

September 30, 2015

Mr. Scott Boylan  
MDE-Western Division  
160 South Water  
Frostburg, MD 21532

## Certificate of Analysis

Project Name: <b>VERSO-N. Branch Potomac</b>	Workorder: <b>2098091</b>
Purchase Order: <b>U00P6400021</b>	Workorder ID: <b>VERSO-N. Branch Potomac</b>

Dear Mr. Boylan:

Enclosed are the analytical results for samples received by the laboratory on Friday, September 25, 2015.

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. Amy K Borden (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](http://www.alsglobal.com/en/Our-Services/Life-Sciences/Environmental/Downloads).

This laboratory report may not be reproduced, except in full, without the written approval of ALS Environmental.

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

CC: Mr. Brad Metzger , Ms. Elizabeth Reicks , Mr. Jesse Salter , Ms. Heather Nelson

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

Ms. Amy K Borden  
Project Coordinator

### ALS Environmental Laboratory Locations Across North America

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

### SAMPLE SUMMARY

Workorder: 2098091 VERSO-N. Branch Potomac

Lab ID	Sample ID	Matrix	Date Collected	Date Received	Collected By
2098091001	North Branch Potomac - Pinto	Water	9/25/2015 12:24	9/25/2015 17:33	Collected by Client

**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 performed 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".

**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

### ALS Environmental Laboratory Locations Across North America

**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**ANALYTICAL RESULTS**

Workorder: 2098091 VERSO-N. Branch Potomac

Lab ID: **2098091001**

Date Collected: 9/25/2015 12:24

Matrix: Water

Sample ID: **North Branch Potomac - Pinto**

Date Received: 9/25/2015 17:33

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
<b>VOLATILE ORGANICS</b>									
Acrolein	ND		ug/L	30.0	EPA 624		9/26/15 04:23	CJG	A
Acrylonitrile	ND		ug/L	5.0	EPA 624		9/26/15 04:23	CJG	A
Benzene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Bromodichloromethane	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Bromoform	ND		ug/L	2.0	EPA 624		9/26/15 04:23	CJG	A
Bromomethane	ND		ug/L	2.0	EPA 624		9/26/15 04:23	CJG	A
Carbon Tetrachloride	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Chlorobenzene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Chlorodibromomethane	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Chloroethane	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
2-Chloroethylvinyl ether	ND		ug/L	2.0	EPA 624		9/26/15 04:23	CJG	A
Chloroform	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Chloromethane	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
1,2-Dichlorobenzene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
1,3-Dichlorobenzene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
1,4-Dichlorobenzene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
1,1-Dichloroethane	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
1,2-Dichloroethane	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
1,1-Dichloroethene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
trans-1,2-Dichloroethene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
1,2-Dichloropropane	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
cis-1,3-Dichloropropene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
trans-1,3-Dichloropropene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
1,3-Dichloropropene, Total	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Ethylbenzene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Methylene Chloride	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Styrene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
1,1,2,2-Tetrachloroethane	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Tetrachloroethene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Toluene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
1,1,1-Trichloroethane	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
1,1,2-Trichloroethane	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Trichloroethene	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Trichlorofluoromethane	ND		ug/L	1.0	EPA 624		9/26/15 04:23	CJG	A
Vinyl Chloride	ND		ug/L	2.0	EPA 624		9/26/15 04:23	CJG	A
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**ANALYTICAL RESULTS**

Workorder: 2098091 VERSO-N. Branch Potomac

Lab ID: **2098091001** Date Collected: 9/25/2015 12:24 Matrix: Water  
 Sample ID: **North Branch Potomac - Pinto** Date Received: 9/25/2015 17:33

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
1,2-Dichloroethane-d4 (S)	98.3		%	72 - 142	EPA 624		9/26/15 04:23	CJG	A
4-Bromofluorobenzene (S)	103		%	73 - 119	EPA 624		9/26/15 04:23	CJG	A
Dibromofluoromethane (S)	97.6		%	74 - 132	EPA 624		9/26/15 04:23	CJG	A
Toluene-d8 (S)	88		%	75 - 133	EPA 624		9/26/15 04:23	CJG	A
<b>SEMIVOLATILES</b>									
Acenaphthene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Acenaphthylene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Anthracene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Benzidine	ND		ug/L	50.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Benzo(a)anthracene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Benzo(a)pyrene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Benzo(b)fluoranthene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Benzo(g,h,i)perylene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Benzo(k)fluoranthene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
4-Bromophenyl-phenylether	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Butylbenzylphthalate	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
4-Chloro-3-methylphenol	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
bis(2-Chloroethoxy)methane	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
bis(2-Chloroethyl)ether	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
bis(2-Chloroisopropyl)ether	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2-Chloronaphthalene	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2-Chlorophenol	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
4-Chlorophenyl-phenylether	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Chrysene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Di-n-Butylphthalate	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Di-n-Octylphthalate	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Dibenzo(a,h)anthracene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
3,3-Dichlorobenzidine	ND		ug/L	16.2	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2,4-Dichlorophenol	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Diethylphthalate	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2,4-Dimethylphenol	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Dimethylphthalate	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2,4-Dinitrophenol	ND		ug/L	16.2	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2,4-Dinitrotoluene	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2,6-Dinitrotoluene	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
1,2-Diphenylhydrazine	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
bis(2-Ethylhexyl)phthalate	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Fluoranthene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D

**ALS Environmental Laboratory Locations Across North America**

**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
 Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**ANALYTICAL RESULTS**

