January 15, 2020 Service Request No:R1912662

Ron Jamison
Seneca Nation Health System
36 Thomas Indian School Drive
Irving, NY 14081

Laboratory Results for: RRW

Dear Ron,

Enclosed are the results of the sample(s) submitted to our laboratory December 31, 2019
For your reference, these analyses have been assigned our service request number **R1912662.**

All testing was performed according to our laboratory's quality assurance program and met the requirements of the TNI standards except as noted in the case narrative report. Any testing not included in the lab's accreditation is identified on a Non-Certified Analytes report. All results are intended to be considered in their entirety. ALS Environmental is not responsible for use of less than the complete report. Results apply only to the individual samples submitted to the lab for analysis, 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), and represented by Laboratory Control Sample control limits. Any events, such as QC failures or Holding Time exceedances, which may add to the uncertainty are explained in the report narrative or are flagged with qualifiers. The flags are explained in the Report Qualifiers and Definitions page of this report.

Please contact me if you have any questions. My extension is 7471. You may also contact me via email at Brady.Kalkman@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Brady Kalkman
Project Manager

CC: Shannon Seneca

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

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ALS Environmental

Client: Seneca Nation Health System
Project: RRW
Sample Matrix: Drinking Water

Service Request: R1912662
Date Received: 12/31/2019

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples for the Tier II level requested by the client.

Sample Receipt:

Two drinking water samples were received for analysis at ALS Environmental on 12/31/2019. Any discrepancies upon initial sample inspection are annotated on the sample receipt and preservation form included within this report. The samples were stored at minimum in accordance with the analytical method requirements.

Metals:

No significant anomalies were noted with this analysis.

General Chemistry:

No significant anomalies were noted with this analysis.

Subcontracted Analytical Parameters:

One or more samples were subcontracted to another laboratory for testing. The certified analytical report from the subcontractor has been included in its entirety at the end of this report and includes the name and address of the subcontracted laboratory.

Approved by _____ Date 01/15/2020

SAMPLE DETECTION SUMMARY

CLIENT ID: RRW1 - RRW20			Lab ID: R1912662-001			
Analyte	**Results**	**Flag**	**MDL**	**MRL**	**Units**	**Method**
Nitrate as Nitrogen	2.20			0.05	mg/L	Calculation
Nitrate+Nitrite as Nitrogen	2.20		0.003	0.10	mg/L	353.2
Barium, Total	1170		6	20	ug/L	200.8
Nickel, Total	0.7	J	0.3	1.0	ug/L	200.8
Sodium, Total	59800		100	1000	ug/L	200.7

Sample Receipt Information

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

Client: Seneca Nation Health System **Service Request:**R1912662
Project: RRW

SAMPLE CROSS-REFERENCE

SAMPLE #	CLIENT SAMPLE ID	DATE	TIME
R1912662-001	RRW1 - RRW20	12/30/2019	

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 59361

ALS

1565 Jefferson Road, Building 300, Suite 360 • Rochester, NY 14623 | +1 585 288 5380 +1 585 288 8475 (fax) PAGE 1 OF 3

Project Name: RRW
Project Number:
Project Manager: Ron Jamison
Report CC:
Company/Address: SNHS
36 Thomas Indian School Dr.
Irving NY 14081
Phone #: 716-532-8223 x.5296
Email: rjamison@ seneca health.org
Sampler's Signature: Ronald A
Sampler's Printed Name: Ronald A. Jamison

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs • 8260 • 624 • CLP	GC/MS SVOAs • 8270 • 625	GC VOAs • 8021 • 601/602	PESTICIDES • 8081 • 608	PCBs • 8082 • 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	SOC 525	SOC Dioxin	IOC Asbestos	549 Diquat	SOC 515	548.1	IOC 353.2 Nitrite	REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE															0	0			0	
RRW1		12/ /19		DW	1								X							Na2S2O3 + HCl
RRW2					1								X							Na2S2O3 + HCl
RRW3					1									X						
RRW4					1										X					
RRW5					1									X						
RRW6					1										X					Na2S2O3
RRW7					1											X				Na2S2O3 sodium thiosulfate
RRW8					1												X			"
RRW9					1											X				"
RRW10					1												X			"
RRW11					1														X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals (Grab)

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
X Standard (10 business days-No Surcharge)
REQUESTED REPORT DATE _____

REPORT REQUIREMENTS
____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
Edata ____ Yes ____ No

INVOICE INFORMATION
PO #
BILL TO: SNHS

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Ronald A	Signature: Gary Bohan	Signature	Signature	Signature	Signature
Printed Name: Ronald A. Jamison	Printed Name: Gary Bohan	Printed Name	Printed Name	Printed Name	Printed Name
Firm: SNHS	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 12/ /19	Date/Time: 12/31/19 0920	Date/Time	Date/Time	Date/Time	Date/Time

Elissa Porter

R1912662 5
Seneca Nation Health System
RRW

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 59362

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Project Name: RRW
Project Number:
Project Manager: Ron Jamison
Report CC:
Company/Address: SNHS
36 Thomas Indian School Dr.
Irving NY 14081
Phone #: 716-532-8223 x.5296
Email: rjamison@ Seneca health.org
Sampler's Signature: Ronald A
Sampler's Printed Name: Ronald A. Jamison

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

Preservative Key: 0. NONE 1. HCL 2. HNO_3 3. H_2SO_4 4. NaOH 5. Zn. Acetate 6. MeOH 7. $NaHSO_4$ 8. Other _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ○ 8260 ○ 624 ○ CLP	GC/MS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	~~SOC 525~~	IOC 353.2	IOC 200.7/200.8	SOC 531	SOC 547 Glyphosate	IOC 245.1 (Hg)	504	REMARKS/ ALTERNATE DESCRIPTION
					PRESERVATIVE										3	2			3	
~~RRW1~~		~~12/ /19~~		~~DW~~	~~2~~								~~X~~							~~Na2S2O3 + HCl~~
RRW12		12/ /19		DW	1									X						
RRW13					1										X					
RRW14					2											X				Na2S2O3
RRW15					2												X			Na2S2O3
RRW16					1													X		
RRW17					2														X	Na2S2O3

SPECIAL INSTRUCTIONS/COMMENTS
Metals (Grab)

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
X Standard (10 business days-No Surcharge)
REQUESTED REPORT DATE _____

REPORT REQUIREMENTS
____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
Edata ____ Yes ____ No

INVOICE INFORMATION
PO #
BILL TO: SNHS

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Ronald A	Signature: Gary Bohen	Signature	Signature	Signature	
Printed Name: Ronald A. Jamison	Printed Name: Gary Bohen	Printed Name	Printed Name	Printed Name	
Firm: SNHS	Firm: ALS	Firm	Firm	Firm	
Date/Time: 12/ /19	Date/Time: 12/31/19 0920	Date/Time	Date/Time	Date/Time	

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Seneca Nation Health System
RRW

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CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM 59359

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Project Name: RRW	Project Number:
Project Manager: Ron Jamison	Report CC:
Company/Address: SNHS, 36 Thomas Indian School Dr., Irving NY 14081	
Phone #: 716-532-8223 x. 5296	Email: rjamison@senecahealth.org
Sampler's Signature: Ronald A.	Sampler's Printed Name: Ronald A. Jamison

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOAs ○ 8260 ○ 624 ○ CLP	GC/MS SVOAs ○ 8270 ○ 625	GC VOAs ○ 8021 ○ 601/602	PESTICIDES ○ 8081 ○ 608	PCBs ○ 8082 ○ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	SOC 505, 508	SOC 524	VOC 524					REMARKS/ ALTERNATE DESCRIPTION
PRESERVATIVE																				
RRW18		12/ /19		DW	2								X							Na2S2O3
RRW19					3									X						ASC + HCl
RRW20					3										X					ASC + HCl

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals (Grab)

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
X Standard (10 business days-No Surcharge)
REQUESTED REPORT DATE _____

REPORT REQUIREMENTS
____ I. Results Only
X II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
Edata ____ Yes ____ No

INVOICE INFORMATION
PO #
BILL TO: SNHS

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Ronald A.	Signature: Gary Bahan	Signature	Signature	Signature	Signature
Printed Name: Ronald A. Jamison	Printed Name: Gary Bahan	Printed Name	Printed Name	Printed Name	Printed Name
Firm: SNHS	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 12/ /19	Date/Time: 12/31/19 0920	Date/Time	Date/Time	Date/Time	Date/Time

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Seneca Nation Health System
RRW

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R1912662 Seneca Nation Health System RRW 5

Cooler Receipt and Preservation Check Form

Project/Client RRW / SNHS Folder Number

Cooler received on 12/31/19 by: COURIER: ALS UPS FEDEX VELOCITY CLIENT

1	Were **Custody seals** on outside of cooler?	Y N	5a	**Perchlorate** samples have required headspace?	Y N NA
2	**Custody papers** properly completed (ink, signed)?	Y N	5b	Did VOA vials, Alk,or Sulfide have sig* **bubbles**?	Y N NA
3	Did all bottles arrive in good **condition** (unbroken)?	Y N	6	Where did the bottles originate?	ALS/ROC CLIENT
4	Circle: **Wet Ice** **Dry Ice** **Gel packs** present?	Y N	7	Soil VOA received as: Bulk Encore 5035set	NA

8. Temperature Readings Date: 12/31 Time: 0927 ID: IR#7 IR#10 From: Temp Blank Sample Bottle

Observed Temp (°C)	1.4						
Within 0-6°C?	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

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: R002 by GB on 12/31 at 0937
5035 samples placed in storage location: _____ by _____ on _____ at _____

Cooler Breakdown/Preservation Check**: Date: 12/31/19 Time: 1229 by: [illegible]

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 N/A
13. Air Samples: Cassettes / Tubes Intact with MS? Canisters Pressurized Tedlar® Bags Inflated N/A

pH	Lot of test paper	Reagent	Preserved? Yes	Preserved? No	Lot Received	Exp	Sample ID Adjusted	Vol. Added	Lot Added	Final pH
≥12		NaOH								
≤2	230018	HNO_3	✓							
≤2	↓	H_2SO_4	✓							
<4		$NaHSO_4$								
5-9		For 608pest			No=Notify for 3day					
Residual Chlorine (-)		For CN, Phenol, 625, 608pest, 522			If +, contact PM to add $Na_2S_2O_3$ (625, 608, CN), ascorbic (phenol).					
		$Na_2S_2O_3$								
		ZnAcetate	-	-			**VOAs and 1664 Not to be tested before analysis. Otherwise, all bottles of all samples with chemical preservatives are checked (not just representatives).			
		HCl	**	**						

Bottle lot numbers: MDT, 19-10-11, Pace

Explain all Discrepancies/ Other Comments:

asbestos will be out of HT

HPROD	BULK
HTR	FLDT
SUB	HGFB
ALS	LL3541

Labels secondary reviewed by: [illegible]

PC Secondary Review: _____

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

Miscellaneous Forms

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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.

