DRAKE Consulting Group, LLC

February 26, 2020

Jennifer Dorman, Environmental Program Associate
Wisconsin Department of Natural Resources
2300 N. Martin Luther King Jr. Drive
Milwaukee, WI 53212

RE: Groundwater Sample Results Notification for the Former Meta Mold/Amcast North, Amcast Central & Amcast South Brownfield Redevelopment Sites - City of Cedarburg, Ozaukee County, Wisconsin. U.S. EPA Superfund Site ID: WIN 000510210 (Amcast Industrial Site)
DNR BRRTS Numbers: 07-46-581557, 02-46-583162, 02-46-583163, and 02-46-583164

Dear Ms. Dorman:

This letter is being submitted to the Wisconsin Department of Natural Resources (WDNR) on behalf of our client, Oliver Fiontar, LLC to provide notification of the groundwater sample results that were collected from the monitoring wells at the Amcast Industrial and Amcast Automotive Brownfield Redevelopment Site in Cedarburg, Wisconsin.

On November 19, 2019 Drake returned to the site to sample the existing monitoring wells at the Amcast redevelopment property. Three monitoring wells (AMN-MW01, FVMW-26, FVMW-27) were located on the Amcast North property and nine (9) monitoring wells (AMS-MW01, GMMW-1, GMMW-2, GMMW-3, GMMW-4, GMMW-5, GMMW-6, GMMW-7 and FVMW-20) were located on the Amcast Central and Amcast South properties. Groundwater samples were collected from each well and submitted to a WDNR-certified laboratory analysis for the following parameters:

Analytical Parameter	Analytical Method
Volatile Organic Compounds (VOCs)	EPA Method 8260
Poly-cyclic Aromatic Hydrocarbons (PAHs)	EPA Method 8270
Resource Conservation and Recovery Act (RCRA) Metals	EPA Method 6010/7470
Polychlorinated Biphenyls (PCBs)	EPA Method 8082
Total suspended solids	SM 2540D

A summary of the results from the November 19, 2018 groundwater monitoring event was submitted to the WDNR via electronic submittal on April 18, 2019. The information contained in the April 2019 submittal indicated that a groundwater sample was collected from monitoring well FVMW-28 on the Amcast North property, however that monitoring well has been reported as "dry" during both sampling events and no sample has been able to be collected by Drake during annual monitoring. The attached contains the complete laboratory analytical results and associated chain of custody for each sampling event discussed above.

If you have any questions regarding this monthly update, please contact D.J. Burns, President/Project Director of Drake. His office telephone number is (262) 241-0005 and his cell phone number is (414) 881-0003.

Sincerely,

Drake Consulting Group, LLC

Chelsea Corson
Senior Project Manager

Attachments

cc: Oliver Fiontar, LLC

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

December 07, 2018

DJ Burns
Drake Consulting Group, LLC
118 N. Green Bay Road
Suite 2
Thiensville, WI 53092

RE: Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Dear DJ Burns:
Enclosed are the analytical results for sample(s) received by the laboratory on November 21, 2018. 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,

Steven Mleczko
steve.mleczko@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Chelsea Corson, Drake Consulting Group, LLC

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CERTIFICATIONS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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SAMPLE SUMMARY

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40179993001	**AMN-MW1**	Water	11/19/18 12:00	11/21/18 08:25
40179993002	**FVMW-27**	Water	11/19/18 12:18	11/21/18 08:25
40179993003	**FVMW-26**	Water	11/19/18 12:38	11/21/18 08:25
40179993004	**GMMW-1**	Water	11/19/18 13:10	11/21/18 08:25
40179993005	**GMMW-2**	Water	11/19/18 13:45	11/21/18 08:25
40179993006	**FVMW-20**	Water	11/19/18 14:05	11/21/18 08:25
40179993007	**GMMW-3**	Water	11/19/18 14:20	11/21/18 08:25
40179993008	**GMMW-5**	Water	11/19/18 14:35	11/21/18 08:25
40179993009	**AMSMW-01**	Water	11/19/18 14:45	11/21/18 08:25
40179993010	**GMMW-4**	Water	11/19/18 15:00	11/21/18 08:25
40179993011	**GMMW-6**	Water	11/19/18 15:30	11/21/18 08:25
40179993012	**GMMW-7**	Water	11/19/18 15:50	11/21/18 08:25

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SAMPLE ANALYTE COUNT

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40179993001	**AMN-MW1**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G
40179993002	**FVMW-27**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G
40179993003	**FVMW-26**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G
40179993004	**GMMW-1**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G
40179993005	**GMMW-2**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G

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SAMPLE ANALYTE COUNT

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G
40179993006	**FVMW-20**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G
40179993007	**GMMW-3**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G
40179993008	**GMMW-5**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G
40179993009	**AMSMW-01**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G
40179993010	**GMMW-4**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G

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SAMPLE ANALYTE COUNT

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G
40179993011	**GMMW-6**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G
40179993012	**GMMW-7**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	DEY	1	PASI-G

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Method: **EPA 8082**
Description: 8082 GCS PCB
Client: Drake Consulting Group, LLC
Date: December 07, 2018

General Information:
12 samples were analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 307735

S0: Surrogate recovery outside laboratory control limits.
- GMMW-4 (Lab ID: 40179993010)
  - Tetrachloro-m-xylene (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 307735

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Drake Consulting Group, LLC
Date: December 07, 2018

General Information:
12 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: Drake Consulting Group, LLC
Date: December 07, 2018

General Information:
12 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

P4: Sample field preservation does not meet EPA or method recommendations for this analysis.
- AMN-MW1 (Lab ID: 40179993001)
- AMSMW-01 (Lab ID: 40179993009)
- FVMW-20 (Lab ID: 40179993006)
- FVMW-26 (Lab ID: 40179993003)
- FVMW-27 (Lab ID: 40179993002)
- GMMW-1 (Lab ID: 40179993004)
- GMMW-2 (Lab ID: 40179993005)
- GMMW-3 (Lab ID: 40179993007)
- GMMW-4 (Lab ID: 40179993010)
- GMMW-5 (Lab ID: 40179993008)
- GMMW-6 (Lab ID: 40179993011)
- GMMW-7 (Lab ID: 40179993012)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: Drake Consulting Group, LLC
Date: December 07, 2018

Analyte Comments:

QC Batch: 307569

1q: Analyte was measured in the associated method blank at a concentration of -13.72 ug/L.

- AMN-MW1 (Lab ID: 40179993001)
  - Selenium, Dissolved
- AMSMW-01 (Lab ID: 40179993009)
  - Selenium, Dissolved
- FVMW-20 (Lab ID: 40179993006)
  - Selenium, Dissolved
- FVMW-26 (Lab ID: 40179993003)
  - Selenium, Dissolved
- FVMW-27 (Lab ID: 40179993002)
  - Selenium, Dissolved
- GMMW-1 (Lab ID: 40179993004)
  - Selenium, Dissolved
- GMMW-2 (Lab ID: 40179993005)
  - Selenium, Dissolved
- GMMW-3 (Lab ID: 40179993007)
  - Selenium, Dissolved
- GMMW-4 (Lab ID: 40179993010)
  - Selenium, Dissolved
- GMMW-5 (Lab ID: 40179993008)
  - Selenium, Dissolved
- GMMW-6 (Lab ID: 40179993011)
  - Selenium, Dissolved
- GMMW-7 (Lab ID: 40179993012)
  - Selenium, Dissolved

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Method: **EPA 7470**
Description: 7470 Mercury
Client: Drake Consulting Group, LLC
Date: December 07, 2018

General Information:
12 samples were analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Method: **EPA 7470**
Description: 7470 Mercury, Dissolved
Client: Drake Consulting Group, LLC
Date: December 07, 2018

General Information:
12 samples were analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

P4: Sample field preservation does not meet EPA or method recommendations for this analysis.
- AMN-MW1 (Lab ID: 40179993001)
- AMSMW-01 (Lab ID: 40179993009)
- FVMW-20 (Lab ID: 40179993006)
- FVMW-26 (Lab ID: 40179993003)
- FVMW-27 (Lab ID: 40179993002)
- GMMW-1 (Lab ID: 40179993004)
- GMMW-2 (Lab ID: 40179993005)
- GMMW-3 (Lab ID: 40179993007)
- GMMW-4 (Lab ID: 40179993010)
- GMMW-5 (Lab ID: 40179993008)
- GMMW-6 (Lab ID: 40179993011)
- GMMW-7 (Lab ID: 40179993012)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Drake Consulting Group, LLC
Date: December 07, 2018

General Information:
12 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 307467

S4: Surrogate recovery not evaluated against control limits due to sample dilution.
- GMMW-4 (Lab ID: 40179993010)
  - 2-Fluorobiphenyl (S)
  - Terphenyl-d14 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

QC Batch: 307467

L1: Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
- LCS (Lab ID: 1797604)
  - Benzo(a)pyrene
  - Benzo(k)fluoranthene
- LCSD (Lab ID: 1797605)
  - Benzo(a)pyrene

R1: RPD value was outside control limits.
- LCSD (Lab ID: 1797605)
  - 2,4-Dimethylphenol

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Drake Consulting Group, LLC
Date: December 07, 2018

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 307467

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

Analyte Comments:

QC Batch: 307467

D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.

- GMMW-3 (Lab ID: 40179993007)
  - Phenol

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Method: **EPA 8260**
Description: 8260 MSV
Client: Drake Consulting Group, LLC
Date: December 07, 2018

General Information:
12 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Method: **SM 2540D**
Description: 2540D Total Suspended Solids
Client: Drake Consulting Group, LLC
Date: December 07, 2018

General Information:
12 samples were analyzed for SM 2540D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 307348

R1: RPD value was outside control limits.
- DUP (Lab ID: 1796920)
  - Total Suspended Solids