Workorder: 2098091 VERSO-N. Branch Potomac

Lab ID: **2098091001**

Date Collected: 9/25/2015 12:24

Matrix: Water

Sample ID: **North Branch Potomac - Pinto**

Date Received: 9/25/2015 17:33

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Fluorene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Hexachlorobenzene	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Hexachlorobutadiene	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Hexachlorocyclopentadiene	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Hexachloroethane	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Indeno(1,2,3-cd)pyrene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Isophorone	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2-Methyl-4,6-dinitrophenol	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Naphthalene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Nitrobenzene	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2-Nitrophenol	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
4-Nitrophenol	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
N-Nitrosodimethylamine	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
N-Nitroso-di-n-propylamine	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
N-Nitrosodiphenylamine	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Pentachlorophenol	ND		ug/L	16.2	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Phenanthrene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Phenol	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Pyrene	ND		ug/L	1.5	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
1,2,4-Trichlorobenzene	ND		ug/L	3.0	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2,4,6-Trichlorophenol	ND		ug/L	8.1	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
<i>Surrogate Recoveries</i>	<i>Results</i>	<i>Flag</i>	<i>Units</i>	<i>Limits</i>	<i>Method</i>	<i>Prepared By</i>	<i>Analyzed</i>	<i>By</i>	<i>Cntr</i>
2,4,6-Tribromophenol (S)	80.8		%	38 - 134	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2-Fluorobiphenyl (S)	66.4		%	37 - 113	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
2-Fluorophenol (S)	45.1		%	17 - 73	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Nitrobenzene-d5 (S)	52		%	37 - 124	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Phenol-d5 (S)	30.1		%	11 - 53	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
Terphenyl-d14 (S)	79.1		%	33 - 125	EPA 625	9/28/15 CAC	9/29/15 03:11	CGS	D
<b>WET CHEMISTRY</b>									
Color, Apparent	25	1	CU	5	S2120B-01		9/26/15 05:55	MBW	F
Turbidity	23.4		NTU	0.10	S2130B-01		9/26/15 01:37	REA	F
<b>METALS</b>									
Antimony, Total	ND		mg/L	0.022	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1
Arsenic, Total	ND		mg/L	0.0090	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1
Beryllium, Total	ND		mg/L	0.0044	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1
Cadmium, Total	ND		mg/L	0.0022	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1
Chromium, Total	ND		mg/L	0.0056	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**ANALYTICAL RESULTS**

Workorder: 2098091 VERSO-N. Branch Potomac

Lab ID: **2098091001**

Date Collected: 9/25/2015 12:24

Matrix: Water

Sample ID: **North Branch Potomac - Pinto**

Date Received: 9/25/2015 17:33

Parameters	Results	Flag	Units	RDL	Method	Prepared By	Analyzed	By	Cntr
Copper, Total	ND		mg/L	0.011	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1
Lead, Total	ND		mg/L	0.0067	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1
Mercury, Total	ND		mg/L	0.00050	SW846 7470A	9/28/15 MNP	9/28/15 12:42	MNP	C2
Nickel, Total	ND		mg/L	0.022	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1
Selenium, Total	ND		mg/L	0.022	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1
Silver, Total	ND		mg/L	0.0044	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1
Thallium, Total	ND		mg/L	0.022	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1
Zinc, Total	ND		mg/L	0.022	SW846 6010C	9/27/15 JPS	9/28/15 10:31	SRT	C1



Ms. Amy K Borden  
Project Coordinator

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

**PARAMETER QUALIFIERS**

Lab ID	#	Sample ID	Analytical Method	Analyte
<b>2098091001</b>	1	North Branch Potomac - Pinto	S2120B-01	Color, Apparent

The color analysis was performed on a sample aliquot with a pH of 6.779.

---

**ALS Environmental Laboratory Locations Across North America**

**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

**QC Batch:** EXTR/40878 **Analysis Method:** EPA 625

**QC Batch Method:** EPA 625

**Associated Lab Samples:** 2098091001

METHOD BLANK: 2238631

Parameter	Blank Result	Units	Reporting Limit
Acenaphthene	ND	ug/L	1.5
Acenaphthylene	ND	ug/L	1.5
Anthracene	ND	ug/L	1.5
Benidine	ND	ug/L	50.0
Benzo(a)anthracene	ND	ug/L	1.5
Benzo(a)pyrene	ND	ug/L	1.5
Benzo(b)fluoranthene	ND	ug/L	1.5
Benzo(g,h,i)perylene	ND	ug/L	1.5
Benzo(k)fluoranthene	ND	ug/L	1.5
4-Bromophenyl-phenylether	ND	ug/L	3.0
Butylbenzylphthalate	ND	ug/L	3.0
4-Chloro-3-methylphenol	ND	ug/L	8.0
bis(2-Chloroethoxy)methane	ND	ug/L	3.0
bis(2-Chloroethyl)ether	ND	ug/L	3.0
bis(2-Chloroisopropyl)ether	ND	ug/L	3.0
2-Chloronaphthalene	ND	ug/L	3.0
2-Chlorophenol	ND	ug/L	8.0
4-Chlorophenyl-phenylether	ND	ug/L	3.0
Chrysene	ND	ug/L	1.5
Di-n-Butylphthalate	ND	ug/L	3.0
Di-n-Octylphthalate	ND	ug/L	8.0
Dibenzo(a,h)anthracene	ND	ug/L	1.5
3,3-Dichlorobenzidine	ND	ug/L	16.0
2,4-Dichlorophenol	ND	ug/L	8.0
Diethylphthalate	ND	ug/L	8.0
2,4-Dimethylphenol	ND	ug/L	8.0
Dimethylphthalate	ND	ug/L	8.0
2,4-Dinitrophenol	ND	ug/L	16.0
2,4-Dinitrotoluene	ND	ug/L	3.0
2,6-Dinitrotoluene	ND	ug/L	3.0
1,2-Diphenylhydrazine	ND	ug/L	3.0
bis(2-Ethylhexyl)phthalate	ND	ug/L	3.0
Fluoranthene	ND	ug/L	1.5
Fluorene	ND	ug/L	1.5
Hexachlorobenzene	ND	ug/L	3.0
Hexachlorobutadiene	ND	ug/L	3.0
Hexachlorocyclopentadiene	ND	ug/L	8.0