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 ñNotesò 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 ñimmediateò 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 (Ó100% 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[1]

Connecticut ID # PH0556	Maine ID #NY0032	Pennsylvania ID# 68-786
Delaware Approved	New Hampshire ID # 2941	Rhode Island ID # 158
DoD ELAP #65817	New York ID # 10145	Virginia #460167
Florida ID # E87674	North Carolina #676	

[1] Analyses were performed according to our laboratoryôs 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:	Seneca Nation Health System	**Service Request:**	R1912662
Project:	RRW/		

Sample Name:	RRW1 - RRW20	**Date Collected:**	12/30/19
Lab Code:	R1912662-001	**Date Received:**	12/31/19
Sample Matrix:	Drinking Water		

Analysis Method	Extracted/Digested By	Analyzed By
1613B	TWOODS	LLUONG
200.7	AKONZEL	KMCLAEN
200.8	AKONZEL	KMCLAEN
200.8	AKONZEL	NMANSEN
245.1	AKONZEL	NMANSEN
353.2		SMEDBURY
353.2		KMENGS

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
9034 Sulfide Acid Soluble	9030B
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
7199	3060A
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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Metals

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ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Seneca Nation Health System	**Service Request:**	R1912662
Project:	RRW	**Date Collected:**	12/30/19
Sample Matrix:	Drinking Water	**Date Received:**	12/31/19 09:20
Sample Name:	RRW1 - RRW20	**Basis:**	NA
Lab Code:	R1912662-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total	200.8	1.0	U	ug/L	1.0	0.2	1	01/06/20 10:03	01/02/20	
Arsenic, Total	200.8	1.0	U	ug/L	1.0	0.4	1	01/06/20 10:03	01/02/20	
Barium, Total	200.8	**1170**		ug/L	20	6	20	01/10/20 14:07	01/02/20	
Beryllium	200.8	1.0	U	ug/L	1.0	0.08	1	01/06/20 10:03	01/02/20	
Cadmium, Total	200.8	1.0	U	ug/L	1.0	0.4	1	01/06/20 10:03	01/02/20	
Chromium, Total	200.8	2.0	U	ug/L	2.0	0.6	1	01/06/20 10:03	01/02/20	
Mercury, Total	245.1	0.20	U	ug/L	0.20	0.08	1	01/03/20 11:36	01/02/20	
Nickel, Total	200.8	**0.7**	**J**	ug/L	1.0	0.3	1	01/06/20 10:03	01/02/20	
Selenium, Total	200.8	2.0	U	ug/L	2.0	0.6	1	01/06/20 10:03	01/02/20	
Sodium, Total	200.7	**59800**		ug/L	1000	100	1	01/02/20 16:35	01/02/20	
Thallium, Total	200.8	1.0	U	ug/L	1.0	0.04	1	01/06/20 10:03	01/02/20	

General Chemistry

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

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Seneca Nation Health System	**Service Request:**	R1912662
Project:	RRW	**Date Collected:**	12/30/19
Sample Matrix:	Drinking Water	**Date Received:**	12/31/19 09:20
Sample Name:	RRW1 - RRW20	**Basis:**	NA
Lab Code:	R1912662-001		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Q
Nitrate as Nitrogen	Calculation	**2.20**		mg/L	0.05	-	1	NA	
Nitrate+Nitrite as Nitrogen	353.2	**2.20**		mg/L	0.10	0.003	2	01/13/20 07:02	
Nitrite as Nitrogen	353.2	0.010	U	mg/L	0.010	0.007	1	12/31/19 17:19	

QC Summary Forms

ALS Environmental—Rochester Laboratory
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Phone (585) 288-5380 Fax (585) 288-8475
www.alsglobal.com

Metals

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www.alsglobal.com

ALS Group USA, Corp.
dba ALS Environmental

Analytical Report

Client:	Seneca Nation Health System	**Service Request:**	R1912662
Project:	RRW	**Date Collected:**	NA
Sample Matrix:	Drinking Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	R1912662-MB		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Date Extracted	Q
Antimony, Total	200.8	1.0	U	ug/L	1.0	0.2	1	01/06/20 09:35	01/02/20	
Arsenic, Total	200.8	1.0	U	ug/L	1.0	0.4	1	01/06/20 09:35	01/02/20	
Barium, Total	200.8	1.0	U	ug/L	1.0	0.3	1	01/10/20 14:03	01/02/20	
Beryllium	200.8	1.0	U	ug/L	1.0	0.08	1	01/06/20 09:35	01/02/20	
Cadmium, Total	200.8	1.0	U	ug/L	1.0	0.4	1	01/06/20 09:35	01/02/20	
Chromium, Total	200.8	2.0	U	ug/L	2.0	0.6	1	01/06/20 09:35	01/02/20	
Mercury, Total	245.1	0.20	U	ug/L	0.20	0.08	1	01/03/20 11:16	01/02/20	
Nickel, Total	200.8	1.0	U	ug/L	1.0	0.3	1	01/06/20 09:35	01/02/20	
Selenium, Total	200.8	2.0	U	ug/L	2.0	0.6	1	01/06/20 09:35	01/02/20	
Sodium, Total	200.7	1000	U	ug/L	1000	100	1	01/02/20 15:30	01/02/20	
Thallium, Total	200.8	1.0	U	ug/L	1.0	0.04	1	01/06/20 09:35	01/02/20	

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QA/QC Report

Client: Seneca Nation Health System
Project: RRW
Sample Matrix: Drinking Water

Service Request: R1912662
Date Analyzed: 01/02/20 - 01/10/20

Lab Control Sample Summary
Inorganic Parameters

Units:ug/L
Basis:NA

Lab Control Sample
R1912662-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Antimony, Total	200.8	21.6	20.0	108	85-115
Arsenic, Total	200.8	21.3	20.0	107	85-115
Barium, Total	200.8	22.7	20.0	114	85-115
Beryllium	200.8	21.0	20.0	105	85-115
Cadmium, Total	200.8	21.0	20.0	105	85-115
Chromium, Total	200.8	21.8	20.0	109	85-115
Mercury, Total	245.1	0.966	1.00	97	85-115
Nickel, Total	200.8	21.4	20.0	107	85-115
Selenium, Total	200.8	21.0	20.0	105	85-115
Sodium, Total	200.7	18900	20000	95	85-115
Thallium, Total	200.8	22.1	20.0	111	85-115

General Chemistry

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Analytical Report

Client:	Seneca Nation Health System	**Service Request:**	R1912662
Project:	RRW	**Date Collected:**	NA
Sample Matrix:	Drinking Water	**Date Received:**	NA
Sample Name:	Method Blank	**Basis:**	NA
Lab Code:	R1912662-MB		

Inorganic Parameters

Analyte Name	Analysis Method	Result		Units	MRL	MDL	Dil.	Date Analyzed	Q
Nitrate+Nitrite as Nitrogen	353.2	0.050	U	mg/L	0.050	0.002	1	01/13/20 06:25	
Nitrite as Nitrogen	353.2	0.010	U	mg/L	0.010	0.007	1	12/31/19 17:16	

ALS Group USA, Corp.
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QA/QC Report

Client:	Seneca Nation Health System	**Service Request:**	R1912662
Project:	RRW	**Date Collected:**	12/30/19
Sample Matrix:	Drinking Water	**Date Received:**	12/31/19
		Date Analyzed:	01/13/20

Duplicate Matrix Spike Summary
Nitrate+Nitrite as Nitrogen

Sample Name:	RRW1 - RRW20	**Units:**	mg/L
Lab Code:	R1912662-001	**Basis:**	NA
Analysis Method:	353.2		

		Matrix Spike R1912662-001MS			Duplicate Matrix Spike R1912662-001DMS					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**% Rec**	**Result**	**Spike Amount**	**% Rec**	**% Rec Limits**	**RPD**	**RPD Limit**
Nitrate+Nitrite as Nitrogen	2.20	3.03	1.00	83 *	3.03	1.00	84 *	90-110	<1	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.

ALS Group USA, Corp.
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QA/QC Report

Client: Seneca Nation Health System
Project: RRW
Sample Matrix: Drinking Water

Service Request: R1912662
Date Analyzed: 12/31/19 - 01/13/20

Lab Control Sample Summary
General Chemistry Parameters

Units:mg/L
Basis:NA

Lab Control Sample
R1912662-LCS

Analyte Name	Analytical Method	Result	Spike Amount	% Rec	% Rec Limits
Nitrate+Nitrite as Nitrogen	353.2	0.493	0.500	99	90-110
Nitrite as Nitrogen	353.2	0.247	0.250	99	90-110

Subcontracted Analytical Parameters

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Contact: Brady Kalkman
Company: ALS Laboratory Group
Address: 1565 Jefferson Road, Building 300
Rochester, NY 14623

Project / Location: R1912662
PO Number: 58R1912662
ALS Work Order: 2001034

NARRATIVE: Analysis performed on FEI Tecnai G2 Spirit Twin TEM equipped with EDAX Octane T Plus Silicon Drift Detector System, Z2 Analyzer, and Genesis Software. Fiber morphology, SAED, and EDXA used to determine species. All sample collection is performed outside ALS and is the sole responsibility of client. If sample collection or submission deviates from any method requirement, then interpretation of the results via the method cannot be made. Compliance drinking water samples must be received within 48 hours of sampling. Waters disposed upon adequate filtration. Filters disposed after 60 days. Grids archived 3 years. Results apply only to the portions of samples analyzed. Raw data validated by analyst.

METHOD CODE: "EPA 100.2" refers only to drinking (potable) waters for EPA compliance filtered on 0.22µm pore sized MCE filters. "EPA 100.1" refers only to potable waters for EPA compliance filtered on 0.1µm pore sized polycarbonate filters.

ALS reports results of drinking waters for compliance to EPA only when;

a) chain of custody clearly indicates "drinking water(s) for EPA compliance",
b) sample(s) received by lab and filtered within 48 hours of collection,
c) physical or website reporting address is provided,
d) state form completed with sampling information is submitted with sample(s).

ALS is not responsible for late or inaccurate EPA reporting as result of any sample collection or submission errors or omissions.

"ENV 005" refers to all non-potable waters regardless of origin, use, or requested method as no standard method for asbestos in non-potable water currently exists. An AS of <0.2 MFL is desired for drinking (potable) waters, and an AS of <7 MFL is generally acceptable for non-potable waters. Whenever possible, a sufficient volume is analyzed to yield the desired AS based on the detection of one confirmed asbestos fiber in the total area analyzed. However, samples containing excessive suspended solids may require filtration of volumes too low to achieve the desired AS. All potable and non-potable water samples are analyzed at >10,000x magnification for asbestos fibers >10µm long. A minimum of 4 and maximum of 10 grid openings are analyzed regardless of the AS reached or the asbestos concentration detected.

NOTES: *NA=Not Applicable, AS=Analytical Sensitivity, MFL=Millions of Fibers per Liter.*
PA #68-01320, Cert. #003. OH #4077, P. Hizar #2268, A. Sohn #3431
ALS is accredited for method EPA 100.2 through New York ELAP (Lab#11371).