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: AMN-MW1 **Lab ID: 40179993001** Collected: 11/19/18 12:00 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:28	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:28	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:28	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:28	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:28	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:28	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:28	11096-82-5	
PCB, Total	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:28	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	58	%	44-121		1	11/28/18 07:24	11/29/18 04:28	877-09-8	
Decachlorobiphenyl (S)	40	%	10-119		1	11/28/18 07:24	11/29/18 04:28	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**14.9J**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 17:31	7440-38-2	
Barium	**358**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 17:31	7440-39-3	
Cadmium	**1.8J**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 17:31	7440-43-9	
Chromium	**471**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 17:31	7440-47-3	
Lead	**35.5**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 17:31	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 17:31	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 17:31	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 16:45	7440-38-2	
Barium, Dissolved	**83.1**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 16:45	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 16:45	7440-43-9	
Chromium, Dissolved	**385**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 16:45	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 16:45	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 16:45	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 16:45	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 08:34	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**0.098J**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 09:34	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.9**	ug/L	6.5	1.9	1	11/26/18 07:15	11/27/18 11:30	120-82-1	
1,2-Dichlorobenzene	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 11:30	95-50-1	
1,3-Dichlorobenzene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 11:30	541-73-1	
1,4-Dichlorobenzene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 11:30	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.5**	ug/L	4.8	1.5	1	11/26/18 07:15	11/27/18 11:30	108-60-1	
2,4,5-Trichlorophenol	**<0.80**	ug/L	2.7	0.80	1	11/26/18 07:15	11/27/18 11:30	95-95-4	
2,4,6-Trichlorophenol	**<2.0**	ug/L	6.7	2.0	1	11/26/18 07:15	11/27/18 11:30	88-06-2	
2,4-Dichlorophenol	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 11:30	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: AMN-MW1 **Lab ID: 40179993001** Collected: 11/19/18 12:00 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.2**	ug/L	4.0	1.2	1	11/26/18 07:15	11/27/18 11:30	105-67-9	
2,4-Dinitrophenol	**<0.68**	ug/L	2.3	0.68	1	11/26/18 07:15	11/27/18 11:30	51-28-5	
2,4-Dinitrotoluene	**<0.75**	ug/L	2.5	0.75	1	11/26/18 07:15	11/27/18 11:30	121-14-2	
2,6-Dinitrotoluene	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 11:30	606-20-2	
2-Chloronaphthalene	**<1.6**	ug/L	5.2	1.6	1	11/26/18 07:15	11/27/18 11:30	91-58-7	
2-Chlorophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 11:30	95-57-8	
2-Methylnaphthalene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 11:30	91-57-6	
2-Methylphenol(o-Cresol)	**<0.83**	ug/L	2.8	0.83	1	11/26/18 07:15	11/27/18 11:30	95-48-7	
2-Nitroaniline	**<0.74**	ug/L	2.5	0.74	1	11/26/18 07:15	11/27/18 11:30	88-74-4	
2-Nitrophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 11:30	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 11:30		
3,3'-Dichlorobenzidine	**<0.86**	ug/L	2.9	0.86	1	11/26/18 07:15	11/27/18 11:30	91-94-1	
3-Nitroaniline	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 11:30	99-09-2	
4,6-Dinitro-2-methylphenol	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 11:30	534-52-1	
4-Bromophenylphenyl ether	**<1.9**	ug/L	6.3	1.9	1	11/26/18 07:15	11/27/18 11:30	101-55-3	
4-Chloro-3-methylphenol	**<1.6**	ug/L	5.4	1.6	1	11/26/18 07:15	11/27/18 11:30	59-50-7	
4-Chloroaniline	**<1.0**	ug/L	3.5	1.0	1	11/26/18 07:15	11/27/18 11:30	106-47-8	
4-Chlorophenylphenyl ether	**<0.78**	ug/L	2.6	0.78	1	11/26/18 07:15	11/27/18 11:30	7005-72-3	
4-Nitroaniline	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 11:30	100-01-6	
4-Nitrophenol	**<1.0**	ug/L	3.3	1.0	1	11/26/18 07:15	11/27/18 11:30	100-02-7	
Acenaphthene	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 11:30	83-32-9	
Acenaphthylene	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 11:30	208-96-8	
Anthracene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 11:30	120-12-7	
Benzo(a)anthracene	**<0.51**	ug/L	1.7	0.51	1	11/26/18 07:15	11/27/18 11:30	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 11:30	50-32-8	L1
Benzo(b)fluoranthene	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 11:30	205-99-2	
Benzo(g,h,i)perylene	**<0.77**	ug/L	2.6	0.77	1	11/26/18 07:15	11/27/18 11:30	191-24-2	
Benzo(k)fluoranthene	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 11:30	207-08-9	L1
Butylbenzylphthalate	**<0.74**	ug/L	2.5	0.74	1	11/26/18 07:15	11/27/18 11:30	85-68-7	
Carbazole	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 11:30	86-74-8	
Chrysene	**<1.7**	ug/L	5.5	1.7	1	11/26/18 07:15	11/27/18 11:30	218-01-9	
Di-n-butylphthalate	**<2.4**	ug/L	8.1	2.4	1	11/26/18 07:15	11/27/18 11:30	84-74-2	
Di-n-octylphthalate	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 11:30	117-84-0	
Dibenz(a,h)anthracene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 11:30	53-70-3	
Dibenzofuran	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 11:30	132-64-9	
Diethylphthalate	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 11:30	84-66-2	
Dimethylphthalate	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 11:30	131-11-3	
Fluoranthene	**<0.54**	ug/L	1.8	0.54	1	11/26/18 07:15	11/27/18 11:30	206-44-0	
Fluorene	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 11:30	86-73-7	
Hexachloro-1,3-butadiene	**<2.3**	ug/L	7.8	2.3	1	11/26/18 07:15	11/27/18 11:30	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	5.4	1.6	1	11/26/18 07:15	11/27/18 11:30	118-74-1	
Hexachlorocyclopentadiene	**<0.65**	ug/L	2.2	0.65	1	11/26/18 07:15	11/27/18 11:30	77-47-4	
Hexachloroethane	**<2.5**	ug/L	8.4	2.5	1	11/26/18 07:15	11/27/18 11:30	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 11:30	193-39-5	
Isophorone	**<0.70**	ug/L	2.3	0.70	1	11/26/18 07:15	11/27/18 11:30	78-59-1	
N-Nitroso-di-n-propylamine	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 11:30	621-64-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: AMN-MW1 **Lab ID: 40179993001** Collected: 11/19/18 12:00 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.4**	ug/L	11.2	3.4	1	11/26/18 07:15	11/27/18 11:30	86-30-6	
Naphthalene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 11:30	91-20-3	
Nitrobenzene	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 11:30	98-95-3	
Pentachlorophenol	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 11:30	87-86-5	
Phenanthrene	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 11:30	85-01-8	
Phenol	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 11:30	108-95-2	
Pyrene	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 11:30	129-00-0	
bis(2-Chloroethoxy)methane	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 11:30	111-91-1	
bis(2-Chloroethyl) ether	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 11:30	111-44-4	
bis(2-Ethylhexyl)phthalate	**<0.66**	ug/L	2.2	0.66	1	11/26/18 07:15	11/27/18 11:30	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	83	%	56-120		1	11/26/18 07:15	11/27/18 11:30	4165-60-0	
2-Fluorobiphenyl (S)	76	%	54-122		1	11/26/18 07:15	11/27/18 11:30	321-60-8	
Terphenyl-d14 (S)	107	%	59-136		1	11/26/18 07:15	11/27/18 11:30	1718-51-0	
Phenol-d6 (S)	19	%	16-120		1	11/26/18 07:15	11/27/18 11:30	13127-88-3	
2-Fluorophenol (S)	34	%	27-77		1	11/26/18 07:15	11/27/18 11:30	367-12-4	
2,4,6-Tribromophenol (S)	96	%	58-134		1	11/26/18 07:15	11/27/18 11:30	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/27/18 11:42	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 11:42	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/27/18 11:42	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/27/18 11:42	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/27/18 11:42	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/27/18 11:42	74-83-9	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 11:42	104-51-8	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/27/18 11:42	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/27/18 11:42	98-06-6	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 11:42	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 11:42	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/27/18 11:42	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/27/18 11:42	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/27/18 11:42	74-87-3	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/27/18 11:42	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/27/18 11:42	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/27/18 11:42	96-12-8	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/27/18 11:42	124-48-1	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/27/18 11:42	106-93-4	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/27/18 11:42	74-95-3	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 11:42	95-50-1	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/27/18 11:42	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/27/18 11:42	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/27/18 11:42	75-71-8	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 11:42	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 11:42	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 11:42	75-35-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: AMN-MW1 **Lab ID: 40179993001** Collected: 11/19/18 12:00 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/27/18 11:42	156-59-2	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/27/18 11:42	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 11:42	78-87-5	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/27/18 11:42	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/27/18 11:42	594-20-7	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/27/18 11:42	563-58-6	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/27/18 11:42	10061-01-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/27/18 11:42	10061-02-6	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/27/18 11:42	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/27/18 11:42	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 11:42	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/27/18 11:42	98-82-8	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/27/18 11:42	99-87-6	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/27/18 11:42	75-09-2	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/27/18 11:42	1634-04-4	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 11:42	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/27/18 11:42	103-65-1	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/27/18 11:42	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 11:42	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 11:42	79-34-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/27/18 11:42	127-18-4	
Toluene	**0.32J**	ug/L	5.0	0.17	1		11/27/18 11:42	108-88-3	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/27/18 11:42	87-61-6	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/27/18 11:42	120-82-1	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/27/18 11:42	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/27/18 11:42	79-00-5	
Trichloroethene	**2.1**	ug/L	1.0	0.26	1		11/27/18 11:42	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/27/18 11:42	75-69-4	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/27/18 11:42	96-18-4	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/27/18 11:42	95-63-6	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/27/18 11:42	108-67-8	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 11:42	75-01-4	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/27/18 11:42	179601-23-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 11:42	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/27/18 11:42	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		11/27/18 11:42	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/27/18 11:42	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**272**	mg/L	4.0	1.9	1		11/21/18 11:19		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-27 **Lab ID: 40179993002** Collected: 11/19/18 12:18 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:47	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:47	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:47	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:47	53469-21-9	
PCB-1248 (Aroclor 1248)	**0.37J**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:47	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:47	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:47	11096-82-5	
PCB, Total	**0.37J**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 04:47	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	82	%	44-121		1	11/28/18 07:24	11/29/18 04:47	877-09-8	
Decachlorobiphenyl (S)	65	%	10-119		1	11/28/18 07:24	11/29/18 04:47	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 17:43	7440-38-2	
Barium	**116**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 17:43	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 17:43	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 17:43	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 17:43	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 17:43	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 17:43	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 16:52	7440-38-2	
Barium, Dissolved	**112**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 16:52	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 16:52	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 16:52	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 16:52	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 16:52	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 16:52	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 08:36	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 09:36	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.9**	ug/L	6.4	1.9	1	11/26/18 07:15	11/27/18 11:51	120-82-1	
1,2-Dichlorobenzene	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 11:51	95-50-1	
1,3-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 11:51	541-73-1	
1,4-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 11:51	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 11:51	108-60-1	
2,4,5-Trichlorophenol	**<0.79**	ug/L	2.6	0.79	1	11/26/18 07:15	11/27/18 11:51	95-95-4	
2,4,6-Trichlorophenol	**<2.0**	ug/L	6.6	2.0	1	11/26/18 07:15	11/27/18 11:51	88-06-2	
2,4-Dichlorophenol	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 11:51	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-27 **Lab ID: 40179993002** Collected: 11/19/18 12:18 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.2**	ug/L	4.0	1.2	1	11/26/18 07:15	11/27/18 11:51	105-67-9	
2,4-Dinitrophenol	**<0.67**	ug/L	2.2	0.67	1	11/26/18 07:15	11/27/18 11:51	51-28-5	
2,4-Dinitrotoluene	**<0.75**	ug/L	2.5	0.75	1	11/26/18 07:15	11/27/18 11:51	121-14-2	
2,6-Dinitrotoluene	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 11:51	606-20-2	
2-Chloronaphthalene	**<1.6**	ug/L	5.2	1.6	1	11/26/18 07:15	11/27/18 11:51	91-58-7	
2-Chlorophenol	**<1.1**	ug/L	3.6	1.1	1	11/26/18 07:15	11/27/18 11:51	95-57-8	
2-Methylnaphthalene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 11:51	91-57-6	
2-Methylphenol(o-Cresol)	**<0.82**	ug/L	2.7	0.82	1	11/26/18 07:15	11/27/18 11:51	95-48-7	
2-Nitroaniline	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 11:51	88-74-4	
2-Nitrophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 11:51	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<1.5**	ug/L	4.9	1.5	1	11/26/18 07:15	11/27/18 11:51		
3,3'-Dichlorobenzidine	**<0.85**	ug/L	2.8	0.85	1	11/26/18 07:15	11/27/18 11:51	91-94-1	
3-Nitroaniline	**<0.91**	ug/L	3.0	0.91	1	11/26/18 07:15	11/27/18 11:51	99-09-2	
4,6-Dinitro-2-methylphenol	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 11:51	534-52-1	
4-Bromophenylphenyl ether	**<1.9**	ug/L	6.2	1.9	1	11/26/18 07:15	11/27/18 11:51	101-55-3	
4-Chloro-3-methylphenol	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 11:51	59-50-7	
4-Chloroaniline	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 11:51	106-47-8	
4-Chlorophenylphenyl ether	**<0.77**	ug/L	2.6	0.77	1	11/26/18 07:15	11/27/18 11:51	7005-72-3	
4-Nitroaniline	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 11:51	100-01-6	
4-Nitrophenol	**<0.99**	ug/L	3.3	0.99	1	11/26/18 07:15	11/27/18 11:51	100-02-7	
Acenaphthene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 11:51	83-32-9	
Acenaphthylene	**<1.0**	ug/L	3.3	1.0	1	11/26/18 07:15	11/27/18 11:51	208-96-8	
Anthracene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 11:51	120-12-7	
Benzo(a)anthracene	**<0.50**	ug/L	1.7	0.50	1	11/26/18 07:15	11/27/18 11:51	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 11:51	50-32-8	L1
Benzo(b)fluoranthene	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 11:51	205-99-2	
Benzo(g,h,i)perylene	**<0.76**	ug/L	2.5	0.76	1	11/26/18 07:15	11/27/18 11:51	191-24-2	
Benzo(k)fluoranthene	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 11:51	207-08-9	L1
Butylbenzylphthalate	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 11:51	85-68-7	
Carbazole	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 11:51	86-74-8	
Chrysene	**<1.6**	ug/L	5.5	1.6	1	11/26/18 07:15	11/27/18 11:51	218-01-9	
Di-n-butylphthalate	**<2.4**	ug/L	8.1	2.4	1	11/26/18 07:15	11/27/18 11:51	84-74-2	
Di-n-octylphthalate	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 11:51	117-84-0	
Dibenz(a,h)anthracene	**<1.2**	ug/L	4.2	1.2	1	11/26/18 07:15	11/27/18 11:51	53-70-3	
Dibenzofuran	**<0.72**	ug/L	2.4	0.72	1	11/26/18 07:15	11/27/18 11:51	132-64-9	
Diethylphthalate	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 11:51	84-66-2	
Dimethylphthalate	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 11:51	131-11-3	
Fluoranthene	**<0.53**	ug/L	1.8	0.53	1	11/26/18 07:15	11/27/18 11:51	206-44-0	
Fluorene	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 11:51	86-73-7	
Hexachloro-1,3-butadiene	**<2.3**	ug/L	7.7	2.3	1	11/26/18 07:15	11/27/18 11:51	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 11:51	118-74-1	
Hexachlorocyclopentadiene	**<0.64**	ug/L	2.1	0.64	1	11/26/18 07:15	11/27/18 11:51	77-47-4	
Hexachloroethane	**<2.5**	ug/L	8.4	2.5	1	11/26/18 07:15	11/27/18 11:51	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.4**	ug/L	4.7	1.4	1	11/26/18 07:15	11/27/18 11:51	193-39-5	
Isophorone	**<0.69**	ug/L	2.3	0.69	1	11/26/18 07:15	11/27/18 11:51	78-59-1	
N-Nitroso-di-n-propylamine	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 11:51	621-64-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-27 **Lab ID: 40179993002** Collected: 11/19/18 12:18 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.1	3.3	1	11/26/18 07:15	11/27/18 11:51	86-30-6	
Naphthalene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 11:51	91-20-3	
Nitrobenzene	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 11:51	98-95-3	
Pentachlorophenol	**<1.4**	ug/L	4.5	1.4	1	11/26/18 07:15	11/27/18 11:51	87-86-5	
Phenanthrene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 11:51	85-01-8	
Phenol	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 11:51	108-95-2	
Pyrene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 11:51	129-00-0	
bis(2-Chloroethoxy)methane	**<0.94**	ug/L	3.1	0.94	1	11/26/18 07:15	11/27/18 11:51	111-91-1	
bis(2-Chloroethyl) ether	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 11:51	111-44-4	
bis(2-Ethylhexyl)phthalate	**1.3J**	ug/L	2.2	0.65	1	11/26/18 07:15	11/27/18 11:51	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	96	%	56-120		1	11/26/18 07:15	11/27/18 11:51	4165-60-0	
2-Fluorobiphenyl (S)	77	%	54-122		1	11/26/18 07:15	11/27/18 11:51	321-60-8	
Terphenyl-d14 (S)	124	%	59-136		1	11/26/18 07:15	11/27/18 11:51	1718-51-0	
Phenol-d6 (S)	32	%	16-120		1	11/26/18 07:15	11/27/18 11:51	13127-88-3	
2-Fluorophenol (S)	49	%	27-77		1	11/26/18 07:15	11/27/18 11:51	367-12-4	
2,4,6-Tribromophenol (S)	113	%	58-134		1	11/26/18 07:15	11/27/18 11:51	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/27/18 12:05	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 12:05	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/27/18 12:05	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/27/18 12:05	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/27/18 12:05	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/27/18 12:05	74-83-9	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 12:05	104-51-8	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/27/18 12:05	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/27/18 12:05	98-06-6	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 12:05	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 12:05	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/27/18 12:05	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/27/18 12:05	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/27/18 12:05	74-87-3	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/27/18 12:05	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/27/18 12:05	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/27/18 12:05	96-12-8	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/27/18 12:05	124-48-1	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/27/18 12:05	106-93-4	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/27/18 12:05	74-95-3	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 12:05	95-50-1	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/27/18 12:05	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/27/18 12:05	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/27/18 12:05	75-71-8	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 12:05	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 12:05	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 12:05	75-35-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-27 **Lab ID: 40179993002** Collected: 11/19/18 12:18 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/27/18 12:05	156-59-2	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/27/18 12:05	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 12:05	78-87-5	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/27/18 12:05	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/27/18 12:05	594-20-7	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/27/18 12:05	563-58-6	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/27/18 12:05	10061-01-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/27/18 12:05	10061-02-6	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/27/18 12:05	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/27/18 12:05	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 12:05	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/27/18 12:05	98-82-8	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/27/18 12:05	99-87-6	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/27/18 12:05	75-09-2	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/27/18 12:05	1634-04-4	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 12:05	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/27/18 12:05	103-65-1	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/27/18 12:05	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 12:05	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 12:05	79-34-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/27/18 12:05	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/27/18 12:05	108-88-3	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/27/18 12:05	87-61-6	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/27/18 12:05	120-82-1	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/27/18 12:05	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/27/18 12:05	79-00-5	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 12:05	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/27/18 12:05	75-69-4	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/27/18 12:05	96-18-4	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/27/18 12:05	95-63-6	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/27/18 12:05	108-67-8	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 12:05	75-01-4	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/27/18 12:05	179601-23-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 12:05	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		11/27/18 12:05	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		11/27/18 12:05	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		11/27/18 12:05	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**42.2**	mg/L	2.0	0.95	1		11/21/18 11:19		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-26 **Lab ID: 40179993003** Collected: 11/19/18 12:38 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:05	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:05	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:05	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:05	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:05	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:05	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:05	11096-82-5	