**ALS Environmental Laboratory Locations Across North America**
**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey



**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

Hexachloroethane	ND	ug/L	3.0
Indeno(1,2,3-cd)pyrene	ND	ug/L	1.5
Isophorone	ND	ug/L	3.0
2-Methyl-4,6-dinitrophenol	ND	ug/L	8.0
Naphthalene	ND	ug/L	1.5
Nitrobenzene	ND	ug/L	3.0
2-Nitrophenol	ND	ug/L	8.0
4-Nitrophenol	ND	ug/L	8.0
N-Nitrosodimethylamine	ND	ug/L	3.0
N-Nitroso-di-n-propylamine	ND	ug/L	3.0
N-Nitrosodiphenylamine	ND	ug/L	3.0
Pentachlorophenol	ND	ug/L	16.0
Phenanthrene	ND	ug/L	1.5
Phenol	ND	ug/L	8.0
Pyrene	ND	ug/L	1.5
1,2,4-Trichlorobenzene	ND	ug/L	3.0
2,4,6-Trichlorophenol	ND	ug/L	8.0
2,4,6-Tribromophenol (S)	86.5	%	38 - 134
2-Fluorobiphenyl (S)	82.7	%	37 - 113
2-Fluorophenol (S)	62.4	%	17 - 73
Nitrobenzene-d5 (S)	93.2	%	37 - 124
Phenol-d5 (S)	39.4	%	11 - 53
Terphenyl-d14 (S)	90.5	%	33 - 125

**LABORATORY CONTROL SAMPLE: 2238632**

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Acenaphthene	96.9	ug/L	50	48.4	47 - 145
Acenaphthylene	99.1	ug/L	50	49.6	33 - 145
Anthracene	101	ug/L	50	50.3	27 - 133
Benzidine	86.6	ug/L	100	86.6	5 - 248
Benzo(a)anthracene	99.2	ug/L	50	49.6	33 - 143
Benzo(a)pyrene	104	ug/L	50	52.1	17 - 163
Benzo(b)fluoranthene	106	ug/L	50	52.9	24 - 159
Benzo(g,h,i)perylene	106	ug/L	50	53.0	3 - 219
Benzo(k)fluoranthene	104	ug/L	50	52.2	11 - 162
4-Bromophenyl-phenylether	92.7	ug/L	50	46.4	53 - 127
Butylbenzylphthalate	120	ug/L	50	60.1	3 - 152
4-Chloro-3-methylphenol	105	ug/L	100	105	22 - 147
bis(2-Chloroethoxy)methane	98	ug/L	50	49.0	33 - 184
bis(2-Chloroethyl)ether	95.6	ug/L	50	47.8	12 - 158
bis(2-Chloroisopropyl)ether	102	ug/L	50	51.0	36 - 166
2-Chloronaphthalene	89.5	ug/L	50	44.8	60 - 118
2-Chlorophenol	93.5	ug/L	100	93.5	23 - 134

**ALS Environmental Laboratory Locations Across North America**
**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

4-Chlorophenyl-phenylether	97.1	ug/L	50	48.6	25 - 158
Chrysene	98.1	ug/L	50	49.0	17 - 168
Di-n-Butylphthalate	109	ug/L	50	54.7	3 - 118
Di-n-Octylphthalate	102	ug/L	50	51.2	3 - 146
Dibenzo(a,h)anthracene	107	ug/L	50	53.4	3 - 227
3,3-Dichlorobenzidine	96.9	ug/L	100	96.9	3 - 262
2,4-Dichlorophenol	98.8	ug/L	100	98.8	39 - 135
Diethylphthalate	107	ug/L	50	53.4	3 - 114
2,4-Dimethylphenol	98.2	ug/L	100	98.2	32 - 119
Dimethylphthalate	103	ug/L	50	51.4	3 - 112
2,4-Dinitrophenol	88.3	ug/L	100	88.3	5 - 191
2,4-Dinitrotoluene	104	ug/L	50	52.1	39 - 139
2,6-Dinitrotoluene	115	ug/L	50	57.5	50 - 158
1,2-Diphenylhydrazine	99.2	ug/L	50	49.6	51 - 126
bis(2-Ethylhexyl)phthalate	101	ug/L	50	50.7	8 - 158
Fluoranthene	108	ug/L	50	53.8	26 - 137
Fluorene	101	ug/L	50	50.6	59 - 121
Hexachlorobenzene	92.5	ug/L	50	46.3	3 - 152
Hexachlorobutadiene	71.6	ug/L	50	35.8	24 - 116
Hexachlorocyclopentadiene	49.1	ug/L	50	24.5	5 - 107
Hexachloroethane	59.7	ug/L	50	29.9	40 - 113
Indeno(1,2,3-cd)pyrene	106	ug/L	50	52.8	3 - 171
Isophorone	102	ug/L	50	50.9	21 - 196
2-Methyl-4,6-dinitrophenol	96.3	ug/L	100	96.3	5 - 181
Naphthalene	87.1	ug/L	50	43.6	21 - 133
Nitrobenzene	102	ug/L	50	50.8	35 - 180
2-Nitrophenol	105	ug/L	100	105	29 - 182
4-Nitrophenol	51.3	ug/L	100	51.3	4 - 132
N-Nitrosodimethylamine	65.5	ug/L	50	32.7	22 - 83
N-Nitroso-di-n-propylamine	99.9	ug/L	50	49.9	3 - 230
N-Nitrosodiphenylamine	113	ug/L	50	56.3	57 - 114
Pentachlorophenol	106	ug/L	100	106	14 - 176
Phenanthrene	96	ug/L	50	48.0	54 - 120
Phenol	46.6	ug/L	100	46.6	5 - 112
Pyrene	97.1	ug/L	50	48.5	52 - 115
1,2,4-Trichlorobenzene	74	ug/L	50	37.0	44 - 142
2,4,6-Trichlorophenol	100	ug/L	100	100	37 - 144
2,4,6-Tribromophenol (S)	93.2	%			38 - 134
2-Fluorobiphenyl (S)	84.6	%			37 - 113
2-Fluorophenol (S)	63.5	%			17 - 73
Nitrobenzene-d5 (S)	93.3	%			37 - 124
Phenol-d5 (S)	40.5	%			11 - 53
Terphenyl-d14 (S)	91.7	%			33 - 125