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IDENTIFICATION

Client Sample ID:	RRW1-RRW20
ALS Sample ID:	2001034-01
Method:	EPA 100.2
Date of Collection:	12/30/2019
Time of Collection:	NA

FILTRATION

Date of Filtration:	1/3/2020
Time of Filtration:	12:00
Volume Filtered (L):	0.1

ANALYSIS

Analyst:	Pamela Hizar
Date of Analysis:	1/8/2020
Time of Analysis:	16:00
Openings Analyzed:	6
Avg. Opening Area (mm^2):	0.0102
AS (MFL):	0.18

ASBESTOS COUNT

Chrysotile:	0
Amosite:	0
Crocidolite:	0
Actinolite:	0
Tremolite:	0
Anthophyllite:	0
Total Asbestos:	0

ASBESTOS CONCENTRATION (MFL)

Chrysotile:	<AS
Amosite:	<AS
Crocidolite:	<AS
Actinolite:	<AS
Tremolite:	<AS
Anthophyllite:	<AS
Total Asbestos:	**<AS**

NOTES

Results were not reported directly to EPA as information required to do so was incomplete and/or the samples are not drinking water for EPA compliance.

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ALS Environmental

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January 14, 2020

Reports and Invoices
ALS Environmental
1565 Jefferson Road
Building 300, Suite 360
Rochester, NY 14623

Certificate of Analysis

Project Name:	**QC, MDL, NO EDD**	Workorder:	**3078562**
Purchase Order:	**58R1912662**	Workorder ID:	**R1912662**

Dear Reports Invoices:

Enclosed are the analytical results for samples received by the laboratory on Friday, January 3, 2020.

The ALS Environmental laboratory in Middletown, Pennsylvania is a National Environmental Laboratory Accreditation Program (NELAP) accredited laboratory and as such, certifies that all applicable test results meet the requirements of NELAP.

If you have any questions regarding this certificate of analysis, please contact Ms. Sarah S Leung (Project Coordinator) at (717) 944-5541.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program and any applicable state requirements. The test results meet requirements of the current NELAP standards or state requirements, where applicable. For a specific list of accredited analytes, refer to the certifications section of the ALS website at www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads.

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ALS Spring City: 10 Riverside Drive, Spring City, PA 19475 610-948-4903

CC: Mr. Michael Chevalier , Mr. Brady Kalkman , Ms. Janice Jaeger

This page is included as part of the Analytical Report and must be retained as a permanent record thereof.

Ms. Sarah S Leung
Project Coordinator

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SAMPLE SUMMARY

Workorder: 3078562 R1912662

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
3078562001	RRW1 RRW20	NY Potable Water	12/30/2019 00:00	1/3/2020 08:52	Collected by Client
3078562002	Trip Blank	NY Potable Water	1/3/2020 08:52	1/3/2020 08:52	Collected by Client
3078562003	Trip Blank	NY Potable Water	1/3/2020 08:52	1/3/2020 08:52	Collected by Client

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SAMPLE SUMMARY

Workorder: 3078562 R1912662

Notes

-- Samples collected by ALS personnel are done so in accordance with the procedures set forth in the ALS Field Sampling Plan (20 - Field Services Sampling Plan).
-- All Waste Water analyses comply with methodology requirements of 40 CFR Part 136.
-- All Drinking Water analyses comply with methodology requirements of 40 CFR Part 141.
-- Unless otherwise noted, all quantitative results for soils are reported on a dry weight basis.
-- The Chain of Custody document is included as part of this report.
-- All Library Search analytes should be regarded as tentative identifications based on the presumptive evidence of the mass spectra. Concentrations reported are estimated values.
-- Parameters identified as "analyze immediately" require analysis within 15 minutes of collection. Any "analyze immediately" parameters not listed under the header "Field Parameters" are preformed in the laboratory and are therefore analyzed out of hold time.
-- Method references listed on this report beginning with the prefix “S” followed by a method number (such as S2310B-97) refer to methods from “Standard Methods for the Examination of Water and Wastewater”.
-- For microbiological analyses, the "Prepared" value is the date/time into the incubator and the "Analyzed" value is the date/time out the incubator.
-- An Analysis-Prep Method Cross Reference Table is included after Analytical Results & Qualifiers section in this report.

Standard Acronyms/Flags

J	Indicates an estimated value between the Method Detection Limit (MDL) and the Practical Quantitation Limit (PQL) for the analyte
U	Indicates that the analyte was Not Detected (ND)
N	Indicates presumptive evidence of the presence of a compound
MDL	Method Detection Limit
PQL	Practical Quantitation Limit
RDL	Reporting Detection Limit
ND	Not Detected - indicates that the analyte was Not Detected at the RDL
Cntr	Analysis was performed using this container
RegLmt	Regulatory Limit
LCS	Laboratory Control Sample
MS	Matrix Spike
MSD	Matrix Spike Duplicate
DUP	Sample Duplicate
%Rec	Percent Recovery
RPD	Relative Percent Difference
LOD	DoD Limit of Detection
LOQ	DoD Limit of Quantitation
DL	DoD Detection Limit
I	Indicates reported value is greater than or equal to the Method Detection Limit (MDL) but less than the Report Detection Limit (RDL)
(S)	Surrogate Compound
NC	Not Calculated
*	Result outside of QC limits

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PROJECT SUMMARY

Workorder: 3078562 R1912662

Sample Comments

Lab ID: 3078562003 **Sample ID:** Trip Blank **Sample Type:** SAMPLE

This sample was cancelled per project specifications.

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ANALYTICAL RESULTS

Workorder: 3078562 R1912662

Lab ID: **3078562001** Date Collected: 12/30/2019 00:00 Matrix: NY Potable Water

Sample ID: **RRW1 RRW20** Date Received: 1/3/2020 08:52

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	*Cntr*
VOLATILE ORGANICS											
Benzene	ND		ug/L	0.50	0.070	EPA 524.2			1/8/20 19:49	TMP	N
Bromobenzene	ND		ug/L	0.50	0.19	EPA 524.2			1/8/20 19:49	TMP	N
Bromochloromethane	ND		ug/L	0.50	0.20	EPA 524.2			1/8/20 19:49	TMP	N
Bromomethane	ND		ug/L	0.50	0.13	EPA 524.2			1/8/20 19:49	TMP	N
n-Butylbenzene	ND		ug/L	0.50	0.13	EPA 524.2			1/8/20 19:49	TMP	N
tert-Butylbenzene	ND		ug/L	0.50	0.24	EPA 524.2			1/8/20 19:49	TMP	N
sec-Butylbenzene	ND		ug/L	0.50	0.10	EPA 524.2			1/8/20 19:49	TMP	N
Carbon Tetrachloride	ND		ug/L	0.50	0.20	EPA 524.2			1/8/20 19:49	TMP	N
Chlorobenzene	ND		ug/L	0.50	0.14	EPA 524.2			1/8/20 19:49	TMP	N
Chloroethane	ND		ug/L	0.50	0.24	EPA 524.2			1/8/20 19:49	TMP	N
Chloromethane	ND		ug/L	0.50	0.22	EPA 524.2			1/8/20 19:49	TMP	N
o-Chlorotoluene	ND		ug/L	0.50	0.23	EPA 524.2			1/8/20 19:49	TMP	N
p-Chlorotoluene	ND		ug/L	0.50	0.16	EPA 524.2			1/8/20 19:49	TMP	N
1,2-Dibromo-3-chloropropane	ND		ug/L	0.0096	0.0029	EPA 504.1	1/5/20 21:55	EGO	1/6/20 04:34	EGO	G
1,2-Dibromoethane	ND		ug/L	0.0096	0.0019	EPA 504.1	1/5/20 21:55	EGO	1/6/20 04:34	EGO	G
Dibromomethane	ND		ug/L	0.50	0.24	EPA 524.2			1/8/20 19:49	TMP	N
1,2-Dichlorobenzene	ND		ug/L	0.50	0.13	EPA 524.2			1/8/20 19:49	TMP	N
1,3-Dichlorobenzene	ND		ug/L	0.50	0.11	EPA 524.2			1/8/20 19:49	TMP	N
1,4-Dichlorobenzene	ND		ug/L	0.50	0.11	EPA 524.2			1/8/20 19:49	TMP	N
Dichlorodifluoromethane	ND		ug/L	0.50	0.22	EPA 524.2			1/8/20 19:49	TMP	N
1,1-Dichloroethane	ND		ug/L	0.50	0.11	EPA 524.2			1/8/20 19:49	TMP	N
1,2-Dichloroethane	ND		ug/L	0.50	0.10	EPA 524.2			1/8/20 19:49	TMP	N
1,1-Dichloroethene	ND		ug/L	0.50	0.22	EPA 524.2			1/8/20 19:49	TMP	N
cis-1,2-Dichloroethene	ND		ug/L	0.50	0.19	EPA 524.2			1/8/20 19:49	TMP	N
trans-1,2-Dichloroethene	ND		ug/L	0.50	0.19	EPA 524.2			1/8/20 19:49	TMP	N
1,3-Dichloropropane	ND		ug/L	0.50	0.14	EPA 524.2			1/8/20 19:49	TMP	N
2,2-Dichloropropane	ND		ug/L	0.50	0.18	EPA 524.2			1/8/20 19:49	TMP	N
1,2-Dichloropropane	ND		ug/L	0.50	0.19	EPA 524.2			1/8/20 19:49	TMP	N
1,1-Dichloropropene	ND		ug/L	0.50	0.24	EPA 524.2			1/8/20 19:49	TMP	N
cis-1,3-Dichloropropene	ND		ug/L	0.50	0.15	EPA 524.2			1/8/20 19:49	TMP	N
trans-1,3-Dichloropropene	ND		ug/L	0.50	0.10	EPA 524.2			1/8/20 19:49	TMP	N
Ethylbenzene	ND		ug/L	0.50	0.18	EPA 524.2			1/8/20 19:49	TMP	N
Hexachlorobutadiene	ND		ug/L	0.50	0.24	EPA 524.2			1/8/20 19:49	TMP	N
Isopropylbenzene	ND		ug/L	0.50	0.14	EPA 524.2			1/8/20 19:49	TMP	N
p-Isopropyltoluene	ND		ug/L	0.50	0.11	EPA 524.2			1/8/20 19:49	TMP	N
Methyl t-Butyl Ether	ND		ug/L	0.50	0.090	EPA 524.2			1/8/20 19:49	TMP	N