PCB, Total	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:05	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	85	%	44-121		1	11/28/18 07:24	11/29/18 05:05	877-09-8	
Decachlorobiphenyl (S)	64	%	10-119		1	11/28/18 07:24	11/29/18 05:05	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 17:45	7440-38-2	
Barium	**130**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 17:45	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 17:45	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 17:45	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 17:45	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 17:45	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 17:45	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 16:54	7440-38-2	
Barium, Dissolved	**94.9**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 16:54	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 16:54	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 16:54	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 16:54	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 16:54	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 16:54	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 08:38	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 09:39	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.9**	ug/L	6.5	1.9	1	11/26/18 07:15	11/27/18 12:13	120-82-1	
1,2-Dichlorobenzene	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 12:13	95-50-1	
1,3-Dichlorobenzene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 12:13	541-73-1	
1,4-Dichlorobenzene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 12:13	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.5**	ug/L	4.8	1.5	1	11/26/18 07:15	11/27/18 12:13	108-60-1	
2,4,5-Trichlorophenol	**<0.80**	ug/L	2.7	0.80	1	11/26/18 07:15	11/27/18 12:13	95-95-4	
2,4,6-Trichlorophenol	**<2.0**	ug/L	6.7	2.0	1	11/26/18 07:15	11/27/18 12:13	88-06-2	
2,4-Dichlorophenol	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 12:13	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-26 **Lab ID: 40179993003** Collected: 11/19/18 12:38 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.2**	ug/L	4.0	1.2	1	11/26/18 07:15	11/27/18 12:13	105-67-9	
2,4-Dinitrophenol	**<0.68**	ug/L	2.3	0.68	1	11/26/18 07:15	11/27/18 12:13	51-28-5	
2,4-Dinitrotoluene	**<0.75**	ug/L	2.5	0.75	1	11/26/18 07:15	11/27/18 12:13	121-14-2	
2,6-Dinitrotoluene	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 12:13	606-20-2	
2-Chloronaphthalene	**<1.6**	ug/L	5.2	1.6	1	11/26/18 07:15	11/27/18 12:13	91-58-7	
2-Chlorophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 12:13	95-57-8	
2-Methylnaphthalene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 12:13	91-57-6	
2-Methylphenol(o-Cresol)	**<0.83**	ug/L	2.8	0.83	1	11/26/18 07:15	11/27/18 12:13	95-48-7	
2-Nitroaniline	**<0.74**	ug/L	2.5	0.74	1	11/26/18 07:15	11/27/18 12:13	88-74-4	
2-Nitrophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 12:13	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 12:13		
3,3'-Dichlorobenzidine	**<0.86**	ug/L	2.9	0.86	1	11/26/18 07:15	11/27/18 12:13	91-94-1	
3-Nitroaniline	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 12:13	99-09-2	
4,6-Dinitro-2-methylphenol	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 12:13	534-52-1	
4-Bromophenylphenyl ether	**<1.9**	ug/L	6.3	1.9	1	11/26/18 07:15	11/27/18 12:13	101-55-3	
4-Chloro-3-methylphenol	**<1.6**	ug/L	5.4	1.6	1	11/26/18 07:15	11/27/18 12:13	59-50-7	
4-Chloroaniline	**<1.0**	ug/L	3.5	1.0	1	11/26/18 07:15	11/27/18 12:13	106-47-8	
4-Chlorophenylphenyl ether	**<0.78**	ug/L	2.6	0.78	1	11/26/18 07:15	11/27/18 12:13	7005-72-3	
4-Nitroaniline	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 12:13	100-01-6	
4-Nitrophenol	**<1.0**	ug/L	3.3	1.0	1	11/26/18 07:15	11/27/18 12:13	100-02-7	
Acenaphthene	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 12:13	83-32-9	
Acenaphthylene	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 12:13	208-96-8	
Anthracene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 12:13	120-12-7	
Benzo(a)anthracene	**<0.51**	ug/L	1.7	0.51	1	11/26/18 07:15	11/27/18 12:13	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 12:13	50-32-8	L1
Benzo(b)fluoranthene	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 12:13	205-99-2	
Benzo(g,h,i)perylene	**<0.77**	ug/L	2.6	0.77	1	11/26/18 07:15	11/27/18 12:13	191-24-2	
Benzo(k)fluoranthene	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 12:13	207-08-9	L1
Butylbenzylphthalate	**<0.74**	ug/L	2.5	0.74	1	11/26/18 07:15	11/27/18 12:13	85-68-7	
Carbazole	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 12:13	86-74-8	
Chrysene	**<1.7**	ug/L	5.5	1.7	1	11/26/18 07:15	11/27/18 12:13	218-01-9	
Di-n-butylphthalate	**<2.4**	ug/L	8.1	2.4	1	11/26/18 07:15	11/27/18 12:13	84-74-2	
Di-n-octylphthalate	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 12:13	117-84-0	
Dibenz(a,h)anthracene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 12:13	53-70-3	
Dibenzofuran	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 12:13	132-64-9	
Diethylphthalate	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 12:13	84-66-2	
Dimethylphthalate	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 12:13	131-11-3	
Fluoranthene	**<0.54**	ug/L	1.8	0.54	1	11/26/18 07:15	11/27/18 12:13	206-44-0	
Fluorene	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 12:13	86-73-7	
Hexachloro-1,3-butadiene	**<2.3**	ug/L	7.8	2.3	1	11/26/18 07:15	11/27/18 12:13	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	5.4	1.6	1	11/26/18 07:15	11/27/18 12:13	118-74-1	
Hexachlorocyclopentadiene	**<0.65**	ug/L	2.2	0.65	1	11/26/18 07:15	11/27/18 12:13	77-47-4	
Hexachloroethane	**<2.5**	ug/L	8.4	2.5	1	11/26/18 07:15	11/27/18 12:13	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 12:13	193-39-5	
Isophorone	**<0.70**	ug/L	2.3	0.70	1	11/26/18 07:15	11/27/18 12:13	78-59-1	
N-Nitroso-di-n-propylamine	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 12:13	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-26 **Lab ID: 40179993003** Collected: 11/19/18 12:38 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.4**	ug/L	11.2	3.4	1	11/26/18 07:15	11/27/18 12:13	86-30-6	
Naphthalene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 12:13	91-20-3	
Nitrobenzene	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 12:13	98-95-3	
Pentachlorophenol	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 12:13	87-86-5	
Phenanthrene	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 12:13	85-01-8	
Phenol	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 12:13	108-95-2	
Pyrene	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 12:13	129-00-0	
bis(2-Chloroethoxy)methane	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 12:13	111-91-1	
bis(2-Chloroethyl) ether	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 12:13	111-44-4	
bis(2-Ethylhexyl)phthalate	**1.4J**	ug/L	2.2	0.66	1	11/26/18 07:15	11/27/18 12:13	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	94	%	56-120		1	11/26/18 07:15	11/27/18 12:13	4165-60-0	
2-Fluorobiphenyl (S)	86	%	54-122		1	11/26/18 07:15	11/27/18 12:13	321-60-8	
Terphenyl-d14 (S)	116	%	59-136		1	11/26/18 07:15	11/27/18 12:13	1718-51-0	
Phenol-d6 (S)	32	%	16-120		1	11/26/18 07:15	11/27/18 12:13	13127-88-3	
2-Fluorophenol (S)	50	%	27-77		1	11/26/18 07:15	11/27/18 12:13	367-12-4	
2,4,6-Tribromophenol (S)	114	%	58-134		1	11/26/18 07:15	11/27/18 12:13	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/27/18 12:27	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 12:27	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/27/18 12:27	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/27/18 12:27	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/27/18 12:27	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/27/18 12:27	74-83-9	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 12:27	104-51-8	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/27/18 12:27	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/27/18 12:27	98-06-6	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 12:27	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 12:27	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/27/18 12:27	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/27/18 12:27	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/27/18 12:27	74-87-3	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/27/18 12:27	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/27/18 12:27	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/27/18 12:27	96-12-8	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/27/18 12:27	124-48-1	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/27/18 12:27	106-93-4	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/27/18 12:27	74-95-3	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 12:27	95-50-1	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/27/18 12:27	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/27/18 12:27	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/27/18 12:27	75-71-8	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 12:27	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 12:27	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 12:27	75-35-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-26 **Lab ID: 40179993003** Collected: 11/19/18 12:38 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/27/18 12:27	156-59-2	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/27/18 12:27	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 12:27	78-87-5	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/27/18 12:27	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/27/18 12:27	594-20-7	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/27/18 12:27	563-58-6	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/27/18 12:27	10061-01-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/27/18 12:27	10061-02-6	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/27/18 12:27	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/27/18 12:27	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 12:27	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/27/18 12:27	98-82-8	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/27/18 12:27	99-87-6	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/27/18 12:27	75-09-2	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/27/18 12:27	1634-04-4	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 12:27	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/27/18 12:27	103-65-1	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/27/18 12:27	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 12:27	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 12:27	79-34-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/27/18 12:27	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/27/18 12:27	108-88-3	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/27/18 12:27	87-61-6	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/27/18 12:27	120-82-1	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/27/18 12:27	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/27/18 12:27	79-00-5	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 12:27	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/27/18 12:27	75-69-4	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/27/18 12:27	96-18-4	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/27/18 12:27	95-63-6	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/27/18 12:27	108-67-8	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 12:27	75-01-4	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/27/18 12:27	179601-23-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 12:27	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		11/27/18 12:27	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		11/27/18 12:27	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/27/18 12:27	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**441**	mg/L	12.5	5.9	1		11/21/18 11:19		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-1 **Lab ID: 40179993004** Collected: 11/19/18 13:10 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:23	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:23	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:23	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:23	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:23	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:23	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:23	11096-82-5	
PCB, Total	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:23	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	70	%	44-121		1	11/28/18 07:24	11/29/18 05:23	877-09-8	
Decachlorobiphenyl (S)	55	%	10-119		1	11/28/18 07:24	11/29/18 05:23	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 17:48	7440-38-2	
Barium	**121**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 17:48	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 17:48	7440-43-9	
Chromium	**7.1J**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 17:48	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 17:48	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 17:48	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 17:48	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 16:57	7440-38-2	
Barium, Dissolved	**99.2**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 16:57	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 16:57	7440-43-9	
Chromium, Dissolved	**3.1J**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 16:57	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 16:57	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 16:57	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 16:57	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 08:41	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 09:41	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.9**	ug/L	6.4	1.9	1	11/26/18 07:15	11/27/18 12:34	120-82-1	
1,2-Dichlorobenzene	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 12:34	95-50-1	
1,3-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 12:34	541-73-1	
1,4-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 12:34	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 12:34	108-60-1	
2,4,5-Trichlorophenol	**<0.79**	ug/L	2.6	0.79	1	11/26/18 07:15	11/27/18 12:34	95-95-4	
2,4,6-Trichlorophenol	**<2.0**	ug/L	6.6	2.0	1	11/26/18 07:15	11/27/18 12:34	88-06-2	
2,4-Dichlorophenol	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 12:34	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-1 **Lab ID: 40179993004** Collected: 11/19/18 13:10 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.2**	ug/L	4.0	1.2	1	11/26/18 07:15	11/27/18 12:34	105-67-9	
2,4-Dinitrophenol	**<0.67**	ug/L	2.2	0.67	1	11/26/18 07:15	11/27/18 12:34	51-28-5	
2,4-Dinitrotoluene	**<0.75**	ug/L	2.5	0.75	1	11/26/18 07:15	11/27/18 12:34	121-14-2	
2,6-Dinitrotoluene	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 12:34	606-20-2	
2-Chloronaphthalene	**<1.6**	ug/L	5.2	1.6	1	11/26/18 07:15	11/27/18 12:34	91-58-7	
2-Chlorophenol	**<1.1**	ug/L	3.6	1.1	1	11/26/18 07:15	11/27/18 12:34	95-57-8	
2-Methylnaphthalene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 12:34	91-57-6	
2-Methylphenol(o-Cresol)	**<0.82**	ug/L	2.7	0.82	1	11/26/18 07:15	11/27/18 12:34	95-48-7	
2-Nitroaniline	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 12:34	88-74-4	
2-Nitrophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 12:34	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<1.5**	ug/L	4.9	1.5	1	11/26/18 07:15	11/27/18 12:34		
3,3'-Dichlorobenzidine	**<0.85**	ug/L	2.8	0.85	1	11/26/18 07:15	11/27/18 12:34	91-94-1	
3-Nitroaniline	**<0.91**	ug/L	3.0	0.91	1	11/26/18 07:15	11/27/18 12:34	99-09-2	
4,6-Dinitro-2-methylphenol	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 12:34	534-52-1	
4-Bromophenylphenyl ether	**<1.9**	ug/L	6.2	1.9	1	11/26/18 07:15	11/27/18 12:34	101-55-3	
4-Chloro-3-methylphenol	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 12:34	59-50-7	
4-Chloroaniline	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 12:34	106-47-8	
4-Chlorophenylphenyl ether	**<0.77**	ug/L	2.6	0.77	1	11/26/18 07:15	11/27/18 12:34	7005-72-3	
4-Nitroaniline	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 12:34	100-01-6	
4-Nitrophenol	**<0.99**	ug/L	3.3	0.99	1	11/26/18 07:15	11/27/18 12:34	100-02-7	
Acenaphthene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 12:34	83-32-9	
Acenaphthylene	**<1.0**	ug/L	3.3	1.0	1	11/26/18 07:15	11/27/18 12:34	208-96-8	
Anthracene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 12:34	120-12-7	
Benzo(a)anthracene	**<0.50**	ug/L	1.7	0.50	1	11/26/18 07:15	11/27/18 12:34	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 12:34	50-32-8	L1
Benzo(b)fluoranthene	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 12:34	205-99-2	
Benzo(g,h,i)perylene	**<0.76**	ug/L	2.5	0.76	1	11/26/18 07:15	11/27/18 12:34	191-24-2	
Benzo(k)fluoranthene	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 12:34	207-08-9	L1
Butylbenzylphthalate	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 12:34	85-68-7	
Carbazole	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 12:34	86-74-8	
Chrysene	**<1.6**	ug/L	5.5	1.6	1	11/26/18 07:15	11/27/18 12:34	218-01-9	
Di-n-butylphthalate	**<2.4**	ug/L	8.1	2.4	1	11/26/18 07:15	11/27/18 12:34	84-74-2	
Di-n-octylphthalate	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 12:34	117-84-0	
Dibenz(a,h)anthracene	**<1.2**	ug/L	4.2	1.2	1	11/26/18 07:15	11/27/18 12:34	53-70-3	
Dibenzofuran	**<0.72**	ug/L	2.4	0.72	1	11/26/18 07:15	11/27/18 12:34	132-64-9	
Diethylphthalate	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 12:34	84-66-2	
Dimethylphthalate	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 12:34	131-11-3	
Fluoranthene	**<0.53**	ug/L	1.8	0.53	1	11/26/18 07:15	11/27/18 12:34	206-44-0	
Fluorene	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 12:34	86-73-7	
Hexachloro-1,3-butadiene	**<2.3**	ug/L	7.7	2.3	1	11/26/18 07:15	11/27/18 12:34	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 12:34	118-74-1	
Hexachlorocyclopentadiene	**<0.64**	ug/L	2.1	0.64	1	11/26/18 07:15	11/27/18 12:34	77-47-4	
Hexachloroethane	**<2.5**	ug/L	8.4	2.5	1	11/26/18 07:15	11/27/18 12:34	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.4**	ug/L	4.7	1.4	1	11/26/18 07:15	11/27/18 12:34	193-39-5	
Isophorone	**<0.69**	ug/L	2.3	0.69	1	11/26/18 07:15	11/27/18 12:34	78-59-1	
N-Nitroso-di-n-propylamine	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 12:34	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-1 **Lab ID: 40179993004** Collected: 11/19/18 13:10 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.1	3.3	1	11/26/18 07:15	11/27/18 12:34	86-30-6	
Naphthalene	**3.7J**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 12:34	91-20-3	
Nitrobenzene	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 12:34	98-95-3	
Pentachlorophenol	**<1.4**	ug/L	4.5	1.4	1	11/26/18 07:15	11/27/18 12:34	87-86-5	
Phenanthrene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 12:34	85-01-8	
Phenol	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 12:34	108-95-2	
Pyrene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 12:34	129-00-0	
bis(2-Chloroethoxy)methane	**<0.94**	ug/L	3.1	0.94	1	11/26/18 07:15	11/27/18 12:34	111-91-1	
bis(2-Chloroethyl) ether	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 12:34	111-44-4	
bis(2-Ethylhexyl)phthalate	**12.6**	ug/L	2.2	0.65	1	11/26/18 07:15	11/27/18 12:34	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	88	%	56-120		1	11/26/18 07:15	11/27/18 12:34	4165-60-0	
2-Fluorobiphenyl (S)	84	%	54-122		1	11/26/18 07:15	11/27/18 12:34	321-60-8	
Terphenyl-d14 (S)	118	%	59-136		1	11/26/18 07:15	11/27/18 12:34	1718-51-0	
Phenol-d6 (S)	33	%	16-120		1	11/26/18 07:15	11/27/18 12:34	13127-88-3	
2-Fluorophenol (S)	46	%	27-77		1	11/26/18 07:15	11/27/18 12:34	367-12-4	
2,4,6-Tribromophenol (S)	116	%	58-134		1	11/26/18 07:15	11/27/18 12:34	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/27/18 12:49	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 12:49	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/27/18 12:49	74-97-5	
Bromodichloromethane	**0.61J**	ug/L	1.2	0.36	1		11/27/18 12:49	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/27/18 12:49	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/27/18 12:49	74-83-9	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 12:49	104-51-8	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/27/18 12:49	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/27/18 12:49	98-06-6	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 12:49	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 12:49	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/27/18 12:49	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/27/18 12:49	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/27/18 12:49	74-87-3	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/27/18 12:49	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/27/18 12:49	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/27/18 12:49	96-12-8	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/27/18 12:49	124-48-1	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/27/18 12:49	106-93-4	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/27/18 12:49	74-95-3	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 12:49	95-50-1	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/27/18 12:49	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/27/18 12:49	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/27/18 12:49	75-71-8	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 12:49	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 12:49	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 12:49	75-35-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-1 **Lab ID: 40179993004** Collected: 11/19/18 13:10 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/27/18 12:49	156-59-2	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/27/18 12:49	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 12:49	78-87-5	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/27/18 12:49	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/27/18 12:49	594-20-7	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/27/18 12:49	563-58-6	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/27/18 12:49	10061-01-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/27/18 12:49	10061-02-6	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/27/18 12:49	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/27/18 12:49	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 12:49	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/27/18 12:49	98-82-8	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/27/18 12:49	99-87-6	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/27/18 12:49	75-09-2	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/27/18 12:49	1634-04-4	
Naphthalene	**7.0**	ug/L	5.0	1.2	1		11/27/18 12:49	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/27/18 12:49	103-65-1	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/27/18 12:49	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 12:49	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 12:49	79-34-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/27/18 12:49	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/27/18 12:49	108-88-3	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/27/18 12:49	87-61-6	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/27/18 12:49	120-82-1	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/27/18 12:49	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/27/18 12:49	79-00-5	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 12:49	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/27/18 12:49	75-69-4	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/27/18 12:49	96-18-4	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/27/18 12:49	95-63-6	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/27/18 12:49	108-67-8	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 12:49	75-01-4	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/27/18 12:49	179601-23-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 12:49	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		11/27/18 12:49	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		11/27/18 12:49	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/27/18 12:49	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**124**	mg/L	4.0	1.9	1		11/21/18 11:19		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-2 **Lab ID: 40179993005** Collected: 11/19/18 13:45 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:41	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:41	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:41	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:41	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:41	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:41	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:41	11096-82-5	