**ALS Environmental Laboratory Locations Across North America**
**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

MATRIX SPIKE SAMPLE: 2238633 ORIGINAL: 2097027002

\*\*\*\*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
Acenaphthene	0	ug/L	47.8	41.5869	86.9	47 - 145
Acenaphthylene	0	ug/L	47.8	43.2841	90.5	33 - 145
Anthracene	0	ug/L	47.8	47.668	99.6	27 - 133
Benzidine	0	ug/L	95.7	47.91	50.1	5 - 248
Benzo(a)anthracene	0	ug/L	47.8	47.6094	99.5	33 - 143
Benzo(a)pyrene	0	ug/L	47.8	49.7131	104	17 - 163
Benzo(b)fluoranthene	0	ug/L	47.8	51.1084	107	24 - 159
Benzo(g,h,i)perylene	0	ug/L	47.8	50.8078	106	3 - 219
Benzo(k)fluoranthene	0	ug/L	47.8	50.1991	105	11 - 162
4-Bromophenyl-phenylether	0	ug/L	47.8	44.6206	93.3	53 - 127
Butylbenzylphthalate	0	ug/L	47.8	60.8191	127	3 - 152
4-Chloro-3-methylphenol	0	ug/L	95.7	98.9497	103	22 - 147
bis(2-Chloroethoxy)methane	0	ug/L	47.8	47.6027	99.5	33 - 184
bis(2-Chloroethyl)ether	0	ug/L	47.8	45.2695	94.6	12 - 158
bis(2-Chloroisopropyl)ether	0	ug/L	47.8	49.0495	103	36 - 166
2-Chloronaphthalene	0	ug/L	47.8	37.0193	77.4	60 - 118
2-Chlorophenol	0	ug/L	95.7	90.8704	95	23 - 134
4-Chlorophenyl-phenylether	0	ug/L	47.8	42.8774	89.6	25 - 158
Chrysene	0	ug/L	47.8	47.3953	99.1	17 - 168
Di-n-Butylphthalate	0	ug/L	47.8	54.823	115	3 - 118
Di-n-Octylphthalate	0	ug/L	47.8	55.0936	115	3 - 146
Dibenzo(a,h)anthracene	0	ug/L	47.8	52.0959	109	3 - 227
3,3-Dichlorobenzidine	0	ug/L	95.7	77.5219	81	3 - 262
2,4-Dichlorophenol	0	ug/L	95.7	96.4507	101	39 - 135
Diethylphthalate	0	ug/L	47.8	49.7363	104	3 - 114
2,4-Dimethylphenol	0	ug/L	95.7	94.0846	98.3	32 - 119
Dimethylphthalate	0	ug/L	47.8	47.5186	99.3	3 - 112
2,4-Dinitrophenol	0	ug/L	95.7	81.6498	85.3	5 - 191
2,4-Dinitrotoluene	0	ug/L	47.8	47.2508	98.8	39 - 139
2,6-Dinitrotoluene	0	ug/L	47.8	52.0822	109	50 - 158
1,2-Diphenylhydrazine	0	ug/L	47.8	48.0233	100	51 - 126
bis(2-Ethylhexyl)phthalate	0	ug/L	47.8	54.4771	114	8 - 158
Fluoranthene	0	ug/L	47.8	49.628	104	26 - 137
Fluorene	0	ug/L	47.8	44.3174	92.6	59 - 121
Hexachlorobenzene	0	ug/L	47.8	44.2126	92.4	3 - 152
Hexachlorobutadiene	0	ug/L	47.8	26.9519	56.3	24 - 116
Hexachlorocyclopentadiene	0	ug/L	47.8	19.6061	41	5 - 107
Hexachloroethane	0	ug/L	47.8	22.8236	47.7	40 - 113
Indeno(1,2,3-cd)pyrene	0	ug/L	47.8	50.885	106	3 - 171
Isophorone	0	ug/L	47.8	49.2318	103	21 - 196

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

2-Methyl-4,6-dinitrophenol	0	ug/L	95.7	93.8904	98.1	5 - 181
Naphthalene	0	ug/L	47.8	36.8247	77	21 - 133
Nitrobenzene	0	ug/L	47.8	45.9159	96	35 - 180
2-Nitrophenol	0	ug/L	95.7	100.269	105	29 - 182
4-Nitrophenol	0	ug/L	95.7	44.7765	46.8	4 - 132
N-Nitrosodimethylamine	0	ug/L	47.8	29.8684	62.4	22 - 83
N-Nitroso-di-n-propylamine	0	ug/L	47.8	42.2517	88.3	3 - 230
N-Nitrosodiphenylamine	0	ug/L	47.8	54.7749	114	57 - 114
Pentachlorophenol	0	ug/L	95.7	110.479	115	14 - 176
Phenanthrene	0	ug/L	47.8	45.2759	94.6	54 - 120
Phenol	0	ug/L	95.7	42.4051	44.3	5 - 112
Pyrene	0	ug/L	47.8	46.1561	96.5	52 - 115
1,2,4-Trichlorobenzene	0	ug/L	47.8	28.9623	60.5	44 - 142
2,4,6-Trichlorophenol	0	ug/L	95.7	96.5964	101	37 - 144
2,4,6-Tribromophenol (S)	98.8	%				38 - 134
2-Fluorobiphenyl (S)	83.2	%				37 - 113
2-Fluorophenol (S)	62.9	%				17 - 73
Nitrobenzene-d5 (S)	84.4	%				37 - 124
Phenol-d5 (S)	39.4	%				11 - 53
Terphenyl-d14 (S)	92.3	%				33 - 125