ANALYTICAL RESULTS

Workorder: 3078562 R1912662

Lab ID: **3078562001** Date Collected: 12/30/2019 00:00 Matrix: NY Potable Water

Sample ID: **RRW1 RRW20** Date Received: 1/3/2020 08:52

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Methylene Chloride	ND		ug/L	0.50	0.32	EPA 524.2			1/8/20 19:49	TMP	N
n-Propylbenzene	ND		ug/L	0.50	0.10	EPA 524.2			1/8/20 19:49	TMP	N
Styrene	ND		ug/L	0.50	0.11	EPA 524.2			1/8/20 19:49	TMP	N
1,1,1,2-Tetrachloroethane	ND		ug/L	0.50	0.22	EPA 524.2			1/8/20 19:49	TMP	N
1,1,2,2-Tetrachloroethane	ND		ug/L	0.50	0.13	EPA 524.2			1/8/20 19:49	TMP	N
Tetrachloroethene	ND		ug/L	0.50	0.17	EPA 524.2			1/8/20 19:49	TMP	N
Toluene	ND		ug/L	0.50	0.12	EPA 524.2			1/8/20 19:49	TMP	N
Total Xylenes	ND		ug/L	0.50	0.27	EPA 524.2			1/8/20 19:49	TMP	N
1,2,3-Trichlorobenzene	ND		ug/L	0.50	0.23	EPA 524.2			1/8/20 19:49	TMP	N
1,2,4-Trichlorobenzene	ND		ug/L	0.50	0.14	EPA 524.2			1/8/20 19:49	TMP	N
1,1,1-Trichloroethane	ND		ug/L	0.50	0.15	EPA 524.2			1/8/20 19:49	TMP	N
1,1,2-Trichloroethane	ND		ug/L	0.50	0.20	EPA 524.2			1/8/20 19:49	TMP	N
Trichloroethene	ND		ug/L	0.50	0.21	EPA 524.2			1/8/20 19:49	TMP	N
Trichlorofluoromethane	ND		ug/L	0.50	0.18	EPA 524.2			1/8/20 19:49	TMP	N
1,2,3-Trichloropropane	ND		ug/L	0.50	0.28	EPA 524.2			1/8/20 19:49	TMP	N
1,2,4-Trimethylbenzene	ND		ug/L	0.50	0.11	EPA 524.2			1/8/20 19:49	TMP	N
1,3,5-Trimethylbenzene	ND		ug/L	0.50	0.11	EPA 524.2			1/8/20 19:49	TMP	N
Vinyl Chloride	ND		ug/L	0.50	0.23	EPA 524.2			1/8/20 19:49	TMP	N
o-Xylene	ND		ug/L	0.25	0.050	EPA 524.2			1/8/20 19:49	TMP	N
mp-Xylene	ND		ug/L	0.25	0.080	EPA 524.2			1/8/20 19:49	TMP	N

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1-Chloro-2-Fluorobenzene (S)	97.9		%	70 - 130	EPA 504.1	1/5/20 21:55	EGO	1/6/20 04:34	EGO	G

Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*	*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,2-Dichlorobenzene-d4 (S)	94.9		%	70 - 130	EPA 524.2			1/8/20 19:49	TMP	N
4-Bromofluorobenzene (S)	90.8		%	70 - 130	EPA 524.2			1/8/20 19:49	TMP	N
SEMIVOLATILES										
Alachlor	ND		ug/L	0.19	0.056	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Aldrin	ND		ug/L	0.19	0.038	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Atrazine	ND		ug/L	0.19	0.019	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
gamma-BHC	ND		ug/L	0.094	0.028	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Benzo(a)pyrene	ND		ug/L	0.094	0.038	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Butachlor	ND		ug/L	0.19	0.028	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Dieldrin	ND		ug/L	0.19	0.094	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Endrin	ND		ug/L	0.19	0.066	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Di(2-Ethylhexyl)adipate	ND		ug/L	0.94	0.028	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
bis(2-Ethylhexyl)phthalate	0.15J	J,1	ug/L	0.94	0.066	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E

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ANALYTICAL RESULTS

Workorder: 3078562 R1912662

Lab ID: **3078562001** Date Collected: 12/30/2019 00:00 Matrix: NY Potable Water
Sample ID: **RRW1 RRW20** Date Received: 1/3/2020 08:52

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
Heptachlor	ND		ug/L	0.094	0.066	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Heptachlor Epoxide	ND		ug/L	0.094	0.066	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Hexachlorobenzene	ND		ug/L	0.094	0.019	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Hexachlorocyclopentadiene	ND		ug/L	0.19	0.019	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Methoxychlor	ND		ug/L	0.19	0.019	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Metolachlor	ND		ug/L	0.19	0.028	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Metribuzin	ND		ug/L	0.19	0.028	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Propachlor	ND		ug/L	0.19	0.038	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Simazine	ND		ug/L	0.19	0.056	EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1,3-Dimethyl-2-Nitrobenzene (S)	86.5		%	70 - 130		EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
IS_Perylene-d12 (S)	95.4		%	70 - 130		EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Pyrene-d10 (S)	101		%	70 - 130		EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
Triphenylphosphate (S)	106		%	70 - 130		EPA 525.2	1/7/20 16:30	JEK	1/9/20 15:08	CGS	E
PESTICIDES											
Aldrin	ND		ug/L	0.20	0.0099	EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
gamma-BHC	ND		ug/L	0.099	0.0099	EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
Chlordane	ND		ug/L	0.49	0.049	EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
Dieldrin	ND		ug/L	0.20	0.0099	EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
Endrin	ND		ug/L	0.20	0.0069	EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
Heptachlor	ND		ug/L	0.099	0.0099	EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
Heptachlor Epoxide	ND		ug/L	0.099	0.0099	EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
Hexachlorobenzene	ND		ug/L	0.20	0.020	EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
Hexachlorocyclopentadiene	ND		ug/L	0.20	0.020	EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
Methoxychlor	ND		ug/L	0.20	0.020	EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
Toxaphene	ND		ug/L	2.0	0.30	EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
Tetrachloro-m-xylene (S)	99.4		%	70 - 130		EPA 505	1/6/20 12:40	BS	1/6/20 17:14	BS	C
HERBICIDES											
Acifluorfen	ND		ug/L	1.0	0.14	EPA 515.3	1/8/20 03:20	KMR	1/9/20 12:37	EGO	A1
2,4-D	ND		ug/L	1.0	0.080	EPA 515.3	1/8/20 03:20	KMR	1/9/20 12:37	EGO	A1
Dalapon	ND		ug/L	4.0	0.17	EPA 515.3	1/8/20 03:20	KMR	1/9/20 12:37	EGO	A1
Dicamba	ND		ug/L	1.0	0.17	EPA 515.3	1/8/20 03:20	KMR	1/9/20 12:37	EGO	A1
Dinoseb	ND		ug/L	1.0	0.080	EPA 515.3	1/8/20 03:20	KMR	1/9/20 12:37	EGO	A1
Diquat	ND		ug/L	2.0	0.27	EPA 549.2	1/6/20 02:40	KMR	1/9/20 10:43	CGS	M1
Endothall	ND		ug/L	20.0	13.0	EPA 548.1	1/6/20 05:35	KMR	1/7/20 11:34	CGS	K1

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ANALYTICAL RESULTS

Workorder: 3078562 R1912662

Lab ID: **3078562001** Date Collected: 12/30/2019 00:00 Matrix: NY Potable Water

Sample ID: **RRW1 RRW20** Date Received: 1/3/2020 08:52

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	*Cntr*
Glyphosate	ND		ug/L	25.0	3.4	EPA 547			1/9/20 15:59	CGS	I
Pentachlorophenol	ND		ug/L	0.19	0.040	EPA 515.3	1/8/20 03:20	KMR	1/9/20 12:37	EGO	A1
Picloram	ND		ug/L	2.0	0.060	EPA 515.3	1/8/20 03:20	KMR	1/9/20 12:37	EGO	A1
2,4,5-T	ND		ug/L	0.50	0.14	EPA 515.3	1/8/20 03:20	KMR	1/9/20 12:37	EGO	A1
2,4,5-TP	ND		ug/L	0.50	0.10	EPA 515.3	1/8/20 03:20	KMR	1/9/20 12:37	EGO	A1
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
2,4-Dichlorophenylacetic acid (S)	120		%	70 - 130		EPA 515.3	1/8/20 03:20	KMR	1/9/20 12:37	EGO	A1

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ANALYTICAL RESULTS

Workorder: 3078562 R1912662

Lab ID: **3078562002** Date Collected: 1/3/2020 08:52 Matrix: NY Potable Water

Sample ID: **Trip Blank** Date Received: 1/3/2020 08:52

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared	By	Analyzed	By	Cntr
VOLATILE ORGANICS											
1,2-Dibromo-3-chloropropane	ND		ug/L	0.0097	0.0029	EPA 504.1	1/5/20 21:55	EGO	1/6/20 04:49	EGO	A
1,2-Dibromoethane	ND		ug/L	0.0097	0.0019	EPA 504.1	1/5/20 21:55	EGO	1/6/20 04:49	EGO	A
Surrogate Recoveries	*Results*	*Flag*	*Units*	*Limits*		*Method*	*Prepared*	*By*	*Analyzed*	*By*	*Cntr*
1-Chloro-2-Fluorobenzene (S)	100		%	70 - 130		EPA 504.1	1/5/20 21:55	EGO	1/6/20 04:49	EGO	A

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ANALYTICAL RESULTS

Workorder: 3078562 R1912662

Lab ID:	**3078562003**	Date Collected:	1/3/2020 08:52	Matrix:	NY Potable Water
Sample ID:	**Trip Blank**	Date Received:	1/3/2020 08:52		

Parameters	Results	Flag	Units	RDL	MDL	Method	Prepared By	Analyzed	By	*Cntr*
ADMINISTRATIVE										
Sample Cancelled	CANCEL							1/9/20 10:27	CPK	

Ms. Sarah S Leung
Project Coordinator

ANALYTICAL RESULTS

Workorder: 3078562 R1912662

PARAMETER QUALIFIERS

Lab ID	#	Sample ID	Analytical Method	Analyte
3078562001	1	RRW1 RRW20	EPA 525.2	bis(2-Ethylhexyl)phthalate

The QC sample type LCS for method EPA 525.2 was outside the control limits for the analyte bis(2-Ethylhexyl)phthalate. The % Recovery was reported as 1070 and the control limits were 70 to 130.