PCB, Total	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 05:41	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	73	%	44-121		1	11/28/18 07:24	11/29/18 05:41	877-09-8	
Decachlorobiphenyl (S)	51	%	10-119		1	11/28/18 07:24	11/29/18 05:41	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 17:50	7440-38-2	
Barium	**75.8**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 17:50	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 17:50	7440-43-9	
Chromium	**17.8**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 17:50	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 17:50	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 17:50	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 17:50	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 16:59	7440-38-2	
Barium, Dissolved	**65.9**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 16:59	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 16:59	7440-43-9	
Chromium, Dissolved	**4.3J**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 16:59	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 16:59	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 16:59	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 16:59	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 08:43	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 09:43	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.9**	ug/L	6.4	1.9	1	11/26/18 07:15	11/27/18 12:55	120-82-1	
1,2-Dichlorobenzene	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 12:55	95-50-1	
1,3-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 12:55	541-73-1	
1,4-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 12:55	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 12:55	108-60-1	
2,4,5-Trichlorophenol	**<0.79**	ug/L	2.6	0.79	1	11/26/18 07:15	11/27/18 12:55	95-95-4	
2,4,6-Trichlorophenol	**<2.0**	ug/L	6.6	2.0	1	11/26/18 07:15	11/27/18 12:55	88-06-2	
2,4-Dichlorophenol	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 12:55	120-83-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-2 **Lab ID: 40179993005** Collected: 11/19/18 13:45 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.2**	ug/L	4.0	1.2	1	11/26/18 07:15	11/27/18 12:55	105-67-9	
2,4-Dinitrophenol	**<0.67**	ug/L	2.2	0.67	1	11/26/18 07:15	11/27/18 12:55	51-28-5	
2,4-Dinitrotoluene	**<0.75**	ug/L	2.5	0.75	1	11/26/18 07:15	11/27/18 12:55	121-14-2	
2,6-Dinitrotoluene	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 12:55	606-20-2	
2-Chloronaphthalene	**<1.6**	ug/L	5.2	1.6	1	11/26/18 07:15	11/27/18 12:55	91-58-7	
2-Chlorophenol	**<1.1**	ug/L	3.6	1.1	1	11/26/18 07:15	11/27/18 12:55	95-57-8	
2-Methylnaphthalene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 12:55	91-57-6	
2-Methylphenol(o-Cresol)	**<0.82**	ug/L	2.7	0.82	1	11/26/18 07:15	11/27/18 12:55	95-48-7	
2-Nitroaniline	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 12:55	88-74-4	
2-Nitrophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 12:55	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<1.5**	ug/L	4.9	1.5	1	11/26/18 07:15	11/27/18 12:55		
3,3'-Dichlorobenzidine	**<0.85**	ug/L	2.8	0.85	1	11/26/18 07:15	11/27/18 12:55	91-94-1	
3-Nitroaniline	**<0.91**	ug/L	3.0	0.91	1	11/26/18 07:15	11/27/18 12:55	99-09-2	
4,6-Dinitro-2-methylphenol	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 12:55	534-52-1	
4-Bromophenylphenyl ether	**<1.9**	ug/L	6.2	1.9	1	11/26/18 07:15	11/27/18 12:55	101-55-3	
4-Chloro-3-methylphenol	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 12:55	59-50-7	
4-Chloroaniline	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 12:55	106-47-8	
4-Chlorophenylphenyl ether	**<0.77**	ug/L	2.6	0.77	1	11/26/18 07:15	11/27/18 12:55	7005-72-3	
4-Nitroaniline	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 12:55	100-01-6	
4-Nitrophenol	**<0.99**	ug/L	3.3	0.99	1	11/26/18 07:15	11/27/18 12:55	100-02-7	
Acenaphthene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 12:55	83-32-9	
Acenaphthylene	**<1.0**	ug/L	3.3	1.0	1	11/26/18 07:15	11/27/18 12:55	208-96-8	
Anthracene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 12:55	120-12-7	
Benzo(a)anthracene	**<0.50**	ug/L	1.7	0.50	1	11/26/18 07:15	11/27/18 12:55	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 12:55	50-32-8	L1
Benzo(b)fluoranthene	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 12:55	205-99-2	
Benzo(g,h,i)perylene	**<0.76**	ug/L	2.5	0.76	1	11/26/18 07:15	11/27/18 12:55	191-24-2	
Benzo(k)fluoranthene	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 12:55	207-08-9	L1
Butylbenzylphthalate	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 12:55	85-68-7	
Carbazole	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 12:55	86-74-8	
Chrysene	**<1.6**	ug/L	5.5	1.6	1	11/26/18 07:15	11/27/18 12:55	218-01-9	
Di-n-butylphthalate	**<2.4**	ug/L	8.1	2.4	1	11/26/18 07:15	11/27/18 12:55	84-74-2	
Di-n-octylphthalate	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 12:55	117-84-0	
Dibenz(a,h)anthracene	**<1.2**	ug/L	4.2	1.2	1	11/26/18 07:15	11/27/18 12:55	53-70-3	
Dibenzofuran	**<0.72**	ug/L	2.4	0.72	1	11/26/18 07:15	11/27/18 12:55	132-64-9	
Diethylphthalate	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 12:55	84-66-2	
Dimethylphthalate	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 12:55	131-11-3	
Fluoranthene	**<0.53**	ug/L	1.8	0.53	1	11/26/18 07:15	11/27/18 12:55	206-44-0	
Fluorene	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 12:55	86-73-7	
Hexachloro-1,3-butadiene	**<2.3**	ug/L	7.7	2.3	1	11/26/18 07:15	11/27/18 12:55	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 12:55	118-74-1	
Hexachlorocyclopentadiene	**<0.64**	ug/L	2.1	0.64	1	11/26/18 07:15	11/27/18 12:55	77-47-4	
Hexachloroethane	**<2.5**	ug/L	8.4	2.5	1	11/26/18 07:15	11/27/18 12:55	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.4**	ug/L	4.7	1.4	1	11/26/18 07:15	11/27/18 12:55	193-39-5	
Isophorone	**<0.69**	ug/L	2.3	0.69	1	11/26/18 07:15	11/27/18 12:55	78-59-1	
N-Nitroso-di-n-propylamine	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 12:55	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-2 **Lab ID: 40179993005** Collected: 11/19/18 13:45 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.1	3.3	1	11/26/18 07:15	11/27/18 12:55	86-30-6	
Naphthalene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 12:55	91-20-3	
Nitrobenzene	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 12:55	98-95-3	
Pentachlorophenol	**<1.4**	ug/L	4.5	1.4	1	11/26/18 07:15	11/27/18 12:55	87-86-5	
Phenanthrene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 12:55	85-01-8	
Phenol	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 12:55	108-95-2	
Pyrene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 12:55	129-00-0	
bis(2-Chloroethoxy)methane	**<0.94**	ug/L	3.1	0.94	1	11/26/18 07:15	11/27/18 12:55	111-91-1	
bis(2-Chloroethyl) ether	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 12:55	111-44-4	
bis(2-Ethylhexyl)phthalate	**<0.65**	ug/L	2.2	0.65	1	11/26/18 07:15	11/27/18 12:55	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	82	%	56-120		1	11/26/18 07:15	11/27/18 12:55	4165-60-0	
2-Fluorobiphenyl (S)	69	%	54-122		1	11/26/18 07:15	11/27/18 12:55	321-60-8	
Terphenyl-d14 (S)	96	%	59-136		1	11/26/18 07:15	11/27/18 12:55	1718-51-0	
Phenol-d6 (S)	26	%	16-120		1	11/26/18 07:15	11/27/18 12:55	13127-88-3	
2-Fluorophenol (S)	43	%	27-77		1	11/26/18 07:15	11/27/18 12:55	367-12-4	
2,4,6-Tribromophenol (S)	93	%	58-134		1	11/26/18 07:15	11/27/18 12:55	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/27/18 13:12	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 13:12	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/27/18 13:12	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/27/18 13:12	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/27/18 13:12	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/27/18 13:12	74-83-9	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 13:12	104-51-8	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/27/18 13:12	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/27/18 13:12	98-06-6	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 13:12	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 13:12	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/27/18 13:12	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/27/18 13:12	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/27/18 13:12	74-87-3	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/27/18 13:12	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/27/18 13:12	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/27/18 13:12	96-12-8	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/27/18 13:12	124-48-1	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/27/18 13:12	106-93-4	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/27/18 13:12	74-95-3	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 13:12	95-50-1	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/27/18 13:12	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/27/18 13:12	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/27/18 13:12	75-71-8	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 13:12	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 13:12	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 13:12	75-35-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-2 **Lab ID: 40179993005** Collected: 11/19/18 13:45 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/27/18 13:12	156-59-2	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/27/18 13:12	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 13:12	78-87-5	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/27/18 13:12	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/27/18 13:12	594-20-7	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/27/18 13:12	563-58-6	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/27/18 13:12	10061-01-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/27/18 13:12	10061-02-6	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/27/18 13:12	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/27/18 13:12	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 13:12	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/27/18 13:12	98-82-8	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/27/18 13:12	99-87-6	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/27/18 13:12	75-09-2	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/27/18 13:12	1634-04-4	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 13:12	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/27/18 13:12	103-65-1	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/27/18 13:12	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 13:12	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 13:12	79-34-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/27/18 13:12	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/27/18 13:12	108-88-3	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/27/18 13:12	87-61-6	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/27/18 13:12	120-82-1	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/27/18 13:12	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/27/18 13:12	79-00-5	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 13:12	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/27/18 13:12	75-69-4	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/27/18 13:12	96-18-4	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/27/18 13:12	95-63-6	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/27/18 13:12	108-67-8	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 13:12	75-01-4	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/27/18 13:12	179601-23-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 13:12	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		11/27/18 13:12	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		11/27/18 13:12	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		11/27/18 13:12	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**27.4**	mg/L	2.0	0.95	1		11/21/18 11:19		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-20 **Lab ID: 40179993006** Collected: 11/19/18 14:05 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:00	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:00	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:00	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:00	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:00	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:00	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:00	11096-82-5	
PCB, Total	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:00	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	60	%	44-121		1	11/28/18 07:24	11/29/18 06:00	877-09-8	
Decachlorobiphenyl (S)	56	%	10-119		1	11/28/18 07:24	11/29/18 06:00	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 17:53	7440-38-2	
Barium	**131**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 17:53	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 17:53	7440-43-9	
Chromium	**17.1**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 17:53	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 17:53	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 17:53	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 17:53	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 17:02	7440-38-2	
Barium, Dissolved	**60.7**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 17:02	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 17:02	7440-43-9	
Chromium, Dissolved	**2.9J**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 17:02	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 17:02	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 17:02	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 17:02	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 08:45	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 09:45	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.9**	ug/L	6.4	1.9	1	11/26/18 07:15	11/27/18 13:17	120-82-1	
1,2-Dichlorobenzene	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 13:17	95-50-1	
1,3-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 13:17	541-73-1	
1,4-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 13:17	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 13:17	108-60-1	
2,4,5-Trichlorophenol	**<0.79**	ug/L	2.6	0.79	1	11/26/18 07:15	11/27/18 13:17	95-95-4	
2,4,6-Trichlorophenol	**<2.0**	ug/L	6.6	2.0	1	11/26/18 07:15	11/27/18 13:17	88-06-2	
2,4-Dichlorophenol	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 13:17	120-83-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-20 **Lab ID: 40179993006** Collected: 11/19/18 14:05 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.2**	ug/L	4.0	1.2	1	11/26/18 07:15	11/27/18 13:17	105-67-9	
2,4-Dinitrophenol	**<0.67**	ug/L	2.2	0.67	1	11/26/18 07:15	11/27/18 13:17	51-28-5	
2,4-Dinitrotoluene	**<0.75**	ug/L	2.5	0.75	1	11/26/18 07:15	11/27/18 13:17	121-14-2	
2,6-Dinitrotoluene	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 13:17	606-20-2	
2-Chloronaphthalene	**<1.6**	ug/L	5.2	1.6	1	11/26/18 07:15	11/27/18 13:17	91-58-7	
2-Chlorophenol	**<1.1**	ug/L	3.6	1.1	1	11/26/18 07:15	11/27/18 13:17	95-57-8	
2-Methylnaphthalene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 13:17	91-57-6	
2-Methylphenol(o-Cresol)	**<0.82**	ug/L	2.7	0.82	1	11/26/18 07:15	11/27/18 13:17	95-48-7	
2-Nitroaniline	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 13:17	88-74-4	
2-Nitrophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 13:17	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<1.5**	ug/L	4.9	1.5	1	11/26/18 07:15	11/27/18 13:17		
3,3'-Dichlorobenzidine	**<0.85**	ug/L	2.8	0.85	1	11/26/18 07:15	11/27/18 13:17	91-94-1	
3-Nitroaniline	**<0.91**	ug/L	3.0	0.91	1	11/26/18 07:15	11/27/18 13:17	99-09-2	
4,6-Dinitro-2-methylphenol	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 13:17	534-52-1	
4-Bromophenylphenyl ether	**<1.9**	ug/L	6.2	1.9	1	11/26/18 07:15	11/27/18 13:17	101-55-3	
4-Chloro-3-methylphenol	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 13:17	59-50-7	
4-Chloroaniline	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 13:17	106-47-8	
4-Chlorophenylphenyl ether	**<0.77**	ug/L	2.6	0.77	1	11/26/18 07:15	11/27/18 13:17	7005-72-3	
4-Nitroaniline	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 13:17	100-01-6	
4-Nitrophenol	**<0.99**	ug/L	3.3	0.99	1	11/26/18 07:15	11/27/18 13:17	100-02-7	
Acenaphthene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 13:17	83-32-9	
Acenaphthylene	**<1.0**	ug/L	3.3	1.0	1	11/26/18 07:15	11/27/18 13:17	208-96-8	
Anthracene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 13:17	120-12-7	
Benzo(a)anthracene	**<0.50**	ug/L	1.7	0.50	1	11/26/18 07:15	11/27/18 13:17	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 13:17	50-32-8	L1
Benzo(b)fluoranthene	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 13:17	205-99-2	
Benzo(g,h,i)perylene	**<0.76**	ug/L	2.5	0.76	1	11/26/18 07:15	11/27/18 13:17	191-24-2	
Benzo(k)fluoranthene	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 13:17	207-08-9	L1
Butylbenzylphthalate	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 13:17	85-68-7	
Carbazole	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 13:17	86-74-8	
Chrysene	**<1.6**	ug/L	5.5	1.6	1	11/26/18 07:15	11/27/18 13:17	218-01-9	
Di-n-butylphthalate	**<2.4**	ug/L	8.1	2.4	1	11/26/18 07:15	11/27/18 13:17	84-74-2	
Di-n-octylphthalate	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 13:17	117-84-0	
Dibenz(a,h)anthracene	**<1.2**	ug/L	4.2	1.2	1	11/26/18 07:15	11/27/18 13:17	53-70-3	
Dibenzofuran	**<0.72**	ug/L	2.4	0.72	1	11/26/18 07:15	11/27/18 13:17	132-64-9	
Diethylphthalate	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 13:17	84-66-2	
Dimethylphthalate	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 13:17	131-11-3	
Fluoranthene	**<0.53**	ug/L	1.8	0.53	1	11/26/18 07:15	11/27/18 13:17	206-44-0	
Fluorene	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 13:17	86-73-7	
Hexachloro-1,3-butadiene	**<2.3**	ug/L	7.7	2.3	1	11/26/18 07:15	11/27/18 13:17	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 13:17	118-74-1	
Hexachlorocyclopentadiene	**<0.64**	ug/L	2.1	0.64	1	11/26/18 07:15	11/27/18 13:17	77-47-4	
Hexachloroethane	**<2.5**	ug/L	8.4	2.5	1	11/26/18 07:15	11/27/18 13:17	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.4**	ug/L	4.7	1.4	1	11/26/18 07:15	11/27/18 13:17	193-39-5	
Isophorone	**<0.69**	ug/L	2.3	0.69	1	11/26/18 07:15	11/27/18 13:17	78-59-1	
N-Nitroso-di-n-propylamine	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 13:17	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-20 **Lab ID: 40179993006** Collected: 11/19/18 14:05 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.1	3.3	1	11/26/18 07:15	11/27/18 13:17	86-30-6	
Naphthalene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 13:17	91-20-3	
Nitrobenzene	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 13:17	98-95-3	
Pentachlorophenol	**3.9J**	ug/L	4.5	1.4	1	11/26/18 07:15	11/27/18 13:17	87-86-5	
Phenanthrene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 13:17	85-01-8	
Phenol	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 13:17	108-95-2	
Pyrene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 13:17	129-00-0	
bis(2-Chloroethoxy)methane	**<0.94**	ug/L	3.1	0.94	1	11/26/18 07:15	11/27/18 13:17	111-91-1	
bis(2-Chloroethyl) ether	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 13:17	111-44-4	
bis(2-Ethylhexyl)phthalate	**2.1J**	ug/L	2.2	0.65	1	11/26/18 07:15	11/27/18 13:17	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	86	%	56-120		1	11/26/18 07:15	11/27/18 13:17	4165-60-0	
2-Fluorobiphenyl (S)	74	%	54-122		1	11/26/18 07:15	11/27/18 13:17	321-60-8	
Terphenyl-d14 (S)	110	%	59-136		1	11/26/18 07:15	11/27/18 13:17	1718-51-0	
Phenol-d6 (S)	29	%	16-120		1	11/26/18 07:15	11/27/18 13:17	13127-88-3	
2-Fluorophenol (S)	39	%	27-77		1	11/26/18 07:15	11/27/18 13:17	367-12-4	
2,4,6-Tribromophenol (S)	91	%	58-134		1	11/26/18 07:15	11/27/18 13:17	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/27/18 13:34	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 13:34	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/27/18 13:34	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/27/18 13:34	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/27/18 13:34	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/27/18 13:34	74-83-9	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 13:34	104-51-8	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/27/18 13:34	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/27/18 13:34	98-06-6	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 13:34	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 13:34	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/27/18 13:34	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/27/18 13:34	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/27/18 13:34	74-87-3	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/27/18 13:34	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/27/18 13:34	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/27/18 13:34	96-12-8	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/27/18 13:34	124-48-1	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/27/18 13:34	106-93-4	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/27/18 13:34	74-95-3	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 13:34	95-50-1	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/27/18 13:34	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/27/18 13:34	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/27/18 13:34	75-71-8	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 13:34	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 13:34	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 13:34	75-35-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: FVMW-20 **Lab ID: 40179993006** Collected: 11/19/18 14:05 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/27/18 13:34	156-59-2	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/27/18 13:34	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 13:34	78-87-5	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/27/18 13:34	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/27/18 13:34	594-20-7	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/27/18 13:34	563-58-6	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/27/18 13:34	10061-01-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/27/18 13:34	10061-02-6	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/27/18 13:34	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/27/18 13:34	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 13:34	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/27/18 13:34	98-82-8	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/27/18 13:34	99-87-6	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/27/18 13:34	75-09-2	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/27/18 13:34	1634-04-4	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 13:34	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/27/18 13:34	103-65-1	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/27/18 13:34	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 13:34	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 13:34	79-34-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/27/18 13:34	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/27/18 13:34	108-88-3	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/27/18 13:34	87-61-6	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/27/18 13:34	120-82-1	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/27/18 13:34	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/27/18 13:34	79-00-5	
Trichloroethene	**0.68J**	ug/L	1.0	0.26	1		11/27/18 13:34	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/27/18 13:34	75-69-4	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/27/18 13:34	96-18-4	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/27/18 13:34	95-63-6	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/27/18 13:34	108-67-8	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 13:34	75-01-4	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/27/18 13:34	179601-23-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 13:34	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	98	%	70-130		1		11/27/18 13:34	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		11/27/18 13:34	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		11/27/18 13:34	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**286**	mg/L	5.0	2.4	1		11/21/18 11:20		R1