**ALS Environmental Laboratory Locations Across North America**
**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

**QC Batch:** MDIG/52995 **Analysis Method:** SW846 6010C  
**QC Batch Method:** SW846 3015  
**Associated Lab Samples:** 2098091001

## METHOD BLANK: 2238493

Parameter	Blank Result	Units	Reporting Limit
Antimony, Total	ND	mg/L	0.022
Arsenic, Total	ND	mg/L	0.0090
Beryllium, Total	ND	mg/L	0.0044
Cadmium, Total	ND	mg/L	0.0022
Chromium, Total	ND	mg/L	0.0056
Copper, Total	ND	mg/L	0.011
Lead, Total	ND	mg/L	0.0067
Nickel, Total	ND	mg/L	0.022
Selenium, Total	ND	mg/L	0.022
Silver, Total	ND	mg/L	0.0044
Thallium, Total	ND	mg/L	0.022
Zinc, Total	ND	mg/L	0.022

## LABORATORY CONTROL SAMPLE: 2238494

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Antimony, Total	93	mg/L	.22	0.21	80 - 120
Arsenic, Total	94.8	mg/L	.11	0.11	80 - 120
Beryllium, Total	97.3	mg/L	.22	0.22	80 - 120
Cadmium, Total	93.8	mg/L	.11	0.10	80 - 120
Chromium, Total	97	mg/L	.11	0.11	80 - 120
Copper, Total	93.6	mg/L	1.1	1.0	80 - 120
Lead, Total	98.1	mg/L	.11	0.11	80 - 120
Nickel, Total	94	mg/L	1.1	1.0	80 - 120
Selenium, Total	93.1	mg/L	1.1	1.0	80 - 120
Silver, Total	94.9	mg/L	.11	0.11	80 - 120
Thallium, Total	91.6	mg/L	.11	0.10	80 - 120
Zinc, Total	93.4	mg/L	.56	0.52	80 - 120

**ALS Environmental Laboratory Locations Across North America**

 Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
 Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

NELAP Certifications: NJ PA010 , NY 11759 , PA 22-293  
State Certifications: DE ID 11 , MA PA0102 , MD 128 , VA 460157 , WV 343

### QUALITY CONTROL DATA

Workorder: 2098091 VERSO-N. Branch Potomac

**QC Batch:** MDIG/53012 **Analysis Method:** SW846 7470A  
**QC Batch Method:** SW846 7470A  
**Associated Lab Samples:** 2098091001

**METHOD BLANK: 2238714**

Parameter	Blank Result	Units	Reporting Limit
Mercury, Total	ND	mg/L	0.00050

**LABORATORY CONTROL SAMPLE: 2238715**

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Mercury, Total	100	mg/L	.002	0.0020	85 - 115

**MATRIX SPIKE: 2238716 DUPLICATE: 2238717 ORIGINAL: 2097771002**

\*\*\*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
Mercury, Total	.00014	mg/L	.005	.00503	.00514	97.9	100	70 - 130	2.16	20

### ALS Environmental Laboratory Locations Across North America

**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

**QC Batch:** VOMS/37283 **Analysis Method:** EPA 624

**QC Batch Method:** EPA 624

**Associated Lab Samples:** 2098091001

METHOD BLANK: 2238057

Parameter	Blank Result	Units	Reporting Limit
Acrolein	ND	ug/L	30.0
Acrylonitrile	ND	ug/L	5.0
Benzene	ND	ug/L	1.0
Bromodichloromethane	ND	ug/L	1.0
Bromoform	ND	ug/L	2.0
Bromomethane	ND	ug/L	2.0
Carbon Tetrachloride	ND	ug/L	1.0
Chlorobenzene	ND	ug/L	1.0
Chlorodibromomethane	ND	ug/L	1.0
Chloroethane	ND	ug/L	1.0
2-Chloroethylvinyl ether	ND	ug/L	2.0
Chloroform	ND	ug/L	1.0
Chloromethane	ND	ug/L	1.0
1,2-Dichlorobenzene	ND	ug/L	1.0
1,3-Dichlorobenzene	ND	ug/L	1.0
1,4-Dichlorobenzene	ND	ug/L	1.0
1,1-Dichloroethane	ND	ug/L	1.0
1,2-Dichloroethane	ND	ug/L	1.0
1,1-Dichloroethene	ND	ug/L	1.0
trans-1,2-Dichloroethene	ND	ug/L	1.0
1,2-Dichloropropane	ND	ug/L	1.0
cis-1,3-Dichloropropene	ND	ug/L	1.0
trans-1,3-Dichloropropene	ND	ug/L	1.0
1,3-Dichloropropene, Total	ND	ug/L	1.0
Ethylbenzene	ND	ug/L	1.0
Methylene Chloride	ND	ug/L	1.0
Styrene	ND	ug/L	1.0
1,1,2,2-Tetrachloroethane	ND	ug/L	1.0
Tetrachloroethene	ND	ug/L	1.0
Toluene	ND	ug/L	1.0
1,1,1-Trichloroethane	ND	ug/L	1.0
1,1,2-Trichloroethane	ND	ug/L	1.0
Trichloroethene	ND	ug/L	1.0
Trichlorofluoromethane	ND	ug/L	1.0
Vinyl Chloride	ND	ug/L	2.0
1,2-Dichloroethane-d4 (S)	98.2	%	72 - 142
4-Bromofluorobenzene (S)	99.1	%	73 - 119
Dibromofluoromethane (S)	98.7	%	74 - 132