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ANALYSIS - PREP METHOD CROSS REFERENCE TABLE

Workorder: 3078562 R1912662

Lab ID	Sample ID	Analysis Method	Prep Method
3078562001	RRW1 RRW20	EPA 504.1	EPA 504.1
3078562001	RRW1 RRW20	EPA 505	EPA 505
3078562001	RRW1 RRW20	EPA 515.3	EPA 515.3
3078562001	RRW1 RRW20	EPA 524.2	
3078562001	RRW1 RRW20	EPA 525.2	EPA 525.2
3078562001	RRW1 RRW20	EPA 547	
3078562001	RRW1 RRW20	EPA 548.1	EPA 548.1
3078562001	RRW1 RRW20	EPA 549.2	EPA 549.2
3078562002	Trip Blank	EPA 504.1	EPA 504.1

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QUALITY CONTROL DATA

Workorder: 3078562 R1912662

QC Batch: DWPR/3329 **Analysis Method:** EPA 549.2

QC Batch Method: EPA 549.2

Associated Lab Samples: 3078562001

MATRIX SPIKE: 3069209 DUPLICATE: 3069210 ORIGINAL: 3078562001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Diquat	0	ug/L	20	20.4797	20.8961	102	104	70 - 130	2.01	40

METHOD BLANK: 3069211

Parameter	Blank Result	Units	Reporting Limit
Diquat	ND	ug/L	2.0

LABORATORY CONTROL SAMPLE: 3069212

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Diquat	102	ug/L	20	20.4	70 - 130

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QUALITY CONTROL DATA

Workorder: 3078562 R1912662

QC Batch: DWPR/3330 **Analysis Method:** EPA 548.1

QC Batch Method: EPA 548.1

Associated Lab Samples: 3078562001

MATRIX SPIKE: 3069213 DUPLICATE: 3069214 ORIGINAL: 3078562001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limit	RPD	Max RPD
Endothall	0	ug/L	80	78.1945	86.6203	97.7	108	75 - 115	10.2	30

METHOD BLANK: 3069215

Parameter	Blank Result	Units	Reporting Limit
Endothall	ND	ug/L	20.0

LABORATORY CONTROL SAMPLE: 3069216

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Endothall	98.4	ug/L	80	78.7	75 - 115

QUALITY CONTROL DATA

Workorder: 3078562 R1912662

QC Batch: DWPR/3332 **Analysis Method:** EPA 525.2

QC Batch Method: EPA 525.2

Associated Lab Samples: 3078562001

METHOD BLANK: 3069950

Parameter	Blank Result	Units	Reporting Limit
Alachlor	ND	ug/L	0.20
Aldrin	ND	ug/L	0.20
Atrazine	ND	ug/L	0.20
gamma-BHC	ND	ug/L	0.10
Benzo(a)pyrene	ND	ug/L	0.10
Butachlor	ND	ug/L	0.20
Dieldrin	ND	ug/L	0.20
Endrin	ND	ug/L	0.20
Di(2-Ethylhexyl)adipate	ND	ug/L	1.0
bis(2-Ethylhexyl)phthalate	ND	ug/L	1.0
Heptachlor	ND	ug/L	0.10
Heptachlor Epoxide	ND	ug/L	0.10
Hexachlorobenzene	ND	ug/L	0.10
Hexachlorocyclopentadiene	ND	ug/L	0.20
Methoxychlor	ND	ug/L	0.20
Metolachlor	ND	ug/L	0.20
Metribuzin	ND	ug/L	0.20
Propachlor	ND	ug/L	0.20
Simazine	ND	ug/L	0.20
1,3-Dimethyl-2-Nitrobenzene (S)	96.9	%	70 - 130
IS_Perylene-d12 (S)	88.8	%	70 - 130
Pyrene-d10 (S)	100	%	70 - 130
Triphenylphosphate (S)	97.8	%	70 - 130

LABORATORY CONTROL SAMPLE: 3069951

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Alachlor	99	ug/L	2	2.0	70 - 130
Aldrin	84.3	ug/L	2	1.7	70 - 130
Atrazine	98.3	ug/L	2	2.0	70 - 130
gamma-BHC	99.9	ug/L	.2	0.20	70 - 130
Benzo(a)pyrene	97.1	ug/L	.2	0.19	70 - 130
Butachlor	107	ug/L	2	2.1	70 - 130
Dieldrin	99.7	ug/L	2	2.0	70 - 130
Endrin	99.8	ug/L	2	2.0	70 - 130

QUALITY CONTROL DATA

Workorder: 3078562 R1912662

Di(2-Ethylhexyl)adipate	106	ug/L	4	4.2	70 - 130
bis(2-Ethylhexyl)phthalate	1070*	ug/L	4	42.9	70 - 130
Heptachlor	84.3	ug/L	.2	0.17	70 - 130
Heptachlor Epoxide	105	ug/L	.2	0.21	70 - 130
Hexachlorobenzene	100	ug/L	2	2.0	70 - 130
Hexachlorocyclopentadiene	84.8	ug/L	2	1.7	70 - 130
Methoxychlor	99.8	ug/L	2	2.0	70 - 130
Metolachlor	103	ug/L	2	2.1	70 - 130
Metribuzin	97.6	ug/L	2	2.0	70 - 130
Propachlor	102	ug/L	2	2.0	70 - 130
Simazine	99.9	ug/L	2	2.0	70 - 130
1,3-Dimethyl-2-Nitrobenzene (S)	95.7	%			70 - 130
IS_Perylene-d12 (S)	93.9	%			70 - 130
Pyrene-d10 (S)	99.8	%			70 - 130
Triphenylphosphate (S)	97.3	%			70 - 130

SAMPLE DUPLICATE: 3069952 ORIGINAL: 3078146001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Atrazine	0	ug/L	0	NC	30

MATRIX SPIKE SAMPLE: 3069953 ORIGINAL: 3078562001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Alachlor	0	ug/L	1.9	1.92523	103	70 - 130
Aldrin	0	ug/L	1.9	1.65038	87.9	70 - 130
Atrazine	0	ug/L	1.9	1.85113	98.6	70 - 130
gamma-BHC	0	ug/L	.19	.19634	105	70 - 130
Benzo(a)pyrene	0	ug/L	.19	.15716	83.7	70 - 130
Butachlor	0	ug/L	1.9	2.15075	115	70 - 130
Dieldrin	0	ug/L	1.9	1.79054	95.3	70 - 130
Endrin	0	ug/L	1.9	2.00683	107	70 - 130
Di(2-Ethylhexyl)adipate	0	ug/L	3.8	4.12094	110	70 - 130
bis(2-Ethylhexyl)phthalate	.15171	ug/L	3.8	3.97679	102	70 - 130
Heptachlor	0	ug/L	.19	.16901	90	70 - 130
Heptachlor Epoxide	0	ug/L	.19	.21748	116	70 - 130
Hexachlorobenzene	0	ug/L	1.9	1.88852	101	70 - 130
Hexachlorocyclopentadiene	0	ug/L	1.9	1.7264	91.9	70 - 130
Methoxychlor	0	ug/L	1.9	2.09181	111	70 - 130
Metolachlor	0	ug/L	1.9	1.99974	106	70 - 130

QUALITY CONTROL DATA

Workorder: 3078562 R1912662

Metribuzin	0	ug/L	1.9	1.9188	102	70 - 130
Propachlor	0	ug/L	1.9	1.92543	103	70 - 130
Simazine	0	ug/L	1.9	1.89117	101	70 - 130
1,3-Dimethyl-2-Nitrobenzene (S)	100	%				70 - 130
IS_Perylene-d12 (S)	103	%				70 - 130
Pyrene-d10 (S)	100	%				70 - 130
Triphenylphosphate (S)	99.7	%				70 - 130

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QUALITY CONTROL DATA

Workorder: 3078562 R1912662

QC Batch: DWPR/3333 **Analysis Method:** EPA 515.3

QC Batch Method: EPA 515.3

Associated Lab Samples: 3078562001

MATRIX SPIKE SAMPLE: 3070145 ORIGINAL: 3078944001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
2,4-D	0	ug/L	5	5.79802	116	70 - 130
Dalapon	0	ug/L	5	6.40253	128	70 - 130
Dinoseb	0	ug/L	5	6.03425	121	70 - 130
Pentachlorophenol	0	ug/L	.5	.62816	126	70 - 130
Picloram	0	ug/L	5	6.33378	127	70 - 130
2,4,5-TP	0	ug/L	1.3	1.49243	119	70 - 130
2,4-Dichlorophenylacetic acid (S)	99	%				70 - 130

SAMPLE DUPLICATE: 3070146 ORIGINAL: 3078944001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
2,4-D	0	ug/L	0	NC	30
Dalapon	0	ug/L	0	NC	30
Dinoseb	0	ug/L	0	NC	30
Pentachlorophenol	0	ug/L	0	NC	30
Picloram	0	ug/L	0	NC	30
2,4,5-TP	0	ug/L	0	NC	30

METHOD BLANK: 3070147

Parameter	Blank Result	Units	Reporting Limit
Acifluorfen	ND	ug/L	1.0
2,4-D	ND	ug/L	1.0
Dalapon	ND	ug/L	4.0
Dicamba	ND	ug/L	1.0
Dinoseb	ND	ug/L	1.0
Pentachlorophenol	ND	ug/L	0.19
Picloram	ND	ug/L	2.0
2,4,5-T	ND	ug/L	0.50
2,4,5-TP	ND	ug/L	0.50

QUALITY CONTROL DATA

Workorder: 3078562 R1912662

2,4-Dichlorophenylacetic acid (S)	73	%	70 - 130

LABORATORY CONTROL SAMPLE: 3070148

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Acifluorfen	108	ug/L	2.5	2.7	70 - 130
2,4-D	83.5	ug/L	5	4.2	70 - 130
Dalapon	95.7	ug/L	5	4.8	70 - 130
Dicamba	90.8	ug/L	2.5	2.3	70 - 130
Dinoseb	88.7	ug/L	5	4.4	70 - 130
Pentachlorophenol	94.2	ug/L	.5	0.47	70 - 130
Picloram	94.2	ug/L	5	4.7	70 - 130
2,4,5-T	92.1	ug/L	1.3	1.2	70 - 130
2,4,5-TP	87.9	ug/L	1.3	1.1	70 - 130
2,4-Dichlorophenylacetic acid (S)	82	%			70 - 130

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QUALITY CONTROL DATA

Workorder: 3078562 R1912662

QC Batch: HPLC/4851 **Analysis Method:** EPA 547

QC Batch Method: EPA 547

Associated Lab Samples: 3078562001

METHOD BLANK: 3070934

Parameter	Blank Result	Units	Reporting Limit
Glyphosate	ND	ug/L	25.0

LABORATORY CONTROL SAMPLE: 3070935

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Glyphosate	83	ug/L	500	415	80 - 120

MATRIX SPIKE SAMPLE: 3070936 ORIGINAL: 3078944001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Glyphosate	0	ug/L	500	411.999	82.4	67 - 124

SAMPLE DUPLICATE: 3070937 ORIGINAL: 3078944001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Glyphosate	0	ug/L	0	NC	20

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

QUALITY CONTROL DATA

Workorder: 3078562 R1912662

QC Batch: SVGC/55610 **Analysis Method:** EPA 504.1

QC Batch Method: EPA 504.1

Associated Lab Samples: 3078562001, 3078562002

METHOD BLANK: 3069194

Parameter	Blank Result	Units	Reporting Limit
1,2-Dibromo-3-chloropropane	ND	ug/L	0.010
1,2-Dibromoethane	ND	ug/L	0.010
1-Chloro-2-Fluorobenzene (S)	101	%	70 - 130

LABORATORY CONTROL SAMPLE: 3069195

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,2-Dibromo-3-chloropropane	105	ug/L	.05	0.053	70 - 130
1,2-Dibromoethane	109	ug/L	.05	0.054	70 - 130
1-Chloro-2-Fluorobenzene (S)	102	%			70 - 130

LABORATORY CONTROL SAMPLE: 3069198

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
1,2-Dibromo-3-chloropropane	104	ug/L	.05	0.052	70 - 130
1,2-Dibromoethane	114	ug/L	.05	0.057	70 - 130
1-Chloro-2-Fluorobenzene (S)	102	%			70 - 130

MATRIX SPIKE SAMPLE: 3069196 ORIGINAL: 3078639001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
1,2-Dibromo-3-chloropropane	0	ug/L	.049	.04641	95.4	65 - 135
1,2-Dibromoethane	0	ug/L	.049	.0502	103	65 - 135