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-3 **Lab ID: 40179993007** Collected: 11/19/18 14:20 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:18	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:18	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:18	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:18	53469-21-9	
PCB-1248 (Aroclor 1248)	**5.5**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:18	12672-29-6	
PCB-1254 (Aroclor 1254)	**2.7**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:18	11097-69-1	
PCB-1260 (Aroclor 1260)	**0.61**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:18	11096-82-5	
PCB, Total	**8.8**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:18	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	60	%	44-121		1	11/28/18 07:24	11/29/18 06:18	877-09-8	
Decachlorobiphenyl (S)	49	%	10-119		1	11/28/18 07:24	11/29/18 06:18	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**9.3J**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 17:55	7440-38-2	
Barium	**113**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 17:55	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 17:55	7440-43-9	
Chromium	**3.5J**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 17:55	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 17:55	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 17:55	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 17:55	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**8.7J**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 17:04	7440-38-2	
Barium, Dissolved	**79.3**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 17:04	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 17:04	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 17:04	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 17:04	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 17:04	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 17:04	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 08:48	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 09:48	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<19.2**	ug/L	64.0	19.2	10	11/26/18 07:15	11/27/18 13:38	120-82-1	
1,2-Dichlorobenzene	**<18.2**	ug/L	60.7	18.2	10	11/26/18 07:15	11/27/18 13:38	95-50-1	
1,3-Dichlorobenzene	**<17.8**	ug/L	59.2	17.8	10	11/26/18 07:15	11/27/18 13:38	541-73-1	
1,4-Dichlorobenzene	**<17.7**	ug/L	59.0	17.7	10	11/26/18 07:15	11/27/18 13:38	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<14.4**	ug/L	48.0	14.4	10	11/26/18 07:15	11/27/18 13:38	108-60-1	
2,4,5-Trichlorophenol	**<7.9**	ug/L	26.5	7.9	10	11/26/18 07:15	11/27/18 13:38	95-95-4	
2,4,6-Trichlorophenol	**<19.9**	ug/L	66.4	19.9	10	11/26/18 07:15	11/27/18 13:38	88-06-2	
2,4-Dichlorophenol	**<12.9**	ug/L	43.0	12.9	10	11/26/18 07:15	11/27/18 13:38	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-3 **Lab ID: 40179993007** Collected: 11/19/18 14:20 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<11.9**	ug/L	39.8	11.9	10	11/26/18 07:15	11/27/18 13:38	105-67-9	
2,4-Dinitrophenol	**<6.7**	ug/L	22.4	6.7	10	11/26/18 07:15	11/27/18 13:38	51-28-5	
2,4-Dinitrotoluene	**<7.5**	ug/L	24.9	7.5	10	11/26/18 07:15	11/27/18 13:38	121-14-2	
2,6-Dinitrotoluene	**<5.7**	ug/L	19.0	5.7	10	11/26/18 07:15	11/27/18 13:38	606-20-2	
2-Chloronaphthalene	**<15.5**	ug/L	51.8	15.5	10	11/26/18 07:15	11/27/18 13:38	91-58-7	
2-Chlorophenol	**<10.9**	ug/L	36.4	10.9	10	11/26/18 07:15	11/27/18 13:38	95-57-8	
2-Methylnaphthalene	**185**	ug/L	47.6	14.3	10	11/26/18 07:15	11/27/18 13:38	91-57-6	
2-Methylphenol(o-Cresol)	**<8.2**	ug/L	27.3	8.2	10	11/26/18 07:15	11/27/18 13:38	95-48-7	
2-Nitroaniline	**<7.3**	ug/L	24.3	7.3	10	11/26/18 07:15	11/27/18 13:38	88-74-4	
2-Nitrophenol	**<11.0**	ug/L	36.6	11.0	10	11/26/18 07:15	11/27/18 13:38	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<14.7**	ug/L	49.1	14.7	10	11/26/18 07:15	11/27/18 13:38		
3,3'-Dichlorobenzidine	**<8.5**	ug/L	28.5	8.5	10	11/26/18 07:15	11/27/18 13:38	91-94-1	
3-Nitroaniline	**<9.1**	ug/L	30.5	9.1	10	11/26/18 07:15	11/27/18 13:38	99-09-2	
4,6-Dinitro-2-methylphenol	**<6.2**	ug/L	20.6	6.2	10	11/26/18 07:15	11/27/18 13:38	534-52-1	
4-Bromophenylphenyl ether	**<18.6**	ug/L	62.0	18.6	10	11/26/18 07:15	11/27/18 13:38	101-55-3	
4-Chloro-3-methylphenol	**<15.9**	ug/L	53.1	15.9	10	11/26/18 07:15	11/27/18 13:38	59-50-7	
4-Chloroaniline	**<10.3**	ug/L	34.5	10.3	10	11/26/18 07:15	11/27/18 13:38	106-47-8	
4-Chlorophenylphenyl ether	**<7.7**	ug/L	25.8	7.7	10	11/26/18 07:15	11/27/18 13:38	7005-72-3	
4-Nitroaniline	**<17.3**	ug/L	57.6	17.3	10	11/26/18 07:15	11/27/18 13:38	100-01-6	
4-Nitrophenol	**<9.9**	ug/L	32.9	9.9	10	11/26/18 07:15	11/27/18 13:38	100-02-7	
Acenaphthene	**21.9J**	ug/L	42.1	12.6	10	11/26/18 07:15	11/27/18 13:38	83-32-9	
Acenaphthylene	**<10.0**	ug/L	33.4	10.0	10	11/26/18 07:15	11/27/18 13:38	208-96-8	
Anthracene	**<17.0**	ug/L	56.8	17.0	10	11/26/18 07:15	11/27/18 13:38	120-12-7	
Benzo(a)anthracene	**<5.0**	ug/L	16.8	5.0	10	11/26/18 07:15	11/27/18 13:38	56-55-3	
Benzo(a)pyrene	**<17.8**	ug/L	59.2	17.8	10	11/26/18 07:15	11/27/18 13:38	50-32-8	L1
Benzo(b)fluoranthene	**<6.2**	ug/L	20.6	6.2	10	11/26/18 07:15	11/27/18 13:38	205-99-2	
Benzo(g,h,i)perylene	**<7.6**	ug/L	25.5	7.6	10	11/26/18 07:15	11/27/18 13:38	191-24-2	
Benzo(k)fluoranthene	**<9.5**	ug/L	31.5	9.5	10	11/26/18 07:15	11/27/18 13:38	207-08-9	L1
Butylbenzylphthalate	**<7.3**	ug/L	24.3	7.3	10	11/26/18 07:15	11/27/18 13:38	85-68-7	
Carbazole	**<7.1**	ug/L	23.6	7.1	10	11/26/18 07:15	11/27/18 13:38	86-74-8	
Chrysene	**<16.4**	ug/L	54.7	16.4	10	11/26/18 07:15	11/27/18 13:38	218-01-9	
Di-n-butylphthalate	**<24.2**	ug/L	80.6	24.2	10	11/26/18 07:15	11/27/18 13:38	84-74-2	
Di-n-octylphthalate	**<17.9**	ug/L	59.5	17.9	10	11/26/18 07:15	11/27/18 13:38	117-84-0	
Dibenz(a,h)anthracene	**<12.5**	ug/L	41.6	12.5	10	11/26/18 07:15	11/27/18 13:38	53-70-3	
Dibenzofuran	**12.0J**	ug/L	24.2	7.2	10	11/26/18 07:15	11/27/18 13:38	132-64-9	
Diethylphthalate	**<10.2**	ug/L	34.0	10.2	10	11/26/18 07:15	11/27/18 13:38	84-66-2	
Dimethylphthalate	**<18.2**	ug/L	60.7	18.2	10	11/26/18 07:15	11/27/18 13:38	131-11-3	
Fluoranthene	**<5.3**	ug/L	17.7	5.3	10	11/26/18 07:15	11/27/18 13:38	206-44-0	
Fluorene	**21.1J**	ug/L	23.6	7.1	10	11/26/18 07:15	11/27/18 13:38	86-73-7	
Hexachloro-1,3-butadiene	**<23.2**	ug/L	77.4	23.2	10	11/26/18 07:15	11/27/18 13:38	87-68-3	
Hexachlorobenzene	**<16.0**	ug/L	53.2	16.0	10	11/26/18 07:15	11/27/18 13:38	118-74-1	
Hexachlorocyclopentadiene	**<6.4**	ug/L	21.3	6.4	10	11/26/18 07:15	11/27/18 13:38	77-47-4	
Hexachloroethane	**<25.1**	ug/L	83.6	25.1	10	11/26/18 07:15	11/27/18 13:38	67-72-1	
Indeno(1,2,3-cd)pyrene	**<14.1**	ug/L	47.1	14.1	10	11/26/18 07:15	11/27/18 13:38	193-39-5	
Isophorone	**<6.9**	ug/L	23.1	6.9	10	11/26/18 07:15	11/27/18 13:38	78-59-1	
N-Nitroso-di-n-propylamine	**<9.2**	ug/L	30.5	9.2	10	11/26/18 07:15	11/27/18 13:38	621-64-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-3 **Lab ID: 40179993007** Collected: 11/19/18 14:20 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<33.3**	ug/L	111	33.3	10	11/26/18 07:15	11/27/18 13:38	86-30-6	
Naphthalene	**223**	ug/L	59.7	17.9	10	11/26/18 07:15	11/27/18 13:38	91-20-3	
Nitrobenzene	**<13.7**	ug/L	45.6	13.7	10	11/26/18 07:15	11/27/18 13:38	98-95-3	
Pentachlorophenol	**<13.5**	ug/L	45.1	13.5	10	11/26/18 07:15	11/27/18 13:38	87-86-5	
Phenanthrene	**<17.2**	ug/L	57.3	17.2	10	11/26/18 07:15	11/27/18 13:38	85-01-8	
Phenol	**<5.7**	ug/L	18.9	5.7	10	11/26/18 07:15	11/27/18 13:38	108-95-2	D3
Pyrene	**<12.7**	ug/L	42.4	12.7	10	11/26/18 07:15	11/27/18 13:38	129-00-0	
bis(2-Chloroethoxy)methane	**<9.4**	ug/L	31.3	9.4	10	11/26/18 07:15	11/27/18 13:38	111-91-1	
bis(2-Chloroethyl) ether	**<14.9**	ug/L	49.7	14.9	10	11/26/18 07:15	11/27/18 13:38	111-44-4	
bis(2-Ethylhexyl)phthalate	**15.0J**	ug/L	21.8	6.5	10	11/26/18 07:15	11/27/18 13:38	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	85	%	56-120		10	11/26/18 07:15	11/27/18 13:38	4165-60-0	
2-Fluorobiphenyl (S)	104	%	54-122		10	11/26/18 07:15	11/27/18 13:38	321-60-8	
Terphenyl-d14 (S)	93	%	59-136		10	11/26/18 07:15	11/27/18 13:38	1718-51-0	
Phenol-d6 (S)	31	%	16-120		10	11/26/18 07:15	11/27/18 13:38	13127-88-3	
2-Fluorophenol (S)	53	%	27-77		10	11/26/18 07:15	11/27/18 13:38	367-12-4	
2,4,6-Tribromophenol (S)	96	%	58-134		10	11/26/18 07:15	11/27/18 13:38	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**0.56J**	ug/L	2.0	0.49	2		11/27/18 11:20	71-43-2	
Bromobenzene	**<0.48**	ug/L	2.0	0.48	2		11/27/18 11:20	108-86-1	
Bromochloromethane	**<0.72**	ug/L	10.0	0.72	2		11/27/18 11:20	74-97-5	
Bromodichloromethane	**<0.73**	ug/L	2.4	0.73	2		11/27/18 11:20	75-27-4	
Bromoform	**<7.9**	ug/L	26.5	7.9	2		11/27/18 11:20	75-25-2	
Bromomethane	**<1.9**	ug/L	10.0	1.9	2		11/27/18 11:20	74-83-9	
n-Butylbenzene	**4.0J**	ug/L	4.7	1.4	2		11/27/18 11:20	104-51-8	
sec-Butylbenzene	**3.0J**	ug/L	10.0	1.7	2		11/27/18 11:20	135-98-8	
tert-Butylbenzene	**<0.61**	ug/L	2.0	0.61	2		11/27/18 11:20	98-06-6	
Carbon tetrachloride	**<0.33**	ug/L	2.0	0.33	2		11/27/18 11:20	56-23-5	
Chlorobenzene	**<1.4**	ug/L	4.7	1.4	2		11/27/18 11:20	108-90-7	
Chloroethane	**<2.7**	ug/L	10.0	2.7	2		11/27/18 11:20	75-00-3	
Chloroform	**<2.5**	ug/L	10.0	2.5	2		11/27/18 11:20	67-66-3	
Chloromethane	**<4.4**	ug/L	14.6	4.4	2		11/27/18 11:20	74-87-3	
2-Chlorotoluene	**<1.9**	ug/L	10.0	1.9	2		11/27/18 11:20	95-49-8	
4-Chlorotoluene	**<1.5**	ug/L	5.0	1.5	2		11/27/18 11:20	106-43-4	
1,2-Dibromo-3-chloropropane	**<3.5**	ug/L	11.8	3.5	2		11/27/18 11:20	96-12-8	
Dibromochloromethane	**<5.2**	ug/L	17.3	5.2	2		11/27/18 11:20	124-48-1	
1,2-Dibromoethane (EDB)	**<1.7**	ug/L	5.5	1.7	2		11/27/18 11:20	106-93-4	
Dibromomethane	**<1.9**	ug/L	6.2	1.9	2		11/27/18 11:20	74-95-3	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	2		11/27/18 11:20	95-50-1	
1,3-Dichlorobenzene	**<1.3**	ug/L	4.2	1.3	2		11/27/18 11:20	541-73-1	
1,4-Dichlorobenzene	**<1.9**	ug/L	6.3	1.9	2		11/27/18 11:20	106-46-7	
Dichlorodifluoromethane	**<1.0**	ug/L	10.0	1.0	2		11/27/18 11:20	75-71-8	
1,1-Dichloroethane	**<0.55**	ug/L	2.0	0.55	2		11/27/18 11:20	75-34-3	
1,2-Dichloroethane	**<0.56**	ug/L	2.0	0.56	2		11/27/18 11:20	107-06-2	
1,1-Dichloroethene	**<0.49**	ug/L	2.0	0.49	2		11/27/18 11:20	75-35-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-3 **Lab ID: 40179993007** Collected: 11/19/18 14:20 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.54**	ug/L	2.0	0.54	2		11/27/18 11:20	156-59-2	
trans-1,2-Dichloroethene	**<2.2**	ug/L	7.3	2.2	2		11/27/18 11:20	156-60-5	
1,2-Dichloropropane	**<0.57**	ug/L	2.0	0.57	2		11/27/18 11:20	78-87-5	
1,3-Dichloropropane	**<1.7**	ug/L	5.5	1.7	2		11/27/18 11:20	142-28-9	
2,2-Dichloropropane	**<4.5**	ug/L	15.1	4.5	2		11/27/18 11:20	594-20-7	
1,1-Dichloropropene	**<1.1**	ug/L	3.6	1.1	2		11/27/18 11:20	563-58-6	
cis-1,3-Dichloropropene	**<7.3**	ug/L	24.2	7.3	2		11/27/18 11:20	10061-01-5	
trans-1,3-Dichloropropene	**<8.7**	ug/L	29.1	8.7	2		11/27/18 11:20	10061-02-6	
Diisopropyl ether	**<3.8**	ug/L	12.6	3.8	2		11/27/18 11:20	108-20-3	
Ethylbenzene	**41.4**	ug/L	2.0	0.44	2		11/27/18 11:20	100-41-4	
Hexachloro-1,3-butadiene	**<2.4**	ug/L	10.0	2.4	2		11/27/18 11:20	87-68-3	
Isopropylbenzene (Cumene)	**9.1J**	ug/L	10.0	0.79	2		11/27/18 11:20	98-82-8	
p-Isopropyltoluene	**1.8J**	ug/L	5.3	1.6	2		11/27/18 11:20	99-87-6	
Methylene Chloride	**<1.2**	ug/L	10.0	1.2	2		11/27/18 11:20	75-09-2	
Methyl-tert-butyl ether	**<2.5**	ug/L	8.3	2.5	2		11/27/18 11:20	1634-04-4	
Naphthalene	**184**	ug/L	10.0	2.4	2		11/27/18 11:20	91-20-3	
n-Propylbenzene	**15.9**	ug/L	10.0	1.6	2		11/27/18 11:20	103-65-1	
Styrene	**<0.93**	ug/L	3.1	0.93	2		11/27/18 11:20	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.54**	ug/L	2.0	0.54	2		11/27/18 11:20	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.55**	ug/L	2.0	0.55	2		11/27/18 11:20	79-34-5	
Tetrachloroethene	**<0.65**	ug/L	2.2	0.65	2		11/27/18 11:20	127-18-4	
Toluene	**<0.34**	ug/L	10.0	0.34	2		11/27/18 11:20	108-88-3	
1,2,3-Trichlorobenzene	**<1.3**	ug/L	10.0	1.3	2		11/27/18 11:20	87-61-6	
1,2,4-Trichlorobenzene	**<1.9**	ug/L	10.0	1.9	2		11/27/18 11:20	120-82-1	
1,1,1-Trichloroethane	**<0.49**	ug/L	2.0	0.49	2		11/27/18 11:20	71-55-6	
1,1,2-Trichloroethane	**<1.1**	ug/L	10.0	1.1	2		11/27/18 11:20	79-00-5	
Trichloroethene	**<0.51**	ug/L	2.0	0.51	2		11/27/18 11:20	79-01-6	
Trichlorofluoromethane	**<0.43**	ug/L	2.0	0.43	2		11/27/18 11:20	75-69-4	
1,2,3-Trichloropropane	**<1.2**	ug/L	10.0	1.2	2		11/27/18 11:20	96-18-4	
1,2,4-Trimethylbenzene	**114**	ug/L	5.6	1.7	2		11/27/18 11:20	95-63-6	
1,3,5-Trimethylbenzene	**<1.7**	ug/L	5.8	1.7	2		11/27/18 11:20	108-67-8	
Vinyl chloride	**<0.35**	ug/L	2.0	0.35	2		11/27/18 11:20	75-01-4	
m&p-Xylene	**17.9**	ug/L	4.0	0.93	2		11/27/18 11:20	179601-23-1	
o-Xylene	**4.5**	ug/L	2.0	0.52	2		11/27/18 11:20	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	101	%	70-130		2		11/27/18 11:20	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		2		11/27/18 11:20	1868-53-7	
Toluene-d8 (S)	103	%	70-130		2		11/27/18 11:20	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**101**	mg/L	6.7	3.2	1		11/21/18 11:20		

