Date	USIZOIZUTO



### **SAMPLE DETECTION SUMMARY**

Lab ID: R1808653-001

0.10

0.25

mg/L

365.1

CLIENT ID: 19PKTP19FW

Phosphorus, Total

Analyte	Results	Flag	MDL	MRL	Units	Method	
Alkalinity, Total as CaCO3	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	CLIENT ID: 19PKTP18DS Lab ID: R1808653-002						
Analyte	Results	Flag	MDL	MRL	Units	Method	
Alkalinity, Total as CaCO3	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		Lal	b ID: R1808	8653-003			
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	

0.87



## Sample Receipt Information

New York State DEC Service Request:R1808653

Project: LCI 2018/PK2018

Client:

### **SAMPLE CROSS-REFERENCE**

SAMPLE #	CLIENT SAMPLE ID	<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

#### Page \_\_\_\_ of / CHAIN OF CUSTODY Project Number: PK2018 **NYSDEC SDG:** Project Name: LCI Sampler Signature: Sampler Collector: Sampler Phone No.: Hunter Ackerman Project Manager: Scott Kishbaugh ☐ Bill to Project Manager X Report to Project Manager Bill to: Jason Fagel Report to: Alene Onion Address: 625 Broadway, 4th Floor Address: 625 Broadway, 4th Floor Address: 625 Broadway, 4th Floor Albany, NY 12233-3502 Albany, NY 12233-3502 Albany, NY 12233-3502 New York State Department of **Environmental Conservation –** Phone: 518-402-8156 Phone: (518) 402-8286 Phone: (518) 402-8166 **Division of Water** Email: scott.kishbaugh@dec.ny.gov Email: alene.onion@dec.ny.gov Email: Jason.fagel@dec.ny.gov **Analyses Ordered (list) Preservative Codes: Matrix Codes:** 0 = Cool to < 6°C 2 0 3 1 = HCL WW = Wastewater 2 = HNO<sub>3</sub> GW = Groundwater 3 = H<sub>2</sub>SO<sub>4</sub> of Containers AW = Ambient Water 4 = NaOH **Collection Time Collection Date** SE = Sediment Chlorophyll a | Vol (ml) 5 = Zn. Acetate 6 = MeOH SL = Sludge Matrix Code TKN, NOx, 7 = NaHSO4 T = Tissue 8 = Other O = Other Alkalinity NYSDEC Location Info **LCI Sample ID** X 9/6/2018 18PKTP19FW 10:32 AW Rockland Lake SP 18PKTP19FW Х Rockland Lake SP 9/6/2018 10:32 AW 18PKTP18DS 9/6/2018 9:57 X AW Rockland Lake SP Rockland Lake SP 18PKTP18DS AW X 9/6/2018 9:57 18PKTP18DD 9/6/2018 10:03 AW Х Rockland Lake SP **Special Analysis Instructions:** Relinquished by Sampler: Date: Time: Received by: Date: Time: **Laboratory Receipt Notes:** Relindrated by: Ackernon Pate: Time: 4/10/18 11:06 Received by: Time: 9/10/18/100an Sample Te R1808653 91018 Received by Laboratory: Property P Relinguished by: Time: Time: 1600 Samples I



### Cooler Receipt and Preservation Check Form

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2 Custody	y papers proper	rly completed (in	k, signe	xd)? (	D N	5b Did V	OA via	ls, Alk,o	r Sulfide	have sig	* bubbles?	Q) V	NA NA
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## Miscellaneous Forms



### 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.
- 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/Arclors).
- B Analyte was also detected in the associated method blank at a concentration that may have contributed to the sample result.
- E Inorganics- Concentration is estimated due to the serial dilution was outside control limits.
- E Organics- Concentration has exceeded the calibration range for that specific analysis.
- 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.
- \* Indicates that a quality control parameter has exceeded laboratory limits. Under the õNotesö column of the Form I, this qualifier denotes analysis was performed out of Holding Time.
- H Analysis was performed out of hold time for tests that have an õimmediateö hold time criteria.
- # Spike was diluted out.