QUALITY CONTROL DATA

Workorder: 3078562 R1912662

1-Chloro-2-Fluorobenzene (S)	106	%	70 - 130

SAMPLE DUPLICATE: 3069197 ORIGINAL: 3078640001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
1,2-Dibromo-3-chloropropane	0	ug/L	0	NC	20
1,2-Dibromoethane	0	ug/L	0	NC	20

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

QUALITY CONTROL DATA

Workorder: 3078562 R1912662

QC Batch: SVGC/55613 **Analysis Method:** EPA 505

QC Batch Method: EPA 505

Associated Lab Samples: 3078562001

METHOD BLANK: 3069375

Parameter	Blank Result	Units	Reporting Limit
Aldrin	ND	ug/L	0.20
gamma-BHC	ND	ug/L	0.10
Chlordane	ND	ug/L	0.50
Dieldrin	ND	ug/L	0.20
Endrin	ND	ug/L	0.20
Heptachlor	ND	ug/L	0.10
Heptachlor Epoxide	ND	ug/L	0.10
Hexachlorobenzene	ND	ug/L	0.20
Hexachlorocyclopentadiene	ND	ug/L	0.20
Methoxychlor	ND	ug/L	0.20
Toxaphene	ND	ug/L	2.0
Tetrachloro-m-xylene (S)	101	%	70 - 130

LABORATORY CONTROL SAMPLE: 3069376

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Toxaphene	111	ug/L	3	3.3	70 - 130
Tetrachloro-m-xylene (S)	97.8	%			70 - 130

LABORATORY CONTROL SAMPLE: 3069377

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Chlordane	84.6	ug/L	2	1.7	70 - 130
Tetrachloro-m-xylene (S)	115	%			70 - 130

LABORATORY CONTROL SAMPLE: 3069378

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Tetrachloro-m-xylene (S)	103	%			70 - 130

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

QUALITY CONTROL DATA

Workorder: 3078562 R1912662

LABORATORY CONTROL SAMPLE: 3069379

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Aldrin	104	ug/L	.5	0.52	70 - 130
gamma-BHC	95.2	ug/L	.5	0.48	70 - 130
Dieldrin	98	ug/L	.5	0.49	70 - 130
Endrin	103	ug/L	.5	0.51	70 - 130
Heptachlor	103	ug/L	.5	0.52	70 - 130
Heptachlor Epoxide	95.9	ug/L	.5	0.48	70 - 130
Hexachlorobenzene	94	ug/L	.5	0.47	70 - 130
Hexachlorocyclopentadiene	102	ug/L	.5	0.51	70 - 130
Methoxychlor	102	ug/L	.5	0.51	70 - 130
Tetrachloro-m-xylene (S)	99.6	%			70 - 130

MATRIX SPIKE SAMPLE: 3069380 ORIGINAL: 3078562001

****NOTE - The Original Result shown below is a raw result and is only used for the purpose of calculating Matrix Spike percent recoveries. This result is not a final value and cannot be used as such.

Parameter	Original Result	Units	Spike Conc.	MS Result	MS % Rec	% Rec Limit
Chlordane	0	ug/L	1.9	1.54192	80.9	65 - 135
Tetrachloro-m-xylene (S)	101	%				70 - 130

SAMPLE DUPLICATE: 3069381 ORIGINAL: 3078562001

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Aldrin	0	ug/L	0	NC	20
gamma-BHC	0	ug/L	0	NC	20
Chlordane	0	ug/L	0	NC	20
Dieldrin	0	ug/L	0	NC	20
Endrin	0	ug/L	0	NC	20
Heptachlor	0	ug/L	0	NC	20
Heptachlor Epoxide	0	ug/L	0	NC	20
Hexachlorobenzene	0	ug/L	0	NC	20
Hexachlorocyclopentadiene	0	ug/L	0	NC	20
Methoxychlor	0	ug/L	0	NC	20
Toxaphene	0	ug/L	0	NC	20

QUALITY CONTROL DATA

Workorder: 3078562 R1912662

QC Batch: VOMS/53592 **Analysis Method:** EPA 524.2

QC Batch Method: EPA 524.2

Associated Lab Samples: 3078562001

METHOD BLANK: 3070404

Parameter	Blank Result	Units	Reporting Limit
Benzene	ND	ug/L	0.50
Bromobenzene	ND	ug/L	0.50
Bromochloromethane	ND	ug/L	0.50
Bromomethane	0.36J	ug/L	0.50
n-Butylbenzene	ND	ug/L	0.50
tert-Butylbenzene	ND	ug/L	0.50
sec-Butylbenzene	ND	ug/L	0.50
Carbon Tetrachloride	ND	ug/L	0.50
Chlorobenzene	ND	ug/L	0.50
Chloroethane	ND	ug/L	0.50
Chloromethane	ND	ug/L	0.50
o-Chlorotoluene	ND	ug/L	0.50
p-Chlorotoluene	ND	ug/L	0.50
Dibromomethane	ND	ug/L	0.50
1,2-Dichlorobenzene	ND	ug/L	0.50
1,3-Dichlorobenzene	ND	ug/L	0.50
1,4-Dichlorobenzene	ND	ug/L	0.50
Dichlorodifluoromethane	ND	ug/L	0.50
1,1-Dichloroethane	ND	ug/L	0.50
1,2-Dichloroethane	ND	ug/L	0.50
1,1-Dichloroethene	ND	ug/L	0.50
cis-1,2-Dichloroethene	ND	ug/L	0.50
trans-1,2-Dichloroethene	ND	ug/L	0.50
1,3-Dichloropropane	ND	ug/L	0.50
2,2-Dichloropropane	ND	ug/L	0.50
1,2-Dichloropropane	ND	ug/L	0.50
1,1-Dichloropropene	ND	ug/L	0.50
cis-1,3-Dichloropropene	ND	ug/L	0.50
trans-1,3-Dichloropropene	ND	ug/L	0.50
Ethylbenzene	ND	ug/L	0.50
Hexachlorobutadiene	0.37J	ug/L	0.50
Isopropylbenzene	ND	ug/L	0.50
p-Isopropyltoluene	ND	ug/L	0.50
Methyl t-Butyl Ether	ND	ug/L	0.50
Methylene Chloride	ND	ug/L	0.50
n-Propylbenzene	ND	ug/L	0.50
Styrene	ND	ug/L	0.50
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50

QUALITY CONTROL DATA

Workorder: 3078562 R1912662

1,1,2,2-Tetrachloroethane	ND	ug/L	0.50
Tetrachloroethene	ND	ug/L	0.50
Toluene	ND	ug/L	0.50
Total Xylenes	ND	ug/L	0.50
1,2,3-Trichlorobenzene	ND	ug/L	0.50
1,2,4-Trichlorobenzene	0.28J	ug/L	0.50
1,1,1-Trichloroethane	ND	ug/L	0.50
1,1,2-Trichloroethane	ND	ug/L	0.50
Trichloroethene	ND	ug/L	0.50
Trichlorofluoromethane	ND	ug/L	0.50
1,2,3-Trichloropropane	ND	ug/L	0.50
1,2,4-Trimethylbenzene	ND	ug/L	0.50
1,3,5-Trimethylbenzene	ND	ug/L	0.50
Vinyl Chloride	ND	ug/L	0.50
o-Xylene	ND	ug/L	0.25
mp-Xylene	ND	ug/L	0.25
1,2-Dichlorobenzene-d4 (S)	91.5	%	70 - 130
4-Bromofluorobenzene (S)	88	%	70 - 130

LABORATORY CONTROL SAMPLE: 3070405

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Vinyl Chloride	83.3	ug/L	2	1.7	70 - 130
1,2-Dichlorobenzene-d4 (S)	96.7	%			70 - 130
4-Bromofluorobenzene (S)	99.3	%			70 - 130

LABORATORY CONTROL SAMPLE: 3070406

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Benzene	94.1	ug/L	5	4.7	70 - 130
Bromobenzene	99	ug/L	5	5.0	70 - 130
Bromochloromethane	98	ug/L	5	4.9	70 - 130
Bromomethane	89.5	ug/L	5	4.5	70 - 130
n-Butylbenzene	84.8	ug/L	5	4.2	70 - 130
tert-Butylbenzene	91	ug/L	5	4.6	70 - 130
sec-Butylbenzene	90	ug/L	5	4.5	70 - 130
Carbon Tetrachloride	101	ug/L	5	5.1	70 - 130
Chlorobenzene	107	ug/L	5	5.4	70 - 130
Chloroethane	85.3	ug/L	5	4.3	70 - 130
Chloromethane	87	ug/L	5	4.4	70 - 130
o-Chlorotoluene	102	ug/L	5	5.1	70 - 130
p-Chlorotoluene	100	ug/L	5	5.0	70 - 130

QUALITY CONTROL DATA

Workorder: 3078562 R1912662

Dibromomethane	95.1	ug/L	5	4.8	70 - 130
1,2-Dichlorobenzene	99.6	ug/L	5	5.0	70 - 130
1,3-Dichlorobenzene	101	ug/L	5	5.1	70 - 130
1,4-Dichlorobenzene	103	ug/L	5	5.2	70 - 130
Dichlorodifluoromethane	83.1	ug/L	5	4.2	70 - 130
1,1-Dichloroethane	94.8	ug/L	5	4.7	70 - 130
1,2-Dichloroethane	88.7	ug/L	5	4.4	70 - 130
1,1-Dichloroethene	101	ug/L	5	5.0	70 - 130
cis-1,2-Dichloroethene	93	ug/L	5	4.6	70 - 130
trans-1,2-Dichloroethene	101	ug/L	5	5.0	70 - 130
1,3-Dichloropropane	94	ug/L	5	4.7	70 - 130
2,2-Dichloropropane	80.1	ug/L	5	4.0	70 - 130
1,2-Dichloropropane	84.6	ug/L	5	4.2	70 - 130
1,1-Dichloropropene	95.2	ug/L	5	4.8	70 - 130
cis-1,3-Dichloropropene	95.2	ug/L	5	4.8	70 - 130
trans-1,3-Dichloropropene	101	ug/L	5	5.1	70 - 130
Ethylbenzene	92.8	ug/L	5	4.6	70 - 130
Hexachlorobutadiene	107	ug/L	5	5.4	70 - 130
Isopropylbenzene	86.4	ug/L	5	4.3	70 - 130
p-Isopropyltoluene	85.2	ug/L	5	4.3	70 - 130
Methyl t-Butyl Ether	101	ug/L	5	5.0	70 - 130
Methylene Chloride	95.8	ug/L	5	4.8	70 - 130
n-Propylbenzene	103	ug/L	5	5.2	70 - 130
Styrene	84.3	ug/L	5	4.2	70 - 130
1,1,1,2-Tetrachloroethane	102	ug/L	5	5.1	70 - 130
1,1,2,2-Tetrachloroethane	94	ug/L	5	4.7	70 - 130
Tetrachloroethene	106	ug/L	5	5.3	70 - 130
Toluene	97.7	ug/L	5	4.9	70 - 130
Total Xylenes	88.5	ug/L	15	13.3	70 - 130
1,2,3-Trichlorobenzene	99.6	ug/L	5	5.0	70 - 130
1,2,4-Trichlorobenzene	102	ug/L	5	5.1	70 - 130
1,1,1-Trichloroethane	96.6	ug/L	5	4.8	70 - 130
1,1,2-Trichloroethane	96.1	ug/L	5	4.8	70 - 130
Trichloroethene	100	ug/L	5	5.0	70 - 130
Trichlorofluoromethane	96.4	ug/L	5	4.8	70 - 130
1,2,3-Trichloropropane	102	ug/L	5	5.1	70 - 130
1,2,4-Trimethylbenzene	84.8	ug/L	5	4.2	70 - 130
1,3,5-Trimethylbenzene	88.9	ug/L	5	4.4	70 - 130
Vinyl Chloride	83.1	ug/L	5	4.2	70 - 130
o-Xylene	87.8	ug/L	5	4.4	70 - 130
mp-Xylene	88.8	ug/L	10	8.9	70 - 130
1,2-Dichlorobenzene-d4 (S)	99.3	%			70 - 130
4-Bromofluorobenzene (S)	107	%			70 - 130

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QUALITY CONTROL DATA QUALIFIERS

Workorder: 3078562 R1912662

QUALITY CONTROL PARAMETER QUALIFIERS

Lab ID	#	Sample Type	Analytical Method	Analyte
3069951	1	Lab Control Standard	EPA 525.2	bis(2-Ethylhexyl)phthalate

The QC sample type LCS for method EPA 525.2 was outside the control limits for the analyte bis(2-Ethylhexyl)phthalate. The % Recovery was reported as 1070 and the control limits were 70 to 130.