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-5 **Lab ID: 40179993008** Collected: 11/19/18 14:35 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:36	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:36	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:36	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:36	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:36	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:36	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:36	11096-82-5	
PCB, Total	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:36	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	68	%	44-121		1	11/28/18 07:24	11/29/18 06:36	877-09-8	
Decachlorobiphenyl (S)	27	%	10-119		1	11/28/18 07:24	11/29/18 06:36	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**173**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 17:58	7440-38-2	
Barium	**300**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 17:58	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 17:58	7440-43-9	
Chromium	**81.9**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 17:58	7440-47-3	
Lead	**25.6**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 17:58	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 17:58	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 17:58	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 17:07	7440-38-2	
Barium, Dissolved	**108**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 17:07	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 17:07	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 17:07	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 17:07	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 17:07	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 17:07	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.084J**	ug/L	0.28	0.084	1	12/03/18 08:55	12/04/18 08:43	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**0.26J**	ug/L	0.28	0.084	1	12/03/18 08:55	12/04/18 09:15	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.9**	ug/L	6.4	1.9	1	11/26/18 07:15	11/27/18 13:59	120-82-1	
1,2-Dichlorobenzene	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 13:59	95-50-1	
1,3-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 13:59	541-73-1	
1,4-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 13:59	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 13:59	108-60-1	
2,4,5-Trichlorophenol	**<0.79**	ug/L	2.6	0.79	1	11/26/18 07:15	11/27/18 13:59	95-95-4	
2,4,6-Trichlorophenol	**<2.0**	ug/L	6.6	2.0	1	11/26/18 07:15	11/27/18 13:59	88-06-2	
2,4-Dichlorophenol	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 13:59	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-5 **Lab ID: 40179993008** Collected: 11/19/18 14:35 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.2**	ug/L	4.0	1.2	1	11/26/18 07:15	11/27/18 13:59	105-67-9	
2,4-Dinitrophenol	**<0.67**	ug/L	2.2	0.67	1	11/26/18 07:15	11/27/18 13:59	51-28-5	
2,4-Dinitrotoluene	**<0.75**	ug/L	2.5	0.75	1	11/26/18 07:15	11/27/18 13:59	121-14-2	
2,6-Dinitrotoluene	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 13:59	606-20-2	
2-Chloronaphthalene	**<1.6**	ug/L	5.2	1.6	1	11/26/18 07:15	11/27/18 13:59	91-58-7	
2-Chlorophenol	**<1.1**	ug/L	3.6	1.1	1	11/26/18 07:15	11/27/18 13:59	95-57-8	
2-Methylnaphthalene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 13:59	91-57-6	
2-Methylphenol(o-Cresol)	**<0.82**	ug/L	2.7	0.82	1	11/26/18 07:15	11/27/18 13:59	95-48-7	
2-Nitroaniline	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 13:59	88-74-4	
2-Nitrophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 13:59	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<1.5**	ug/L	4.9	1.5	1	11/26/18 07:15	11/27/18 13:59		
3,3'-Dichlorobenzidine	**<0.85**	ug/L	2.8	0.85	1	11/26/18 07:15	11/27/18 13:59	91-94-1	
3-Nitroaniline	**<0.91**	ug/L	3.0	0.91	1	11/26/18 07:15	11/27/18 13:59	99-09-2	
4,6-Dinitro-2-methylphenol	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 13:59	534-52-1	
4-Bromophenylphenyl ether	**<1.9**	ug/L	6.2	1.9	1	11/26/18 07:15	11/27/18 13:59	101-55-3	
4-Chloro-3-methylphenol	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 13:59	59-50-7	
4-Chloroaniline	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 13:59	106-47-8	
4-Chlorophenylphenyl ether	**<0.77**	ug/L	2.6	0.77	1	11/26/18 07:15	11/27/18 13:59	7005-72-3	
4-Nitroaniline	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 13:59	100-01-6	
4-Nitrophenol	**<0.99**	ug/L	3.3	0.99	1	11/26/18 07:15	11/27/18 13:59	100-02-7	
Acenaphthene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 13:59	83-32-9	
Acenaphthylene	**<1.0**	ug/L	3.3	1.0	1	11/26/18 07:15	11/27/18 13:59	208-96-8	
Anthracene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 13:59	120-12-7	
Benzo(a)anthracene	**<0.50**	ug/L	1.7	0.50	1	11/26/18 07:15	11/27/18 13:59	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 13:59	50-32-8	L1
Benzo(b)fluoranthene	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 13:59	205-99-2	
Benzo(g,h,i)perylene	**<0.76**	ug/L	2.5	0.76	1	11/26/18 07:15	11/27/18 13:59	191-24-2	
Benzo(k)fluoranthene	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 13:59	207-08-9	L1
Butylbenzylphthalate	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 13:59	85-68-7	
Carbazole	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 13:59	86-74-8	
Chrysene	**<1.6**	ug/L	5.5	1.6	1	11/26/18 07:15	11/27/18 13:59	218-01-9	
Di-n-butylphthalate	**<2.4**	ug/L	8.1	2.4	1	11/26/18 07:15	11/27/18 13:59	84-74-2	
Di-n-octylphthalate	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 13:59	117-84-0	
Dibenz(a,h)anthracene	**<1.2**	ug/L	4.2	1.2	1	11/26/18 07:15	11/27/18 13:59	53-70-3	
Dibenzofuran	**<0.72**	ug/L	2.4	0.72	1	11/26/18 07:15	11/27/18 13:59	132-64-9	
Diethylphthalate	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 13:59	84-66-2	
Dimethylphthalate	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 13:59	131-11-3	
Fluoranthene	**<0.53**	ug/L	1.8	0.53	1	11/26/18 07:15	11/27/18 13:59	206-44-0	
Fluorene	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 13:59	86-73-7	
Hexachloro-1,3-butadiene	**<2.3**	ug/L	7.7	2.3	1	11/26/18 07:15	11/27/18 13:59	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 13:59	118-74-1	
Hexachlorocyclopentadiene	**<0.64**	ug/L	2.1	0.64	1	11/26/18 07:15	11/27/18 13:59	77-47-4	
Hexachloroethane	**<2.5**	ug/L	8.4	2.5	1	11/26/18 07:15	11/27/18 13:59	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.4**	ug/L	4.7	1.4	1	11/26/18 07:15	11/27/18 13:59	193-39-5	
Isophorone	**<0.69**	ug/L	2.3	0.69	1	11/26/18 07:15	11/27/18 13:59	78-59-1	
N-Nitroso-di-n-propylamine	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 13:59	621-64-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-5 **Lab ID: 40179993008** Collected: 11/19/18 14:35 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.1	3.3	1	11/26/18 07:15	11/27/18 13:59	86-30-6	
Naphthalene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 13:59	91-20-3	
Nitrobenzene	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 13:59	98-95-3	
Pentachlorophenol	**<1.4**	ug/L	4.5	1.4	1	11/26/18 07:15	11/27/18 13:59	87-86-5	
Phenanthrene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 13:59	85-01-8	
Phenol	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 13:59	108-95-2	
Pyrene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 13:59	129-00-0	
bis(2-Chloroethoxy)methane	**<0.94**	ug/L	3.1	0.94	1	11/26/18 07:15	11/27/18 13:59	111-91-1	
bis(2-Chloroethyl) ether	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 13:59	111-44-4	
bis(2-Ethylhexyl)phthalate	**<0.65**	ug/L	2.2	0.65	1	11/26/18 07:15	11/27/18 13:59	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	92	%	56-120		1	11/26/18 07:15	11/27/18 13:59	4165-60-0	
2-Fluorobiphenyl (S)	81	%	54-122		1	11/26/18 07:15	11/27/18 13:59	321-60-8	
Terphenyl-d14 (S)	101	%	59-136		1	11/26/18 07:15	11/27/18 13:59	1718-51-0	
Phenol-d6 (S)	32	%	16-120		1	11/26/18 07:15	11/27/18 13:59	13127-88-3	
2-Fluorophenol (S)	45	%	27-77		1	11/26/18 07:15	11/27/18 13:59	367-12-4	
2,4,6-Tribromophenol (S)	95	%	58-134		1	11/26/18 07:15	11/27/18 13:59	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/27/18 13:57	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 13:57	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/27/18 13:57	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/27/18 13:57	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/27/18 13:57	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/27/18 13:57	74-83-9	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 13:57	104-51-8	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/27/18 13:57	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/27/18 13:57	98-06-6	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 13:57	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 13:57	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/27/18 13:57	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/27/18 13:57	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/27/18 13:57	74-87-3	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/27/18 13:57	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/27/18 13:57	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/27/18 13:57	96-12-8	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/27/18 13:57	124-48-1	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/27/18 13:57	106-93-4	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/27/18 13:57	74-95-3	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 13:57	95-50-1	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/27/18 13:57	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/27/18 13:57	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/27/18 13:57	75-71-8	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 13:57	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 13:57	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 13:57	75-35-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-5 **Lab ID: 40179993008** Collected: 11/19/18 14:35 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/27/18 13:57	156-59-2	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/27/18 13:57	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 13:57	78-87-5	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/27/18 13:57	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/27/18 13:57	594-20-7	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/27/18 13:57	563-58-6	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/27/18 13:57	10061-01-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/27/18 13:57	10061-02-6	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/27/18 13:57	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/27/18 13:57	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 13:57	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/27/18 13:57	98-82-8	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/27/18 13:57	99-87-6	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/27/18 13:57	75-09-2	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/27/18 13:57	1634-04-4	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 13:57	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/27/18 13:57	103-65-1	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/27/18 13:57	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 13:57	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 13:57	79-34-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/27/18 13:57	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/27/18 13:57	108-88-3	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/27/18 13:57	87-61-6	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/27/18 13:57	120-82-1	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/27/18 13:57	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/27/18 13:57	79-00-5	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 13:57	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/27/18 13:57	75-69-4	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/27/18 13:57	96-18-4	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/27/18 13:57	95-63-6	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/27/18 13:57	108-67-8	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 13:57	75-01-4	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/27/18 13:57	179601-23-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 13:57	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	100	%	70-130		1		11/27/18 13:57	460-00-4	
Dibromofluoromethane (S)	97	%	70-130		1		11/27/18 13:57	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		11/27/18 13:57	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**1660**	mg/L	50.0	23.8	1		11/21/18 11:20		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: AMSMW-01 **Lab ID: 40179993009** Collected: 11/19/18 14:45 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:54	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:54	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:54	11141-16-5	
PCB-1242 (Aroclor 1242)	**2.8**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:54	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:54	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:54	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:54	11096-82-5	
PCB, Total	**2.8**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 06:54	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	71	%	44-121		1	11/28/18 07:24	11/29/18 06:54	877-09-8	
Decachlorobiphenyl (S)	32	%	10-119		1	11/28/18 07:24	11/29/18 06:54	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**221**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 18:00	7440-38-2	
Barium	**530**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 18:00	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 18:00	7440-43-9	
Chromium	**123**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 18:00	7440-47-3	
Lead	**42.4**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 18:00	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 18:00	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 18:00	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 17:14	7440-38-2	
Barium, Dissolved	**183**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 17:14	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 17:14	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 17:14	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 17:14	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 17:14	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 17:14	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**1.3**	ug/L	0.28	0.084	1	12/03/18 08:55	12/04/18 08:45	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**0.94**	ug/L	0.28	0.084	1	12/03/18 08:55	12/04/18 09:22	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.9**	ug/L	6.4	1.9	1	11/26/18 07:15	11/27/18 14:21	120-82-1	
1,2-Dichlorobenzene	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 14:21	95-50-1	
1,3-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 14:21	541-73-1	
1,4-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 14:21	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 14:21	108-60-1	
2,4,5-Trichlorophenol	**<0.79**	ug/L	2.6	0.79	1	11/26/18 07:15	11/27/18 14:21	95-95-4	
2,4,6-Trichlorophenol	**<2.0**	ug/L	6.6	2.0	1	11/26/18 07:15	11/27/18 14:21	88-06-2	
2,4-Dichlorophenol	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 14:21	120-83-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: AMSMW-01 **Lab ID: 40179993009** Collected: 11/19/18 14:45 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.2**	ug/L	4.0	1.2	1	11/26/18 07:15	11/27/18 14:21	105-67-9	
2,4-Dinitrophenol	**<0.67**	ug/L	2.2	0.67	1	11/26/18 07:15	11/27/18 14:21	51-28-5	
2,4-Dinitrotoluene	**<0.75**	ug/L	2.5	0.75	1	11/26/18 07:15	11/27/18 14:21	121-14-2	
2,6-Dinitrotoluene	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 14:21	606-20-2	
2-Chloronaphthalene	**<1.6**	ug/L	5.2	1.6	1	11/26/18 07:15	11/27/18 14:21	91-58-7	
2-Chlorophenol	**<1.1**	ug/L	3.6	1.1	1	11/26/18 07:15	11/27/18 14:21	95-57-8	
2-Methylnaphthalene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 14:21	91-57-6	
2-Methylphenol(o-Cresol)	**<0.82**	ug/L	2.7	0.82	1	11/26/18 07:15	11/27/18 14:21	95-48-7	
2-Nitroaniline	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 14:21	88-74-4	
2-Nitrophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 14:21	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<1.5**	ug/L	4.9	1.5	1	11/26/18 07:15	11/27/18 14:21		
3,3'-Dichlorobenzidine	**<0.85**	ug/L	2.8	0.85	1	11/26/18 07:15	11/27/18 14:21	91-94-1	
3-Nitroaniline	**<0.91**	ug/L	3.0	0.91	1	11/26/18 07:15	11/27/18 14:21	99-09-2	
4,6-Dinitro-2-methylphenol	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 14:21	534-52-1	
4-Bromophenylphenyl ether	**<1.9**	ug/L	6.2	1.9	1	11/26/18 07:15	11/27/18 14:21	101-55-3	
4-Chloro-3-methylphenol	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 14:21	59-50-7	
4-Chloroaniline	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 14:21	106-47-8	
4-Chlorophenylphenyl ether	**<0.77**	ug/L	2.6	0.77	1	11/26/18 07:15	11/27/18 14:21	7005-72-3	
4-Nitroaniline	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 14:21	100-01-6	
4-Nitrophenol	**<0.99**	ug/L	3.3	0.99	1	11/26/18 07:15	11/27/18 14:21	100-02-7	
Acenaphthene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 14:21	83-32-9	
Acenaphthylene	**<1.0**	ug/L	3.3	1.0	1	11/26/18 07:15	11/27/18 14:21	208-96-8	
Anthracene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 14:21	120-12-7	
Benzo(a)anthracene	**<0.50**	ug/L	1.7	0.50	1	11/26/18 07:15	11/27/18 14:21	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 14:21	50-32-8	L1
Benzo(b)fluoranthene	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 14:21	205-99-2	
Benzo(g,h,i)perylene	**<0.76**	ug/L	2.5	0.76	1	11/26/18 07:15	11/27/18 14:21	191-24-2	
Benzo(k)fluoranthene	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 14:21	207-08-9	L1
Butylbenzylphthalate	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 14:21	85-68-7	
Carbazole	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 14:21	86-74-8	
Chrysene	**<1.6**	ug/L	5.5	1.6	1	11/26/18 07:15	11/27/18 14:21	218-01-9	
Di-n-butylphthalate	**<2.4**	ug/L	8.1	2.4	1	11/26/18 07:15	11/27/18 14:21	84-74-2	
Di-n-octylphthalate	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 14:21	117-84-0	
Dibenz(a,h)anthracene	**<1.2**	ug/L	4.2	1.2	1	11/26/18 07:15	11/27/18 14:21	53-70-3	
Dibenzofuran	**<0.72**	ug/L	2.4	0.72	1	11/26/18 07:15	11/27/18 14:21	132-64-9	
Diethylphthalate	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 14:21	84-66-2	
Dimethylphthalate	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 14:21	131-11-3	
Fluoranthene	**<0.53**	ug/L	1.8	0.53	1	11/26/18 07:15	11/27/18 14:21	206-44-0	
Fluorene	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 14:21	86-73-7	
Hexachloro-1,3-butadiene	**<2.3**	ug/L	7.7	2.3	1	11/26/18 07:15	11/27/18 14:21	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 14:21	118-74-1	
Hexachlorocyclopentadiene	**<0.64**	ug/L	2.1	0.64	1	11/26/18 07:15	11/27/18 14:21	77-47-4	
Hexachloroethane	**<2.5**	ug/L	8.4	2.5	1	11/26/18 07:15	11/27/18 14:21	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.4**	ug/L	4.7	1.4	1	11/26/18 07:15	11/27/18 14:21	193-39-5	
Isophorone	**<0.69**	ug/L	2.3	0.69	1	11/26/18 07:15	11/27/18 14:21	78-59-1	
N-Nitroso-di-n-propylamine	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 14:21	621-64-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: AMSMW-01 **Lab ID: 40179993009** Collected: 11/19/18 14:45 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.1	3.3	1	11/26/18 07:15	11/27/18 14:21	86-30-6	
Naphthalene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 14:21	91-20-3	
Nitrobenzene	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 14:21	98-95-3	
Pentachlorophenol	**3.6J**	ug/L	4.5	1.4	1	11/26/18 07:15	11/27/18 14:21	87-86-5	
Phenanthrene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 14:21	85-01-8	
Phenol	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 14:21	108-95-2	
Pyrene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 14:21	129-00-0	
bis(2-Chloroethoxy)methane	**<0.94**	ug/L	3.1	0.94	1	11/26/18 07:15	11/27/18 14:21	111-91-1	
bis(2-Chloroethyl) ether	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 14:21	111-44-4	
bis(2-Ethylhexyl)phthalate	**<0.65**	ug/L	2.2	0.65	1	11/26/18 07:15	11/27/18 14:21	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	84	%	56-120		1	11/26/18 07:15	11/27/18 14:21	4165-60-0	
2-Fluorobiphenyl (S)	69	%	54-122		1	11/26/18 07:15	11/27/18 14:21	321-60-8	
Terphenyl-d14 (S)	83	%	59-136		1	11/26/18 07:15	11/27/18 14:21	1718-51-0	
Phenol-d6 (S)	28	%	16-120		1	11/26/18 07:15	11/27/18 14:21	13127-88-3	
2-Fluorophenol (S)	42	%	27-77		1	11/26/18 07:15	11/27/18 14:21	367-12-4	