**ALS Environmental Laboratory Locations Across North America**
**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

Toluene-d8 (S) 88.4 % 75 - 133

**LABORATORY CONTROL SAMPLE: 2238058**

Parameter	LCS % Rec	Units	Spike Conc.	LCS Result	% Rec Limit
Acrolein	97.8	ug/L	150	147	8 - 171
Acrylonitrile	110	ug/L	100	110	63 - 165
Benzene	114	ug/L	20	22.7	37 - 151
Bromodichloromethane	112	ug/L	20	22.4	35 - 155
Bromoform	92.3	ug/L	20	18.5	45 - 169
Bromomethane	72.4	ug/L	20	14.5	1 - 242
Carbon Tetrachloride	113	ug/L	20	22.6	70 - 140
Chlorobenzene	103	ug/L	20	20.6	37 - 160
Chlorodibromomethane	94.1	ug/L	20	18.8	53 - 149
Chloroethane	115	ug/L	20	22.9	14 - 230
2-Chloroethylvinyl ether	121	ug/L	20	24.3	1 - 305
Chloroform	112	ug/L	20	22.4	51 - 138
Chloromethane	119	ug/L	20	23.9	1 - 273
1,2-Dichlorobenzene	105	ug/L	20	21.0	18 - 190
1,3-Dichlorobenzene	108	ug/L	20	21.7	59 - 156
1,4-Dichlorobenzene	106	ug/L	20	21.2	18 - 190
1,1-Dichloroethane	116	ug/L	20	23.2	59 - 155
1,2-Dichloroethane	111	ug/L	20	22.2	49 - 155
1,1-Dichloroethene	118	ug/L	20	23.7	1 - 234
trans-1,2-Dichloroethene	120	ug/L	20	24.0	54 - 156
1,2-Dichloropropane	115	ug/L	20	23.1	1 - 210
cis-1,3-Dichloropropene	111	ug/L	20	22.3	1 - 227
trans-1,3-Dichloropropene	111	ug/L	20	22.2	17 - 183
1,3-Dichloropropene, Total	111	ug/L	40	44.4	17 - 183
Ethylbenzene	106	ug/L	20	21.2	37 - 162
Methylene Chloride	112	ug/L	20	22.4	1 - 221
Styrene	107	ug/L	20	21.5	78 - 127
1,1,2,2-Tetrachloroethane	111	ug/L	20	22.2	46 - 157
Tetrachloroethene	98.9	ug/L	20	19.8	64 - 148
Toluene	109	ug/L	20	21.8	47 - 150
1,1,1-Trichloroethane	112	ug/L	20	22.3	52 - 162
1,1,2-Trichloroethane	105	ug/L	20	21.0	52 - 150
Trichloroethene	108	ug/L	20	21.6	71 - 157
Trichlorofluoromethane	115	ug/L	20	22.9	17 - 181
Vinyl Chloride	117	ug/L	20	23.4	1 - 251
1,2-Dichloroethane-d4 (S)	96.9	%			72 - 142
4-Bromofluorobenzene (S)	96.7	%			73 - 119
Dibromofluoromethane (S)	99	%			74 - 132
Toluene-d8 (S)	87.8	%			75 - 133

**ALS Environmental Laboratory Locations Across North America**
**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey



**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

MATRIX SPIKE: 2238081 DUPLICATE: 2238082 ORIGINAL: 2097808015

\*\*\*\*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
Acrolein	0	ug/L	150	150.153	147.131	100	98.1	8 - 171	2.03	22
Acrylonitrile	0	ug/L	100	111.058	108.428	111	108	63 - 165	2.4	12
Benzene	0	ug/L	20	22.5513	21.1257	113	106	37 - 151	6.53	15
Bromodichloromethane	0	ug/L	20	21.1657	19.6582	106	98.3	35 - 155	7.39	14
Bromoform	0	ug/L	20	15.6976	15.6576	78.5	78.3	45 - 169	.26	11
Bromomethane	.33354	ug/L	20	11.435	14.1572	55.5	69.1	1 - 242	21.3	23
Carbon Tetrachloride	0	ug/L	20	23.6443	22.2588	118	111	70 - 140	6.04	18
Chlorobenzene	.16175	ug/L	20	19.8145	18.8274	98.3	93.3	37 - 160	5.11	15
Chlorodibromomethane	0	ug/L	20	17.3173	16.2962	86.6	81.5	53 - 149	6.08	19
Chloroethane	0	ug/L	20	23.9396	22.1281	120	111	14 - 230	7.86	25
2-Chloroethylvinyl ether	0	ug/L	20	.0322	.05647	.16*	.28*	1 - 305	54.7	40
Chloroform	0	ug/L	20	21.5094	20.0153	108	100	51 - 138	7.2	15
Chloromethane	0	ug/L	20	24.6006	22.6764	123	113	1 - 273	8.14	23
1,1-Dichloroethane	.23633	ug/L	20	23.3904	21.7724	116	108	59 - 155	7.17	16
1,2-Dichloroethane	0	ug/L	20	22.0399	20.7847	110	104	49 - 155	5.86	13
1,1-Dichloroethene	0	ug/L	20	24.6742	23.2078	123	116	1 - 234	6.13	18
trans-1,2-Dichloroethene	0	ug/L	20	24.0917	22.1819	120	111	54 - 156	8.25	16
cis-1,3-Dichloropropene	0	ug/L	20	21.0767	19.8479	105	99.2	1 - 227	6.01	13
trans-1,3-Dichloropropene	0	ug/L	20	20.7394	20.1662	104	101	17 - 183	2.8	13
Ethylbenzene	0	ug/L	20	20.4237	19.7542	102	98.8	37 - 162	3.33	17
Methylene Chloride	.51079	ug/L	20	23.5029	21.603	115	105	1 - 221	8.42	14
1,1,2,2-Tetrachloroethane	0	ug/L	20	21.8944	21.5533	109	108	46 - 157	1.57	13
Tetrachloroethene	0	ug/L	20	19.6241	18.3701	98.1	91.9	64 - 148	6.6	18
Toluene	0	ug/L	20	21.3447	20.1207	107	101	47 - 150	5.9	19
1,1,1-Trichloroethane	0	ug/L	20	22.7931	21.5084	114	108	52 - 162	5.8	18
1,1,2-Trichloroethane	0	ug/L	20	20.3737	19.3629	102	96.8	52 - 150	5.09	12
Trichloroethene	0	ug/L	20	21.879	19.9908	109	100	71 - 157	9.02	17
Trichlorofluoromethane	0	ug/L	20	24.4708	22.2862	122	111	17 - 181	9.34	18
Vinyl Chloride	0	ug/L	20	25.7403	23.7135	129	119	1 - 251	8.2	29
1,2-Dichloroethane-d4 (S)	97	%				97	94.9	72 - 142		
4-Bromofluorobenzene (S)	97.5	%				97.5	97.4	73 - 119		
Dibromofluoromethane (S)	99	%				99	98.2	74 - 132		
Toluene-d8 (S)	87.1	%				87.1	86.5	75 - 133		