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State Certifications: FL E871113 , WA C999 , MD 128 , VA 460157 , WV DW 9961-C , WV 343

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 3078562 R1912662

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
3078562001	RRW1 RRW20	EPA 504.1	SVGC/55610	EPA 504.1	SVGC/55611
3078562002	Trip Blank	EPA 504.1	SVGC/55610	EPA 504.1	SVGC/55611
3078562001	RRW1 RRW20	EPA 549.2	DWPR/3329	EPA 549.2	HPLC/4852
3078562001	RRW1 RRW20	EPA 548.1	DWPR/3330	EPA 548.1	SVMS/34830
3078562001	RRW1 RRW20	EPA 505	SVGC/55613	EPA 505	SVGC/55618
3078562001	RRW1 RRW20	EPA 525.2	DWPR/3332	EPA 525.2	SVMS/34835
3078562001	RRW1 RRW20	EPA 515.3	DWPR/3333	EPA 515.3	SVGC/55639
3078562001	RRW1 RRW20			EPA 524.2	VOMS/53592
3078562001	RRW1 RRW20			EPA 547	HPLC/4851

3078562

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1565 Jefferson Rd, Bu[illegible] 5380 • FAX 585-288-8475

ALS Contact: Brady Kalkman

3078562

Project Number: R1912662
Project Manager: Brady Kalkman
QAP: LAB QAP

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	CL_ACID_HERB 515.4 A 250	DIQ_PARAQ 549.2 P 1L ST	EDB DBCP 504.1 G 40ml ST	ENDO 548.1 A 250 ST	GLYPH 547 G 40ml ST	PEST_CL 508.1 G 40ml ST	SVO 525.2 A 1L SSHCL	VOC 524.2 G 40ml AHCL
~~R1912662-001~~	RRW1 - RRW20	16	Drinking Water	12/30/19		Middletown ALS	X2	X1	X2	X2	X2	X2	X2	X3
~~R1912662-002~~	Trip Blank	5	Drinking Water	12/30/19		Middletown ALS			X2					X3

AO 1/3/20

AO 1/3/20

Report lists attached

Special Instructions/Comments	Turnaround Requirements	Report Requirements	Invoice Information
H - Test is On Hold P - Test is Authorized for Prep Only	___ RUSH (Surcharges Apply) PLEASE CIRCLE WORK DAYS 1 2 3 4 5 X STANDARD Requested FAX Date: ___ Requested Report Date: 01/17/20	___ I. Results Only X II. Results + QC Summaries ___ III. Results + QC and Calibration Summaries ___ IV. Data Validation Report with Raw Data PQL/MDL/J Y EDD N	PO# 58R1912662 Bill to

Relinquished By: [signature] 1/2/2020 1405 Received By: Fed Ex Airbill Number:

Fed Ex AO AO 1/3/20 0852 3 525

3078562

R1912662

X **Ship To: Middletown ALS**
ALS Environmental - Middletown
301 Fulling Mill Rd.
Middletown, PA 17057

PC _____ Date _____

SMO _____ Date _____

Instructions:

Ice _____

Dry Ice _____

No Ice _____

Shipping:

Overnight _____

2nd Day _____

Ground _____

Bill to Client Account _____

Comments:

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3078562

525.2/SVO	1	0.00
547/GLYPH	1	0.00
548.1/ENDO	1	0.00
549.2/DIQ_PARAQ	1	~~479.00~~ 359.25

Comments:

ALS

Report List

3078562

List ID: 20739 ***Non-Routine List***
Name: NYSDW Table 9D+VC,MTBE+DBCP
Description: NYSDW Table 9D, +VC/MTBE+DBCP
Status: Approved by BKALKMAN on 06/10/2019

Method/Test: 524.2 / VOC
CAS Lab: ROCHESTER
Created By: BKALKMAN on 6/10/19

Folder References

Internal Standards

CAS #	Analyte Name to appear on final Client Report	Comments	Grou
462-06-6	Fluorobenzene		A

CAS #	Analyte Name to appear on final Client Report	Comments	Grou
50	Tuning Ion 50		A
75	Tuning Ion 75		A
95	Tuning Ion 95		A
96	Tuning Ion 96		A
173	Tuning Ion 173		A
174	Tuning Ion 174		A
175	Tuning Ion 175		A
176	Tuning Ion 176		A
177	Tuning Ion 177		A

Surrogates

CAS #	Analyte Name to appear on final Client Report	Comments	Grou
2199-69-1	1,2-Dichlorobenzene-d4		A
460-00-4	4-Bromofluorobenzene		A

Target Analytes

CAS #	Analyte Name to appear on final Client Report	Comments	Grou
630-20-6	1,1,1,2-Tetrachloroethane		A
79-34-5	1,1,2,2-Tetrachloroethane		A
79-00-5	1,1,2-Trichloroethane		A
75-35-4	1,1-Dichloroethene (1,1-DCE)		A
87-61-6	1,2,3-Trichlorobenzene		A
96-18-4	1,2,3-Trichloropropane		A
120-82-1	1,2,4-Trichlorobenzene		A
95-63-6	1,2,4-Trimethylbenzene		A
96-12-8	1,2-Dibromo-3-chloropropane (DBCP)		A
95-50-1	1,2-Dichlorobenzene		A
107-06-2	1,2-Dichloroethane		A
108-67-8	1,3,5-Trimethylbenzene		A
541-73-1	1,3-Dichlorobenzene		A
142-28-9	1,3-Dichloropropane		A
106-46-7	1,4-Dichlorobenzene		A
594-20-7	2,2-Dichloropropane		A
95-49-8	2-Chlorotoluene		A
106-43-4	4-Chlorotoluene		A
99-87-6	p-Isopropyltoluene		A
71-43-2	Benzene		A
108-86-1	Bromobenzene		A
74-97-5	Bromochloromethane		A
74-83-9	Bromomethane		A
56-23-5	Carbon Tetrachloride		A
108-90-7	Chlorobenzene		A
75-00-3	Chloroethane		A
74-87-3	Chloromethane		A
74-95-3	Dibromomethane		A
75-71-8	Dichlorodifluoromethane (CFC 12)		A

List ID: 20739 ***Non-Routine List***
Name: NYSDW Table 9D+VC,MTBE+DBCP
Description: NYSDW Table 9D, +VC/MTBE+DBCP
Status: Approved by BKALKMAN on 06/10/2019

Method/Test: 524.2 / VOC 3078562
CAS Lab: ROCHESTER

Created By: BKALKMAN on 6/10/19

Folder References

Target Analytes

CAS #	Analyte Name to appear on final Client Report	Comments	Grou
75-09-2	Methylene Chloride		A
100-41-4	Ethylbenzene		A
87-68-3	Hexachlorobutadiene		A
98-82-8	Isopropylbenzene (Cumene)		A
1634-04-4	Methyl tert-Butyl Ether		A
100-42-5	Styrene		A
127-18-4	Tetrachloroethene (PCE)		A
108-88-3	Toluene		A
79-01-6	Trichloroethene (TCE)		A
75-69-4	Trichlorofluoromethane (CFC 11)		A
75-01-4	Vinyl Chloride		A
156-59-2	cis-1,2-Dichloroethene		A
10061-01-5	cis-1,3-Dichloropropene		A
179601-23-1	m,p-Xylenes		A
104-51-8	n-Butylbenzene		A
103-65-1	n-Propylbenzene		A
95-47-6	o-Xylene		A
135-98-8	sec-Butylbenzene		A
98-06-6	tert-Butylbenzene		A
156-60-5	trans-1,2-Dichloroethene		A
10061-02-6	trans-1,3-Dichloropropene		A
75-34-3	1,1-Dichloroethane (SPCC)		A
78-87-5	1,2-Dichloropropane (CCC)		A
563-58-6	1,1-Dichloropropene		A
71-55-6	1,1,1-Trichloroethane		A

This Report List is NOT currently designated as the "default/standard/normal" Report List for ANY tests

3078562

504
Ethylene Dibromide
Trip Blank

547
Glyphosate

548
Endothall

549
Diquat

505/508
Chlordane
Toxaphene
Toxaphene
Polychorinated Biphenyls
Pentachlorophenol

515
2,4-D
2,4,5-TP (Silvex)
Dalapon
Dicamba
Dinoseb
Picloram

525
Alachlor
Altrazine
Endrin
Heptachlor
Heptachlor Epoxide
Methoxychlor
Aldrin
Benzo (a) Pyrene
Butachlor
Di(2-ethylhexyl)adipate
Di(2-ethylhexyl)phthalate
Dieldrin
Hexachlorobenzene
Hexachlorocyclopentadiene
Metolachlor
Metribuzin
Propachlor
Simazine
Gamma-BHC (Lindane)