- + Correlation coefficient for MSA is <0.995.
- N Inorganics- Matrix spike recovery was outside laboratory limits.
- N Organics- Presumptive evidence of a compound (reported as a TIC) based on the MS library search.
- S Concentration has been determined using Method of Standard Additions (MSA).
- W Post-Digestion Spike recovery is outside control limits and the sample absorbance is <50% of the spike absorbance.
- P Concentration >40% difference between the two GC columns.
- C Confirmed by GC/MS
- Q DoD reports: indicates a pesticide/Aroclor is not confirmed (×100% Difference between two GC columns).
- 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

¹ Analyses were performed according to our laboratory

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 <a href="https://www.alsglobal.com/locations/americas/north-

### **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.

Analyst Summary report

Client: New York State DEC

**Project:** LCI 2018/PK2018

Service Request: R1808653

Sample Name: 19PKTP19FW Date Collected: 09/6/18

**Lab Code:** R1808653-001 **Date Received:** 09/11/18

Sample Matrix: Water

Analysis Method Extracted/Digested By Analyzed By

351.2 NSMITH CWOODS

353.2 MROGERSON

365.1 MROGERSON MROGERSON

ASTM D6919-09 AMOSES

SM 2320 B-1997(2011) CWOODS

Sample Name: 19PKTP18DS Date Collected: 09/6/18

**Lab Code:** R1808653-002 **Date Received:** 09/11/18

**Sample Matrix:** Water

Analysis Method Extracted/Digested By Analyzed By

351.2 NSMITH CWOODS

353.2 MROGERSON

365.1 MROGERSON MROGERSON

ASTM D6919-09 AMOSES

SM 2320 B-1997(2011) CWOODS

Sample Name: 19PKTP18DD Date Collected: 09/6/18

**Lab Code:** R1808653-003 **Date Received:** 09/11/18 **Sample Matrix:** Water

Analysis Method Extracted/Digested By Analyzed By

351.2 NSMITH CWOODS

353.2 MROGERSON

365.1 MROGERSON MROGERSON AMOSES

ASTM D6919-09 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	9030B
Soluble	
9056A Bomb (Halogens)	5050A
9066 Manual Distillation	9065
SM 4500-CN-E Residual	SM 4500-CN-G
Cyanide	
SM 4500-CN-E WAD	SM 4500-CN-I
Cyanide	

### Solid/Soil/Non-Aqueous Matrix

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

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



## Sample Results



## **General Chemistry**

Analytical Report

Client: New York State DEC

**Project:** LCI 2018/PK2018

Sample Matrix: \

**Sample Name:** 

Water

Service Request: R1808653

**Date Collected:** 09/06/18 10:32

**Date Received:** 09/11/18 09:15

19PKTP19FW Basis: NA

**Lab Code:** R1808653-001

							Date	
Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Extracted	Q
Alkalinity, Total as CaCO3	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	

Analytical Report

**Client:** New York State DEC

**Project:** LCI 2018/PK2018

**Sample Matrix:** Water Service Request: R1808653 **Date Collected:** 09/06/18 09:57

**Date Received:** 09/11/18 09:15

19PKTP18DS **Sample Name:** Basis: NA

Lab Code: R1808653-002

							Date	
Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Extracted	Q
Alkalinity, Total as CaCO3	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	

Analytical Report

Client: New York State DEC

**Project:** LCI 2018/PK2018

Sample Matrix: Water

Service Request: R1808653

**Date Collected:** 09/06/18 10:03

**Date Received:** 09/11/18 09:15

Sample Name: 19PKTP18DD Basis: NA

**Lab Code:** R1808653-003

							Date	
Analyte Name	<b>Analysis Method</b>	Result	Units	MRL	Dil.	Date Analyzed	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**



## **General Chemistry**

Analytical Report

Client: New York State DEC Service Request: R1808653

Project: LCI 2018/PK2018 Date Collected: NA

Sample Matrix: Water Date Received: NA

Sample Name: Method Blank Basis: NA

**Lab Code:** R1808653-MB1

							Date	
Analyte Name	Analysis Method	Result	Units	MRL	Dil.	Date Analyzed	Extracted	Q
Alkalinity, Total as CaCO3	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	

Analytical Report

Client: New York State DEC

v York State DEC Service Request: R1808653

Project:LCI 2018/PK2018Date Collected:NASample Matrix:WaterDate Received:NA

Sample Name: Method Blank Basis: NA

**Lab Code:** R1808653-MB2

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

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	<b>Analytical Method</b>	Result	Spike Amount	% Rec	% Rec Limits
Alkalinity, Total as CaCO3	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

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	<b>Analytical Method</b>	Result	Spike Amount	% Rec	% Rec Limits
Ammonia as Nitrogen, undistilled	ASTM D6919-09	0.500	0.500	100	70-130