2,4,6-Tribromophenol (S)	86	%	58-134		1	11/26/18 07:15	11/27/18 14:21	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/27/18 14:19	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 14:19	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/27/18 14:19	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/27/18 14:19	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/27/18 14:19	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/27/18 14:19	74-83-9	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 14:19	104-51-8	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/27/18 14:19	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/27/18 14:19	98-06-6	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 14:19	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 14:19	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/27/18 14:19	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/27/18 14:19	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/27/18 14:19	74-87-3	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/27/18 14:19	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/27/18 14:19	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/27/18 14:19	96-12-8	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/27/18 14:19	124-48-1	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/27/18 14:19	106-93-4	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/27/18 14:19	74-95-3	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 14:19	95-50-1	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/27/18 14:19	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/27/18 14:19	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/27/18 14:19	75-71-8	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 14:19	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 14:19	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 14:19	75-35-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: AMSMW-01 **Lab ID: 40179993009** Collected: 11/19/18 14:45 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/27/18 14:19	156-59-2	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/27/18 14:19	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 14:19	78-87-5	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/27/18 14:19	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/27/18 14:19	594-20-7	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/27/18 14:19	563-58-6	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/27/18 14:19	10061-01-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/27/18 14:19	10061-02-6	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/27/18 14:19	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/27/18 14:19	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 14:19	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/27/18 14:19	98-82-8	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/27/18 14:19	99-87-6	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/27/18 14:19	75-09-2	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/27/18 14:19	1634-04-4	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 14:19	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/27/18 14:19	103-65-1	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/27/18 14:19	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 14:19	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 14:19	79-34-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/27/18 14:19	127-18-4	
Toluene	**0.26J**	ug/L	5.0	0.17	1		11/27/18 14:19	108-88-3	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/27/18 14:19	87-61-6	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/27/18 14:19	120-82-1	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/27/18 14:19	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/27/18 14:19	79-00-5	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 14:19	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/27/18 14:19	75-69-4	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/27/18 14:19	96-18-4	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/27/18 14:19	95-63-6	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/27/18 14:19	108-67-8	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 14:19	75-01-4	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/27/18 14:19	179601-23-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 14:19	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		11/27/18 14:19	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		11/27/18 14:19	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/27/18 14:19	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**3670**	mg/L	50.0	23.8	1		11/21/18 11:20		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-4 **Lab ID: 40179993010** Collected: 11/19/18 15:00 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 07:13	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 07:13	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 07:13	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 07:13	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 07:13	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 07:13	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 07:13	11096-82-5	
PCB, Total	**<0.24**	ug/L	0.47	0.24	1	11/28/18 07:24	11/29/18 07:13	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	36	%	44-121		1	11/28/18 07:24	11/29/18 07:13	877-09-8	S0
Decachlorobiphenyl (S)	31	%	10-119		1	11/28/18 07:24	11/29/18 07:13	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**14.2J**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 18:02	7440-38-2	
Barium	**219**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 18:02	7440-39-3	
Cadmium	**1.4J**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 18:02	7440-43-9	
Chromium	**64.3**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 18:02	7440-47-3	
Lead	**90.2**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 18:02	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 18:02	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 18:02	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 17:16	7440-38-2	
Barium, Dissolved	**83.1**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 17:16	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 17:16	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 17:16	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 17:16	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 17:16	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 17:16	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.093J**	ug/L	0.28	0.084	1	12/03/18 08:55	12/04/18 08:47	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**0.30**	ug/L	0.28	0.084	1	12/03/18 08:55	12/04/18 09:25	7439-97-6	D9,P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<25.0**	ug/L	83.2	25.0	1	11/26/18 07:15	11/27/18 14:42	120-82-1	
1,2-Dichlorobenzene	**<23.7**	ug/L	78.9	23.7	1	11/26/18 07:15	11/27/18 14:42	95-50-1	
1,3-Dichlorobenzene	**<23.1**	ug/L	77.0	23.1	1	11/26/18 07:15	11/27/18 14:42	541-73-1	
1,4-Dichlorobenzene	**<23.0**	ug/L	76.8	23.0	1	11/26/18 07:15	11/27/18 14:42	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<18.7**	ug/L	62.4	18.7	1	11/26/18 07:15	11/27/18 14:42	108-60-1	
2,4,5-Trichlorophenol	**<10.3**	ug/L	34.4	10.3	1	11/26/18 07:15	11/27/18 14:42	95-95-4	
2,4,6-Trichlorophenol	**<25.9**	ug/L	86.4	25.9	1	11/26/18 07:15	11/27/18 14:42	88-06-2	
2,4-Dichlorophenol	**<16.8**	ug/L	55.9	16.8	1	11/26/18 07:15	11/27/18 14:42	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-4 **Lab ID: 40179993010** Collected: 11/19/18 15:00 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<15.5**	ug/L	51.7	15.5	1	11/26/18 07:15	11/27/18 14:42	105-67-9	
2,4-Dinitrophenol	**<8.7**	ug/L	29.1	8.7	1	11/26/18 07:15	11/27/18 14:42	51-28-5	
2,4-Dinitrotoluene	**<9.7**	ug/L	32.4	9.7	1	11/26/18 07:15	11/27/18 14:42	121-14-2	
2,6-Dinitrotoluene	**<7.4**	ug/L	24.6	7.4	1	11/26/18 07:15	11/27/18 14:42	606-20-2	
2-Chloronaphthalene	**<20.2**	ug/L	67.3	20.2	1	11/26/18 07:15	11/27/18 14:42	91-58-7	
2-Chlorophenol	**<14.2**	ug/L	47.3	14.2	1	11/26/18 07:15	11/27/18 14:42	95-57-8	
2-Methylnaphthalene	**<18.6**	ug/L	61.9	18.6	1	11/26/18 07:15	11/27/18 14:42	91-57-6	
2-Methylphenol(o-Cresol)	**<10.6**	ug/L	35.5	10.6	1	11/26/18 07:15	11/27/18 14:42	95-48-7	
2-Nitroaniline	**<9.5**	ug/L	31.6	9.5	1	11/26/18 07:15	11/27/18 14:42	88-74-4	
2-Nitrophenol	**<14.3**	ug/L	47.6	14.3	1	11/26/18 07:15	11/27/18 14:42	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<19.2**	ug/L	63.8	19.2	1	11/26/18 07:15	11/27/18 14:42		
3,3'-Dichlorobenzidine	**<11.1**	ug/L	37.0	11.1	1	11/26/18 07:15	11/27/18 14:42	91-94-1	
3-Nitroaniline	**<11.9**	ug/L	39.6	11.9	1	11/26/18 07:15	11/27/18 14:42	99-09-2	
4,6-Dinitro-2-methylphenol	**<8.0**	ug/L	26.7	8.0	1	11/26/18 07:15	11/27/18 14:42	534-52-1	
4-Bromophenylphenyl ether	**<24.2**	ug/L	80.6	24.2	1	11/26/18 07:15	11/27/18 14:42	101-55-3	
4-Chloro-3-methylphenol	**<20.7**	ug/L	69.0	20.7	1	11/26/18 07:15	11/27/18 14:42	59-50-7	
4-Chloroaniline	**<13.5**	ug/L	44.8	13.5	1	11/26/18 07:15	11/27/18 14:42	106-47-8	
4-Chlorophenylphenyl ether	**<10.0**	ug/L	33.5	10.0	1	11/26/18 07:15	11/27/18 14:42	7005-72-3	
4-Nitroaniline	**<22.5**	ug/L	74.8	22.5	1	11/26/18 07:15	11/27/18 14:42	100-01-6	
4-Nitrophenol	**<12.8**	ug/L	42.8	12.8	1	11/26/18 07:15	11/27/18 14:42	100-02-7	
Acenaphthene	**<16.4**	ug/L	54.8	16.4	1	11/26/18 07:15	11/27/18 14:42	83-32-9	
Acenaphthylene	**<13.0**	ug/L	43.4	13.0	1	11/26/18 07:15	11/27/18 14:42	208-96-8	
Anthracene	**<22.1**	ug/L	73.8	22.1	1	11/26/18 07:15	11/27/18 14:42	120-12-7	
Benzo(a)anthracene	**86.2**	ug/L	21.9	6.6	1	11/26/18 07:15	11/27/18 14:42	56-55-3	
Benzo(a)pyrene	**162**	ug/L	77.0	23.1	1	11/26/18 07:15	11/27/18 14:42	50-32-8	L1
Benzo(b)fluoranthene	**321**	ug/L	26.7	8.0	1	11/26/18 07:15	11/27/18 14:42	205-99-2	
Benzo(g,h,i)perylene	**167**	ug/L	33.1	9.9	1	11/26/18 07:15	11/27/18 14:42	191-24-2	
Benzo(k)fluoranthene	**118**	ug/L	41.0	12.3	1	11/26/18 07:15	11/27/18 14:42	207-08-9	L1
Butylbenzylphthalate	**<9.5**	ug/L	31.6	9.5	1	11/26/18 07:15	11/27/18 14:42	85-68-7	
Carbazole	**18.1J**	ug/L	30.6	9.2	1	11/26/18 07:15	11/27/18 14:42	86-74-8	
Chrysene	**199**	ug/L	71.1	21.3	1	11/26/18 07:15	11/27/18 14:42	218-01-9	
Di-n-butylphthalate	**<31.4**	ug/L	105	31.4	1	11/26/18 07:15	11/27/18 14:42	84-74-2	
Di-n-octylphthalate	**<23.2**	ug/L	77.4	23.2	1	11/26/18 07:15	11/27/18 14:42	117-84-0	
Dibenz(a,h)anthracene	**34.2J**	ug/L	54.0	16.2	1	11/26/18 07:15	11/27/18 14:42	53-70-3	
Dibenzofuran	**<9.4**	ug/L	31.4	9.4	1	11/26/18 07:15	11/27/18 14:42	132-64-9	
Diethylphthalate	**<13.3**	ug/L	44.2	13.3	1	11/26/18 07:15	11/27/18 14:42	84-66-2	
Dimethylphthalate	**<23.7**	ug/L	78.9	23.7	1	11/26/18 07:15	11/27/18 14:42	131-11-3	
Fluoranthene	**385**	ug/L	23.0	6.9	1	11/26/18 07:15	11/27/18 14:42	206-44-0	
Fluorene	**<9.2**	ug/L	30.7	9.2	1	11/26/18 07:15	11/27/18 14:42	86-73-7	
Hexachloro-1,3-butadiene	**<30.2**	ug/L	101	30.2	1	11/26/18 07:15	11/27/18 14:42	87-68-3	
Hexachlorobenzene	**<20.8**	ug/L	69.2	20.8	1	11/26/18 07:15	11/27/18 14:42	118-74-1	
Hexachlorocyclopentadiene	**<8.3**	ug/L	27.7	8.3	1	11/26/18 07:15	11/27/18 14:42	77-47-4	
Hexachloroethane	**<32.6**	ug/L	109	32.6	1	11/26/18 07:15	11/27/18 14:42	67-72-1	
Indeno(1,2,3-cd)pyrene	**184**	ug/L	61.2	18.4	1	11/26/18 07:15	11/27/18 14:42	193-39-5	
Isophorone	**<9.0**	ug/L	30.0	9.0	1	11/26/18 07:15	11/27/18 14:42	78-59-1	
N-Nitroso-di-n-propylamine	**<11.9**	ug/L	39.7	11.9	1	11/26/18 07:15	11/27/18 14:42	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-4 **Lab ID: 40179993010** Collected: 11/19/18 15:00 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<43.3**	ug/L	144	43.3	1	11/26/18 07:15	11/27/18 14:42	86-30-6	
Naphthalene	**<23.3**	ug/L	77.6	23.3	1	11/26/18 07:15	11/27/18 14:42	91-20-3	
Nitrobenzene	**<17.8**	ug/L	59.3	17.8	1	11/26/18 07:15	11/27/18 14:42	98-95-3	
Pentachlorophenol	**<17.6**	ug/L	58.6	17.6	1	11/26/18 07:15	11/27/18 14:42	87-86-5	
Phenanthrene	**92.4**	ug/L	74.4	22.3	1	11/26/18 07:15	11/27/18 14:42	85-01-8	
Phenol	**<7.4**	ug/L	24.5	7.4	1	11/26/18 07:15	11/27/18 14:42	108-95-2	
Pyrene	**308**	ug/L	55.1	16.5	1	11/26/18 07:15	11/27/18 14:42	129-00-0	
bis(2-Chloroethoxy)methane	**<12.2**	ug/L	40.7	12.2	1	11/26/18 07:15	11/27/18 14:42	111-91-1	
bis(2-Chloroethyl) ether	**<19.4**	ug/L	64.7	19.4	1	11/26/18 07:15	11/27/18 14:42	111-44-4	
bis(2-Ethylhexyl)phthalate	**<8.5**	ug/L	28.3	8.5	1	11/26/18 07:15	11/27/18 14:42	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	73	%	56-120		1	11/26/18 07:15	11/27/18 14:42	4165-60-0	
2-Fluorobiphenyl (S)	47	%	54-122		1	11/26/18 07:15	11/27/18 14:42	321-60-8	S4
Terphenyl-d14 (S)	57	%	59-136		1	11/26/18 07:15	11/27/18 14:42	1718-51-0	S4
Phenol-d6 (S)	22	%	16-120		1	11/26/18 07:15	11/27/18 14:42	13127-88-3	
2-Fluorophenol (S)	40	%	27-77		1	11/26/18 07:15	11/27/18 14:42	367-12-4	
2,4,6-Tribromophenol (S)	64	%	58-134		1	11/26/18 07:15	11/27/18 14:42	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/27/18 14:41	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 14:41	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/27/18 14:41	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/27/18 14:41	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/27/18 14:41	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/27/18 14:41	74-83-9	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 14:41	104-51-8	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/27/18 14:41	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/27/18 14:41	98-06-6	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 14:41	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 14:41	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/27/18 14:41	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/27/18 14:41	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/27/18 14:41	74-87-3	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/27/18 14:41	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/27/18 14:41	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/27/18 14:41	96-12-8	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/27/18 14:41	124-48-1	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/27/18 14:41	106-93-4	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/27/18 14:41	74-95-3	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 14:41	95-50-1	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/27/18 14:41	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/27/18 14:41	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/27/18 14:41	75-71-8	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 14:41	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 14:41	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 14:41	75-35-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-4 **Lab ID: 40179993010** Collected: 11/19/18 15:00 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/27/18 14:41	156-59-2	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/27/18 14:41	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 14:41	78-87-5	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/27/18 14:41	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/27/18 14:41	594-20-7	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/27/18 14:41	563-58-6	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/27/18 14:41	10061-01-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/27/18 14:41	10061-02-6	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/27/18 14:41	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/27/18 14:41	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 14:41	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/27/18 14:41	98-82-8	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/27/18 14:41	99-87-6	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/27/18 14:41	75-09-2	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/27/18 14:41	1634-04-4	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 14:41	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/27/18 14:41	103-65-1	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/27/18 14:41	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 14:41	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 14:41	79-34-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/27/18 14:41	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/27/18 14:41	108-88-3	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/27/18 14:41	87-61-6	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/27/18 14:41	120-82-1	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/27/18 14:41	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/27/18 14:41	79-00-5	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 14:41	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/27/18 14:41	75-69-4	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/27/18 14:41	96-18-4	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/27/18 14:41	95-63-6	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/27/18 14:41	108-67-8	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 14:41	75-01-4	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/27/18 14:41	179601-23-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 14:41	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		11/27/18 14:41	460-00-4	
Dibromofluoromethane (S)	98	%	70-130		1		11/27/18 14:41	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		11/27/18 14:41	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**1160**	mg/L	50.0	23.8	1		11/21/18 11:20		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-6 **Lab ID: 40179993011** Collected: 11/19/18 15:30 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:31	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:31	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:31	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:31	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:31	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:31	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:31	11096-82-5	
PCB, Total	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:31	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	66	%	44-121		1	11/28/18 07:24	11/29/18 07:31	877-09-8	
Decachlorobiphenyl (S)	37	%	10-119		1	11/28/18 07:24	11/29/18 07:31	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 18:05	7440-38-2	
Barium	**178**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 18:05	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 18:05	7440-43-9	
Chromium	**14.6**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 18:05	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 18:05	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 18:05	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 18:05	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 17:19	7440-38-2	
Barium, Dissolved	**115**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 17:19	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 17:19	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 17:19	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 17:19	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 17:19	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 17:19	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 09:01	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 10:02	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.9**	ug/L	6.4	1.9	1	11/26/18 07:15	11/27/18 16:08	120-82-1	
1,2-Dichlorobenzene	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 16:08	95-50-1	
1,3-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 16:08	541-73-1	
1,4-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 16:08	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 16:08	108-60-1	
2,4,5-Trichlorophenol	**<0.79**	ug/L	2.6	0.79	1	11/26/18 07:15	11/27/18 16:08	95-95-4	
2,4,6-Trichlorophenol	**<2.0**	ug/L	6.6	2.0	1	11/26/18 07:15	11/27/18 16:08	88-06-2	
2,4-Dichlorophenol	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 16:08	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-6 **Lab ID: 40179993011** Collected: 11/19/18 15:30 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.2**	ug/L	4.0	1.2	1	11/26/18 07:15	11/27/18 16:08	105-67-9	
2,4-Dinitrophenol	**<0.67**	ug/L	2.2	0.67	1	11/26/18 07:15	11/27/18 16:08	51-28-5	
2,4-Dinitrotoluene	**<0.75**	ug/L	2.5	0.75	1	11/26/18 07:15	11/27/18 16:08	121-14-2	
2,6-Dinitrotoluene	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 16:08	606-20-2	
2-Chloronaphthalene	**<1.6**	ug/L	5.2	1.6	1	11/26/18 07:15	11/27/18 16:08	91-58-7	
2-Chlorophenol	**<1.1**	ug/L	3.6	1.1	1	11/26/18 07:15	11/27/18 16:08	95-57-8	
2-Methylnaphthalene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 16:08	91-57-6	
2-Methylphenol(o-Cresol)	**<0.82**	ug/L	2.7	0.82	1	11/26/18 07:15	11/27/18 16:08	95-48-7	
2-Nitroaniline	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 16:08	88-74-4	
2-Nitrophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 16:08	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<1.5**	ug/L	4.9	1.5	1	11/26/18 07:15	11/27/18 16:08		
3,3'-Dichlorobenzidine	**<0.85**	ug/L	2.8	0.85	1	11/26/18 07:15	11/27/18 16:08	91-94-1	
3-Nitroaniline	**<0.91**	ug/L	3.0	0.91	1	11/26/18 07:15	11/27/18 16:08	99-09-2	
4,6-Dinitro-2-methylphenol	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 16:08	534-52-1	
4-Bromophenylphenyl ether	**<1.9**	ug/L	6.2	1.9	1	11/26/18 07:15	11/27/18 16:08	101-55-3	
4-Chloro-3-methylphenol	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 16:08	59-50-7	
4-Chloroaniline	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 16:08	106-47-8	
4-Chlorophenylphenyl ether	**<0.77**	ug/L	2.6	0.77	1	11/26/18 07:15	11/27/18 16:08	7005-72-3	
4-Nitroaniline	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 16:08	100-01-6	
4-Nitrophenol	**<0.99**	ug/L	3.3	0.99	1	11/26/18 07:15	11/27/18 16:08	100-02-7	
Acenaphthene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 16:08	83-32-9	