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

MATRIX SPIKE: 2238083 DUPLICATE: 2238084 ORIGINAL: 2097759001

\*\*\*\*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
Acrolein	0	ug/L	150	10.1768	9.90273	6.78*	6.6*	8 - 171	2.73	22
Acrylonitrile	0	ug/L	100	108.178	109.901	108	110	63 - 165	1.58	12
Benzene	0	ug/L	20	22.6326	22.0626	113	110	37 - 151	2.55	15
Bromodichloromethane	0	ug/L	20	20.8692	20.7066	104	104	35 - 155	.78	14
Bromoform	0	ug/L	20	16.1355	16.4362	80.7	82.2	45 - 169	1.85	11
Bromomethane	.27639	ug/L	20	9.9047	8.03937	48.1	38.8	1 - 242	20.8	23
Carbon Tetrachloride	0	ug/L	20	23.1663	22.614	116	113	70 - 140	2.41	18
Chlorobenzene	0	ug/L	20	20.0009	19.4294	100	97.1	37 - 160	2.9	15
Chlorodibromomethane	0	ug/L	20	17.4055	17.6671	87	88.3	53 - 149	1.49	19
Chloroethane	0	ug/L	20	23.5568	26.7824	118	134	14 - 230	12.8	25
Chloroform	0	ug/L	20	21.3666	20.9792	107	105	51 - 138	1.83	15
Chloromethane	0	ug/L	20	24.5225	23.7782	123	119	1 - 273	3.08	23
1,2-Dichlorobenzene	0	ug/L	20	20.6096	20.6428	103	103	18 - 190	.16	12
1,3-Dichlorobenzene	0	ug/L	20	21.0905	20.5416	105	103	59 - 156	2.64	13
1,4-Dichlorobenzene	0	ug/L	20	20.7813	20.2154	104	101	18 - 190	2.76	10
1,1-Dichloroethane	0	ug/L	20	23.1318	21.9296	116	110	59 - 155	5.34	16
1,2-Dichloroethane	0	ug/L	20	21.2165	21.197	106	106	49 - 155	.09	13
1,1-Dichloroethene	0	ug/L	20	24.5901	23.1779	123	116	1 - 234	5.91	18
trans-1,2-Dichloroethene	0	ug/L	20	24.1291	22.9305	121	115	54 - 156	5.09	16
1,2-Dichloropropane	0	ug/L	20	22.7527	22.2545	114	111	1 - 210	2.21	14
1,3-Dichloropropene, Total	0	ug/L	40	36.9647	36.1293	92.4	90.3	17 - 183	2.29	13
Ethylbenzene	0	ug/L	20	20.9451	20.3009	105	102	37 - 162	3.12	17
Methylene Chloride	0	ug/L	20	21.2955	20.3807	106	102	1 - 221	4.39	14
1,1,1,2-Tetrachloroethane	0	ug/L	20	21.6532	21.2662	108	106	46 - 157	1.8	13
Tetrachloroethene	0	ug/L	20	23.0243	21.8982	115	109	64 - 148	5.01	18
Toluene	0	ug/L	20	21.4999	21.0522	107	105	47 - 150	2.1	19
1,1,1-Trichloroethane	0	ug/L	20	22.7268	21.9169	114	110	52 - 162	3.63	18
1,1,2-Trichloroethane	0	ug/L	20	20.1656	20.0738	101	100	52 - 150	.46	12
Trichloroethene	0	ug/L	20	21.8687	20.9532	109	105	71 - 157	4.28	17
Vinyl Chloride	0	ug/L	20	27.4543	25.5813	137	128	1 - 251	7.06	29
1,2-Dichloroethane-d4 (S)	93.7	%				93.7	91.1	72 - 142		
4-Bromofluorobenzene (S)	96.2	%				96.2	97	73 - 119		
Dibromofluoromethane (S)	97.3	%				97.3	97.9	74 - 132		
Toluene-d8 (S)	86.5	%				86.5	86.9	75 - 133		

**ALS Environmental Laboratory Locations Across North America**

Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife United States: Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York Mexico: Monterrey