301 Fulling Mill Road
Middletown, PA 17057
P: (717) 944-5541
F: (717) 944-1430

Condition of Sample Receipt Form

Client:	Work Order #:	Initials:	Date:
ALS Rochester	3078562	gw	1/3/20

1. Were airbills / tracking numbers present and recorded?	NONE	YES	NO
Tracking number: 4846 1685 7401			
2. Are Custody Seals on shipping containers intact?	NONE	YES	NO
3. Are Custody Seals on sample containers intact?	NONE	YES	NO
4. Is there a COC (Chain-of-Custody) present?		YES	NO
5. Are the COC and bottle labels complete, legible and in agreement?		YES	NO
5a. Does the COC contain sample locations?		YES	NO
5b. Does the COC contain date and time of sample collection for all samples?		YES	NO
5c. Does the COC contain sample collectors name? collected by client		YES	NO
5d. Does the COC note the type(s) of preservation for all bottles? added to COC		YES	NO
5e. Does the COC note the number of bottles submitted for each sample?		YES	NO
5f. Does the COC note the type of sample, composite or grab?		YES	NO
5g. Does the COC note the matrix of the sample(s)?		YES	NO
6. Are all aqueous samples requiring preservation preserved correctly?	N/A	YES	NO
7. Were all samples placed in the proper containers for the requested analyses, with sufficient volume?		YES	NO
8. Are all samples within holding times for the requested analyses?		YES	NO
9. Were all sample containers received intact and headspace free when required? (not broken, leaking, frozen, etc.)		YES	NO
10. Did we receive trip blanks (applies only for methods EPA 504, EPA 524.2 and 1631E (LL Hg)?	N/A	YES	NO
11. Were the samples received on ice?		YES	NO
12. Were sample temperatures measured at 0.0-6.0°C		YES	NO
13. Are the samples DW matrix ? If YES, fill out Reportable Drinking Water questions below		YES	NO
13a. Are the samples required for SDWA compliance reporting?	N/A	YES	NO
13b. Did the client provide a SDWA PWS ID#?	N/A	YES	NO
13c. Are all aqueous unpreserved SDWA samples pH 5-9?	N/A	YES	NO
13d. Did the client provide the SDWA sample location ID/Description?	N/A	YES	NO
13e. Did the client provide the SDWA sample type (D, E, R, C, P, S)?	N/A	YES	NO

Cooler #:								
Temperature (°C):	3							
Thermometer ID:	525							
Radiological (µCi):								

COMMENTS (Required for all NO responses above and any sample non-conformance):

Rev. 4/29/2019

Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

January 09, 2020

Brady Kalkman
ALS Environmental Rochester
1565 Jefferson Rd.
Building 300
Rochester, NY 14623

RE: Project: R1912662
Pace Project No.: 70117077

Dear Brady Kalkman:
Enclosed are the analytical results for sample(s) received by the laboratory on January 03, 2020. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jennifer Aracri
jennifer.aracri@pacelabs.com
(631)694-3040
Project Manager

Enclosures

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Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

CERTIFICATIONS

Project: R1912662
Pace Project No.: 70117077

Pace Analytical Services Long Island
575 Broad Hollow Rd, Melville, NY 11747
New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435
Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

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Melville, NY 11747
(631)694-3040

ANALYTICAL RESULTS

Project: R1912662
Pace Project No.: 70117077

Sample: RRW1-RRW20 **Lab ID: 70117077001** Collected: 12/30/19 11:10 Received: 01/03/20 09:50 Matrix: Drinking Water

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
531.1 HPLC Carbamates	Analytical Method: EPA 531.1							
Aldicarb	**<0.50**	ug/L	0.50	1		01/08/20 20:24	116-06-3	
Aldicarb sulfone	**<0.80**	ug/L	0.80	1		01/08/20 20:24	1646-88-4	
Aldicarb sulfoxide	**<0.50**	ug/L	0.50	1		01/08/20 20:24	1646-87-3	
Carbofuran	**<0.90**	ug/L	0.90	1		01/08/20 20:24	1563-66-2	
3-Hydroxycarbofuran	**<1.0**	ug/L	1.0	1		01/08/20 20:24	16655-82-6	
Methomyl	**<1.0**	ug/L	1.0	1		01/08/20 20:24	16752-77-5	
Oxamyl	**<1.0**	ug/L	1.0	1		01/08/20 20:24	23135-22-0	
Carbaryl	**<1.0**	ug/L	1.0	1		01/08/20 20:24	63-25-2	

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Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA

Project: R1912662
Pace Project No.: 70117077

QC Batch: 144777
QC Batch Method: EPA 531.1
Associated Lab Samples: 70117077001

Analysis Method: EPA 531.1
Analysis Description: 531.1 HPLC Carbamate

METHOD BLANK: 693998
Matrix: Water
Associated Lab Samples: 70117077001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
3-Hydroxycarbofuran	ug/L	<1.0	1.0	01/08/20 13:07	
Aldicarb	ug/L	<0.50	0.50	01/08/20 13:07	
Aldicarb sulfone	ug/L	<0.80	0.80	01/08/20 13:07	
Aldicarb sulfoxide	ug/L	<0.50	0.50	01/08/20 13:07	
Carbaryl	ug/L	<1.0	1.0	01/08/20 13:07	
Carbofuran	ug/L	<0.90	0.90	01/08/20 13:07	
Methomyl	ug/L	<1.0	1.0	01/08/20 13:07	
Oxamyl	ug/L	<1.0	1.0	01/08/20 13:07	

LABORATORY CONTROL SAMPLE: 693999

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
3-Hydroxycarbofuran	ug/L	3.8	3.9	104	80-120	
Aldicarb	ug/L	3.8	4.0	106	80-120	
Aldicarb sulfone	ug/L	3.8	4.5	119	80-120	
Aldicarb sulfoxide	ug/L	3.8	4.1	111	80-120	
Carbaryl	ug/L	3.8	4.0	107	80-120	
Carbofuran	ug/L	3.8	3.6	96	80-120	
Methomyl	ug/L	3.8	3.9	105	80-120	
Oxamyl	ug/L	3.8	3.9	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 694000 694001

Parameter	Units	70117137001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
3-Hydroxycarbofuran	ug/L	<1.0	3.8	3.8	3.5	3.5	95	93	65-135	2	
Aldicarb	ug/L	<0.50	3.8	3.8	3.9	3.9	105	105	65-135	0	
Aldicarb sulfone	ug/L	<0.80	3.8	3.8	3.7	4.1	97	108	65-135	11	
Aldicarb sulfoxide	ug/L	<0.50	3.8	3.8	3.5	3.7	94	97	65-135	4	
Carbaryl	ug/L	<1.0	3.8	3.8	4.0	3.6	106	95	65-135	11	
Carbofuran	ug/L	<0.90	3.8	3.8	3.4	3.9	91	105	65-135	14	
Methomyl	ug/L	<1.0	3.8	3.8	4.2	4.3	111	114	65-135	2	
Oxamyl	ug/L	<1.0	3.8	3.8	3.8	4.1	101	108	65-135	7	

Results presented on this page are in the units indicated by the "Units" column except where an alternate unit is presented to the right of the result.

REPORT OF LABORATORY ANALYSIS

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALIFIERS

Project: R1912662
Pace Project No.: 70117077

DEFINITIONS

DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

J - Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

S - Surrogate

1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.

Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected.

N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.

Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.

TNI - The NELAC Institute.

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575 Broad Hollow Road
Melville, NY 11747
(631)694-3040

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: R1912662
Pace Project No.: 70117077

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
70117077001	**RRW1-RRW20**	EPA 531.1	144777		

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ALS Environmental Chain of Custody

1565 Jefferson Rd, Building 300 • Rochester, NY 14623 • 585-288-5380 • FAX 585-288-8475

ALS Contact: Brady Kalkman

Project Number: R1912662
Project Manager: Brady Kalkman
QAP: LAB QAP

WO#:70117077

Lab Code	Sample ID	# of Cont.	Matrix	Sample Date	Sample Time	Lab ID	CARBAM 531.1
~~R1912662-001~~	RRW1 - RRW20	2	Drinking Water	12/30/19		Pace Melville	X

Special Instructions/Comments

H - Test is On Hold P - Test is Authorized for Prep Only

Turnaround Requirements

____ RUSH (Surcharges Apply)

PLEASE CIRCLE WORK DAYS
1 2 3 4 5

X STANDARD

Requested FAX Date: _____

Requested Report Date: 01/17/20

Report Requirements

____ I. Results Only

X II. Results + QC Summaries

____ III. Results + QC and Calibration Summaries

____ IV. Data Validation Report with Raw Data

PQL/MDL/J Y
EDD N

Invoice Information

PO# 58R1912662

Bill to

Relinquished By: [signature] 1/2/2020/1310

Received By: [signature] PACEM 1/3/20 9:50

Airbill Number:

R1912662

X **Ship To: Pace Melville**
Pace
575 Broadhollow Rd
Melville, NY 11747

PC _____ Date _____

SMO _____ Date _____

Instructions:

Ice _____

Dry Ice _____

No Ice _____

Shipping:

Overnight _____

2nd Day _____

Ground _____

Bill to Client Account _____

Comments:

Pace Analytical

Sample Condition Upon Receipt

WO#: 70117077
PM: JSA Due Date: 01/17/20
CLIENT: ALSR

Client Name: ALSR

Courier: ☑ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace ☐ Other

Tracking #: 4846 1685 7342

Custody Seal on Cooler/Box Present: ☐ Yes ☑ No Seals intact: ☑ Yes ☐ No Temperature Blank Present: ☐ Yes ☑ No

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ Ziploc ☑ None ☐ Other Type of Ice: (Wet) Blue None

Thermometer Used: TH091 Correction Factor: +0.2 ☐ Samples on ice, cooling process has begun

Cooler Temperature (°C): 4.0 Cooler Temperature Corrected (°C): 4.2 Date/Time 5035A kits placed in freezer

Temp should be above freezing to 6.0°C

USDA Regulated Soil (☐ N/A, water sample) Date and Initials of person examining contents: IT 1/3/20

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? ☐ YES ☐ NO

Did samples orignate from a foreign source (internationally, including Hawaii and Puerto Rico)? ☐ Yes ☒ No

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

				COMMENTS:
Chain of Custody Present:	☑ Yes	☐ No		1.
Chain of Custody Filled Out:	☑ Yes	☐ No		2.
Chain of Custody Relinquished:	☑ Yes	☐ No		3.
Sampler Name & Signature on COC:	☑ Yes	☐ No	☐ N/A	4.
Samples Arrived within Hold Time:	☑ Yes	☐ No		5.
Short Hold Time Analysis (<72hr):	☐ Yes	☑ No		6.
Rush Turn Around Time Requested:	☐ Yes	☑ No		7.
Sufficient Volume: (Triple volume provided for MS/MSD)	☑ Yes	☐ No		8.
Correct Containers Used:	☑ Yes	☐ No		9.
Pace Containers Used:	☑ Yes	☐ No		
Containers Intact:	☑ Yes	☐ No		10.
Filtered volume received for Dissolved tests	☐ Yes	☐ No	☑ N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC: -Includes date/time/ID/Analysis Matrix SL WT OIL	☑ Yes	☐ No		12.
All containers needing preservation have been checked	☐ Yes	☐ No	☑ N/A	13. ☐ HNO_3 ☐ H_2SO_4 ☐ NaOH ☐ HCl
pH paper Lot #				Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO_3, H_2SO_4, HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	☐ Yes	☐ No	☑ N/A	Initial when completed: / Lot # of added preservative: / Date/Time preservative added
Samples checked for dechlorination:	☐ Yes	☐ No	☑ N/A	14.
KI starch test strips Lot #				
Residual chlorine strips Lot #				Positive for Res. Chlorine? Y N
Headspace in VOA Vials (>6mm):	☐ Yes	☐ No	☑ N/A	15.
Trip Blank Present:	☐ Yes	☐ No	☑ N/A	16.
Trip Blank Custody Seals Present	☐ Yes	☐ No	☑ N/A	
Pace Trip Blank Lot # (if applicable):				

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.