**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

**QC Batch:** WETC/160121 **Analysis Method:** S2130B-01

**QC Batch Method:** S2130B-01

**Associated Lab Samples:** 2098091001

**METHOD BLANK: 2238085**

Parameter	Blank Result	Units	Reporting Limit
Turbidity	ND	NTU	0.10

**SAMPLE DUPLICATE: 2238087 ORIGINAL: 2098037004**

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Turbidity	1.95	NTU	1.97	1.02	10

**METHOD BLANK: 2238088**

Parameter	Blank Result	Units	Reporting Limit
Turbidity	ND	NTU	0.10

**ALS Environmental Laboratory Locations Across North America**
**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**QUALITY CONTROL DATA**

Workorder: 2098091 VERSO-N. Branch Potomac

**QC Batch:** WETC/160134 **Analysis Method:** S2120B-01**QC Batch Method:** S2120B-01**Associated Lab Samples:**

SAMPLE DUPLICATE: 2238231 ORIGINAL: 2098037004

Parameter	Original Result	Units	DUP Result	RPD	Max RPD
Color, Apparent	15	CU	15	0	10

**ALS Environmental Laboratory Locations Across North America**Canada: Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey

**QUALITY CONTROL DATA CROSS REFERENCE TABLE**

Workorder: 2098091 VERSO-N. Branch Potomac

---

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
2098091001	North Branch Potomac - Pinto			EPA 624	VOMS/37283
2098091001	North Branch Potomac - Pinto			S2130B-01	WETC/160121
2098091001	North Branch Potomac - Pinto			S2120B-01	WETC/160134
2098091001	North Branch Potomac - Pinto	SW846 3015	MDIG/52995	SW846 6010C	META/50014
2098091001	North Branch Potomac - Pinto	EPA 625	EXTR/40878	EPA 625	SVMS/24288
2098091001	North Branch Potomac - Pinto	SW846 7470A	MDIG/53012	SW846 7470A	META/50021

---

**ALS Environmental Laboratory Locations Across North America**

**Canada:** Burlington · Calgary · Centre of Excellence · Edmonton · Fort McMurray · Fort St. John · Grande Prairie · London · Mississauga · Richmond Hill · Saskatoon · Thunder Bay  
Vancouver Waterloo · Winnipeg · Yellowknife **United States:** Cincinnati · Everett · Fort Collins · Holland · Houston · Middletown · Salt Lake City · Spring City · York **Mexico:** Monterrey



34 Dogwood Lane  
Middletown, PA 17057  
P. 717-944-5541  
F. 717-944-1430

**Environmental**

**CHAIN OF CUSTODY/  
REQUEST FOR ANALYSIS**

**ALL SHADED AREAS MUST BE COMPLETED BY THE CLIENT /  
SAMPLER. INSTRUCTIONS ON THE BACK.**

Client Name: MDE - Water Management  
 Address: 160 S. Water Street  
Frostburg MD 21532  
 Contact: Brad Metzger  
 Phone#: 3016891489  
 Project Name#: VERSO - N. Branch Potomac  
 Bill To:

TAT  Normal-Standard TAT is 10-12 business days.  
 Rush-Subject to ALS approval and surcharges.  
 Date Required: \_\_\_\_\_ Approved By: \_\_\_\_\_  
 Email?  -Y  -N  
 Fax?  -Y  -N

Container Type Container Size	Vials	Cube	Cube	Cube	Cube
IL	40ml	IL	IL	IL	IL
COOL	HCI	HNO3	COOL	COOL	COOL
ANALYSES/METHOD REQUESTED					
Semi-Volatile 5 bottles					
VOC's plus styrene 2 vials					
Metals 1 cube					
GOD 1 cube					
TSS, Turbidity, Color 1 cube					

Sample Description/Location (as it will appear on the lab report)	Sample Date	Time	Matrix	Enter Number of Containers Per Sample or Field Results Below.
1 North Branch Potomac - Photo	9-25-15	1224	Gorc	1
2				
3				
4				
5				
6				
7				
8				
9				
10				

Project Comments:  
 LOGGED BY (signature): Frank D'Amico 9/25/15 1730  
 RECEIVED BY (signature): \_\_\_\_\_  
 Date Time Received By / Company Name  
 1 Brad Metzger 9/25/15 1530 2  
 3 Brad Metzger 9/25/15 1730 4  
 5 Brad Metzger 9/25/15 1730 6  
 7 \_\_\_\_\_ 8  
 9 \_\_\_\_\_ 10

Beinquished By / Company Name

COC #: \_\_\_\_\_  
 ALS Quot \_\_\_\_\_

Receipt # \_\_\_\_\_  
 Cooler Temp: 40C Therm ID: 309  
 No. of Coolers: \_\_\_\_\_  
 Custody Seals Present? (if present) Seals Intact? \_\_\_\_\_  
 Received on Ice? \_\_\_\_\_  
 COC Labels Complete/Accurate? \_\_\_\_\_  
 Cont. in Good Cond.? \_\_\_\_\_  
 Correct Containers? \_\_\_\_\_  
 Correct Sample Volumes? \_\_\_\_\_  
 Correct Preservation? \_\_\_\_\_  
 Headspace/Volatiles? \_\_\_\_\_

Counter/Tracking #: \_\_\_\_\_  
 Sample/COC Comments \_\_\_\_\_  
 ALS Field Services: \_\_\_\_\_ Pick-up \_\_\_\_\_ Labor \_\_\_\_\_  
 \_\_\_\_\_ Composite Sampling \_\_\_\_\_ Rental Equipment \_\_\_\_\_  
 \_\_\_\_\_ Other: \_\_\_\_\_  
 Special Processing  
 USACE  Navy   
 Standard  CLP-like  USACE   
 Deliverables  Reportable to PADEP? Yes  No   
 PWSID # \_\_\_\_\_  
 EDDS: Format Type \_\_\_\_\_  
 State Samples Collected In  
 NY  NJ  PA  NC  Special