Acenaphthylene	**<1.0**	ug/L	3.3	1.0	1	11/26/18 07:15	11/27/18 16:08	208-96-8	
Anthracene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 16:08	120-12-7	
Benzo(a)anthracene	**<0.50**	ug/L	1.7	0.50	1	11/26/18 07:15	11/27/18 16:08	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 16:08	50-32-8	L1
Benzo(b)fluoranthene	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 16:08	205-99-2	
Benzo(g,h,i)perylene	**<0.76**	ug/L	2.5	0.76	1	11/26/18 07:15	11/27/18 16:08	191-24-2	
Benzo(k)fluoranthene	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 16:08	207-08-9	L1
Butylbenzylphthalate	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 16:08	85-68-7	
Carbazole	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 16:08	86-74-8	
Chrysene	**<1.6**	ug/L	5.5	1.6	1	11/26/18 07:15	11/27/18 16:08	218-01-9	
Di-n-butylphthalate	**<2.4**	ug/L	8.1	2.4	1	11/26/18 07:15	11/27/18 16:08	84-74-2	
Di-n-octylphthalate	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 16:08	117-84-0	
Dibenz(a,h)anthracene	**<1.2**	ug/L	4.2	1.2	1	11/26/18 07:15	11/27/18 16:08	53-70-3	
Dibenzofuran	**<0.72**	ug/L	2.4	0.72	1	11/26/18 07:15	11/27/18 16:08	132-64-9	
Diethylphthalate	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 16:08	84-66-2	
Dimethylphthalate	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 16:08	131-11-3	
Fluoranthene	**<0.53**	ug/L	1.8	0.53	1	11/26/18 07:15	11/27/18 16:08	206-44-0	
Fluorene	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 16:08	86-73-7	
Hexachloro-1,3-butadiene	**<2.3**	ug/L	7.7	2.3	1	11/26/18 07:15	11/27/18 16:08	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 16:08	118-74-1	
Hexachlorocyclopentadiene	**<0.64**	ug/L	2.1	0.64	1	11/26/18 07:15	11/27/18 16:08	77-47-4	
Hexachloroethane	**<2.5**	ug/L	8.4	2.5	1	11/26/18 07:15	11/27/18 16:08	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.4**	ug/L	4.7	1.4	1	11/26/18 07:15	11/27/18 16:08	193-39-5	
Isophorone	**<0.69**	ug/L	2.3	0.69	1	11/26/18 07:15	11/27/18 16:08	78-59-1	
N-Nitroso-di-n-propylamine	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 16:08	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-6 **Lab ID: 40179993011** Collected: 11/19/18 15:30 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.1	3.3	1	11/26/18 07:15	11/27/18 16:08	86-30-6	
Naphthalene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 16:08	91-20-3	
Nitrobenzene	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 16:08	98-95-3	
Pentachlorophenol	**<1.4**	ug/L	4.5	1.4	1	11/26/18 07:15	11/27/18 16:08	87-86-5	
Phenanthrene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 16:08	85-01-8	
Phenol	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 16:08	108-95-2	
Pyrene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 16:08	129-00-0	
bis(2-Chloroethoxy)methane	**<0.94**	ug/L	3.1	0.94	1	11/26/18 07:15	11/27/18 16:08	111-91-1	
bis(2-Chloroethyl) ether	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 16:08	111-44-4	
bis(2-Ethylhexyl)phthalate	**0.71J**	ug/L	2.2	0.65	1	11/26/18 07:15	11/27/18 16:08	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	96	%	56-120		1	11/26/18 07:15	11/27/18 16:08	4165-60-0	
2-Fluorobiphenyl (S)	85	%	54-122		1	11/26/18 07:15	11/27/18 16:08	321-60-8	
Terphenyl-d14 (S)	82	%	59-136		1	11/26/18 07:15	11/27/18 16:08	1718-51-0	
Phenol-d6 (S)	27	%	16-120		1	11/26/18 07:15	11/27/18 16:08	13127-88-3	
2-Fluorophenol (S)	41	%	27-77		1	11/26/18 07:15	11/27/18 16:08	367-12-4	
2,4,6-Tribromophenol (S)	80	%	58-134		1	11/26/18 07:15	11/27/18 16:08	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/27/18 15:04	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 15:04	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/27/18 15:04	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/27/18 15:04	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/27/18 15:04	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/27/18 15:04	74-83-9	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 15:04	104-51-8	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/27/18 15:04	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/27/18 15:04	98-06-6	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 15:04	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 15:04	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/27/18 15:04	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/27/18 15:04	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/27/18 15:04	74-87-3	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/27/18 15:04	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/27/18 15:04	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/27/18 15:04	96-12-8	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/27/18 15:04	124-48-1	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/27/18 15:04	106-93-4	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/27/18 15:04	74-95-3	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 15:04	95-50-1	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/27/18 15:04	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/27/18 15:04	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/27/18 15:04	75-71-8	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 15:04	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 15:04	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 15:04	75-35-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-6 **Lab ID: 40179993011** Collected: 11/19/18 15:30 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/27/18 15:04	156-59-2	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/27/18 15:04	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 15:04	78-87-5	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/27/18 15:04	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/27/18 15:04	594-20-7	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/27/18 15:04	563-58-6	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/27/18 15:04	10061-01-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/27/18 15:04	10061-02-6	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/27/18 15:04	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/27/18 15:04	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 15:04	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/27/18 15:04	98-82-8	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/27/18 15:04	99-87-6	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/27/18 15:04	75-09-2	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/27/18 15:04	1634-04-4	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 15:04	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/27/18 15:04	103-65-1	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/27/18 15:04	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 15:04	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 15:04	79-34-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/27/18 15:04	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/27/18 15:04	108-88-3	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/27/18 15:04	87-61-6	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/27/18 15:04	120-82-1	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/27/18 15:04	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/27/18 15:04	79-00-5	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 15:04	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/27/18 15:04	75-69-4	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/27/18 15:04	96-18-4	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/27/18 15:04	95-63-6	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/27/18 15:04	108-67-8	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 15:04	75-01-4	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/27/18 15:04	179601-23-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 15:04	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		11/27/18 15:04	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/27/18 15:04	1868-53-7	
Toluene-d8 (S)	103	%	70-130		1		11/27/18 15:04	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**25.6**	mg/L	2.0	0.95	1		11/21/18 11:20		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-7 **Lab ID: 40179993012** Collected: 11/19/18 15:50 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:49	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:49	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:49	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:49	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:49	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:49	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:49	11096-82-5	
PCB, Total	**<0.24**	ug/L	0.48	0.24	1	11/28/18 07:24	11/29/18 07:49	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	56	%	44-121		1	11/28/18 07:24	11/29/18 07:49	877-09-8	
Decachlorobiphenyl (S)	35	%	10-119		1	11/28/18 07:24	11/29/18 07:49	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:09	12/01/18 18:12	7440-38-2	
Barium	**214**	ug/L	5.0	1.5	1	11/26/18 14:09	12/01/18 18:12	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:09	12/01/18 18:12	7440-43-9	
Chromium	**20.7**	ug/L	10.0	2.5	1	11/26/18 14:09	12/01/18 18:12	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:09	12/01/18 18:12	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:09	12/01/18 18:12	7782-49-2	
Silver	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:09	12/01/18 18:12	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic, Dissolved	**<8.3**	ug/L	25.0	8.3	1	11/26/18 14:00	12/01/18 17:21	7440-38-2	
Barium, Dissolved	**143**	ug/L	5.0	1.5	1	11/26/18 14:00	12/01/18 17:21	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1	11/26/18 14:00	12/01/18 17:21	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1	11/26/18 14:00	12/01/18 17:21	7440-47-3	
Lead, Dissolved	**<5.9**	ug/L	19.7	5.9	1	11/26/18 14:00	12/01/18 17:21	7439-92-1	
Selenium, Dissolved	**<12.2**	ug/L	40.8	12.2	1	11/26/18 14:00	12/01/18 17:21	7782-49-2	1q
Silver, Dissolved	**<3.3**	ug/L	10.0	3.3	1	11/26/18 14:00	12/01/18 17:21	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 09:04	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	11/26/18 10:15	11/27/18 10:04	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.9**	ug/L	6.4	1.9	1	11/26/18 07:15	11/27/18 15:04	120-82-1	
1,2-Dichlorobenzene	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 15:04	95-50-1	
1,3-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 15:04	541-73-1	
1,4-Dichlorobenzene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 15:04	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 15:04	108-60-1	
2,4,5-Trichlorophenol	**<0.79**	ug/L	2.6	0.79	1	11/26/18 07:15	11/27/18 15:04	95-95-4	
2,4,6-Trichlorophenol	**<2.0**	ug/L	6.6	2.0	1	11/26/18 07:15	11/27/18 15:04	88-06-2	
2,4-Dichlorophenol	**<1.3**	ug/L	4.3	1.3	1	11/26/18 07:15	11/27/18 15:04	120-83-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-7 **Lab ID: 40179993012** Collected: 11/19/18 15:50 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.2**	ug/L	4.0	1.2	1	11/26/18 07:15	11/27/18 15:04	105-67-9	
2,4-Dinitrophenol	**<0.67**	ug/L	2.2	0.67	1	11/26/18 07:15	11/27/18 15:04	51-28-5	
2,4-Dinitrotoluene	**<0.75**	ug/L	2.5	0.75	1	11/26/18 07:15	11/27/18 15:04	121-14-2	
2,6-Dinitrotoluene	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 15:04	606-20-2	
2-Chloronaphthalene	**<1.6**	ug/L	5.2	1.6	1	11/26/18 07:15	11/27/18 15:04	91-58-7	
2-Chlorophenol	**<1.1**	ug/L	3.6	1.1	1	11/26/18 07:15	11/27/18 15:04	95-57-8	
2-Methylnaphthalene	**<1.4**	ug/L	4.8	1.4	1	11/26/18 07:15	11/27/18 15:04	91-57-6	
2-Methylphenol(o-Cresol)	**<0.82**	ug/L	2.7	0.82	1	11/26/18 07:15	11/27/18 15:04	95-48-7	
2-Nitroaniline	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 15:04	88-74-4	
2-Nitrophenol	**<1.1**	ug/L	3.7	1.1	1	11/26/18 07:15	11/27/18 15:04	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<1.5**	ug/L	4.9	1.5	1	11/26/18 07:15	11/27/18 15:04		
3,3'-Dichlorobenzidine	**<0.85**	ug/L	2.8	0.85	1	11/26/18 07:15	11/27/18 15:04	91-94-1	
3-Nitroaniline	**<0.91**	ug/L	3.0	0.91	1	11/26/18 07:15	11/27/18 15:04	99-09-2	
4,6-Dinitro-2-methylphenol	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 15:04	534-52-1	
4-Bromophenylphenyl ether	**<1.9**	ug/L	6.2	1.9	1	11/26/18 07:15	11/27/18 15:04	101-55-3	
4-Chloro-3-methylphenol	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 15:04	59-50-7	
4-Chloroaniline	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 15:04	106-47-8	
4-Chlorophenylphenyl ether	**<0.77**	ug/L	2.6	0.77	1	11/26/18 07:15	11/27/18 15:04	7005-72-3	
4-Nitroaniline	**<1.7**	ug/L	5.8	1.7	1	11/26/18 07:15	11/27/18 15:04	100-01-6	
4-Nitrophenol	**<0.99**	ug/L	3.3	0.99	1	11/26/18 07:15	11/27/18 15:04	100-02-7	
Acenaphthene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 15:04	83-32-9	
Acenaphthylene	**<1.0**	ug/L	3.3	1.0	1	11/26/18 07:15	11/27/18 15:04	208-96-8	
Anthracene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 15:04	120-12-7	
Benzo(a)anthracene	**<0.50**	ug/L	1.7	0.50	1	11/26/18 07:15	11/27/18 15:04	56-55-3	
Benzo(a)pyrene	**<1.8**	ug/L	5.9	1.8	1	11/26/18 07:15	11/27/18 15:04	50-32-8	L1
Benzo(b)fluoranthene	**<0.62**	ug/L	2.1	0.62	1	11/26/18 07:15	11/27/18 15:04	205-99-2	
Benzo(g,h,i)perylene	**<0.76**	ug/L	2.5	0.76	1	11/26/18 07:15	11/27/18 15:04	191-24-2	
Benzo(k)fluoranthene	**<0.95**	ug/L	3.2	0.95	1	11/26/18 07:15	11/27/18 15:04	207-08-9	L1
Butylbenzylphthalate	**<0.73**	ug/L	2.4	0.73	1	11/26/18 07:15	11/27/18 15:04	85-68-7	
Carbazole	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 15:04	86-74-8	
Chrysene	**<1.6**	ug/L	5.5	1.6	1	11/26/18 07:15	11/27/18 15:04	218-01-9	
Di-n-butylphthalate	**<2.4**	ug/L	8.1	2.4	1	11/26/18 07:15	11/27/18 15:04	84-74-2	
Di-n-octylphthalate	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 15:04	117-84-0	
Dibenz(a,h)anthracene	**<1.2**	ug/L	4.2	1.2	1	11/26/18 07:15	11/27/18 15:04	53-70-3	
Dibenzofuran	**<0.72**	ug/L	2.4	0.72	1	11/26/18 07:15	11/27/18 15:04	132-64-9	
Diethylphthalate	**<1.0**	ug/L	3.4	1.0	1	11/26/18 07:15	11/27/18 15:04	84-66-2	
Dimethylphthalate	**<1.8**	ug/L	6.1	1.8	1	11/26/18 07:15	11/27/18 15:04	131-11-3	
Fluoranthene	**<0.53**	ug/L	1.8	0.53	1	11/26/18 07:15	11/27/18 15:04	206-44-0	
Fluorene	**<0.71**	ug/L	2.4	0.71	1	11/26/18 07:15	11/27/18 15:04	86-73-7	
Hexachloro-1,3-butadiene	**<2.3**	ug/L	7.7	2.3	1	11/26/18 07:15	11/27/18 15:04	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	5.3	1.6	1	11/26/18 07:15	11/27/18 15:04	118-74-1	
Hexachlorocyclopentadiene	**<0.64**	ug/L	2.1	0.64	1	11/26/18 07:15	11/27/18 15:04	77-47-4	
Hexachloroethane	**<2.5**	ug/L	8.4	2.5	1	11/26/18 07:15	11/27/18 15:04	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.4**	ug/L	4.7	1.4	1	11/26/18 07:15	11/27/18 15:04	193-39-5	
Isophorone	**<0.69**	ug/L	2.3	0.69	1	11/26/18 07:15	11/27/18 15:04	78-59-1	
N-Nitroso-di-n-propylamine	**<0.92**	ug/L	3.1	0.92	1	11/26/18 07:15	11/27/18 15:04	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-7 **Lab ID: 40179993012** Collected: 11/19/18 15:50 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.1	3.3	1	11/26/18 07:15	11/27/18 15:04	86-30-6	
Naphthalene	**<1.8**	ug/L	6.0	1.8	1	11/26/18 07:15	11/27/18 15:04	91-20-3	
Nitrobenzene	**<1.4**	ug/L	4.6	1.4	1	11/26/18 07:15	11/27/18 15:04	98-95-3	
Pentachlorophenol	**<1.4**	ug/L	4.5	1.4	1	11/26/18 07:15	11/27/18 15:04	87-86-5	
Phenanthrene	**<1.7**	ug/L	5.7	1.7	1	11/26/18 07:15	11/27/18 15:04	85-01-8	
Phenol	**<0.57**	ug/L	1.9	0.57	1	11/26/18 07:15	11/27/18 15:04	108-95-2	
Pyrene	**<1.3**	ug/L	4.2	1.3	1	11/26/18 07:15	11/27/18 15:04	129-00-0	
bis(2-Chloroethoxy)methane	**<0.94**	ug/L	3.1	0.94	1	11/26/18 07:15	11/27/18 15:04	111-91-1	
bis(2-Chloroethyl) ether	**<1.5**	ug/L	5.0	1.5	1	11/26/18 07:15	11/27/18 15:04	111-44-4	
bis(2-Ethylhexyl)phthalate	**<0.65**	ug/L	2.2	0.65	1	11/26/18 07:15	11/27/18 15:04	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	93	%	56-120		1	11/26/18 07:15	11/27/18 15:04	4165-60-0	
2-Fluorobiphenyl (S)	86	%	54-122		1	11/26/18 07:15	11/27/18 15:04	321-60-8	
Terphenyl-d14 (S)	118	%	59-136		1	11/26/18 07:15	11/27/18 15:04	1718-51-0	
Phenol-d6 (S)	31	%	16-120		1	11/26/18 07:15	11/27/18 15:04	13127-88-3	
2-Fluorophenol (S)	54	%	27-77		1	11/26/18 07:15	11/27/18 15:04	367-12-4	
2,4,6-Tribromophenol (S)	115	%	58-134		1	11/26/18 07:15	11/27/18 15:04	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/27/18 15:26	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 15:26	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/27/18 15:26	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/27/18 15:26	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/27/18 15:26	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/27/18 15:26	74-83-9	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 15:26	104-51-8	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/27/18 15:26	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/27/18 15:26	98-06-6	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 15:26	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 15:26	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/27/18 15:26	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/27/18 15:26	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/27/18 15:26	74-87-3	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/27/18 15:26	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/27/18 15:26	106-43-4	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/27/18 15:26	96-12-8	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/27/18 15:26	124-48-1	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/27/18 15:26	106-93-4	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/27/18 15:26	74-95-3	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/27/18 15:26	95-50-1	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/27/18 15:26	541-73-1	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/27/18 15:26	106-46-7	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/27/18 15:26	75-71-8	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 15:26	75-34-3	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 15:26	107-06-2	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/27/18 15:26	75-35-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Sample: GMMW-7 **Lab ID: 40179993012** Collected: 11/19/18 15:50 Received: 11/21/18 08:25 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/27/18 15:26	156-59-2	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/27/18 15:26	156-60-5	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 15:26	78-87-5	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/27/18 15:26	142-28-9	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/27/18 15:26	594-20-7	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/27/18 15:26	563-58-6	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/27/18 15:26	10061-01-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/27/18 15:26	10061-02-6	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/27/18 15:26	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/27/18 15:26	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 15:26	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/27/18 15:26	98-82-8	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/27/18 15:26	99-87-6	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/27/18 15:26	75-09-2	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/27/18 15:26	1634-04-4	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/27/18 15:26	91-20-3	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/27/18 15:26	103-65-1	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/27/18 15:26	100-42-5	
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/27/18 15:26	630-20-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/27/18 15:26	79-34-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/27/18 15:26	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/27/18 15:26	108-88-3	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/27/18 15:26	87-61-6	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/27/18 15:26	120-82-1	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/27/18 15:26	71-55-6	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/27/18 15:26	79-00-5	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 15:26	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/27/18 15:26	75-69-4	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/27/18 15:26	96-18-4	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/27/18 15:26	95-63-6	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/27/18 15:26	108-67-8	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/27/18 15:26	75-01-4	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/27/18 15:26	179601-23-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/27/18 15:26	95-47-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		1		11/27/18 15:26	460-00-4	
Dibromofluoromethane (S)	99	%	70-130		1		11/27/18 15:26	1868-53-7	
Toluene-d8 (S)	102	%	70-130		1		11/27/18 15:26	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**270**	mg/L	10.0	4.8	1		11/21/18 11:20		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

QC Batch: 307496 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993011, 40179993012

METHOD BLANK: 1797690 Matrix: Water
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993011, 40179993012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.084	0.28	11/27/18 08:04	

LABORATORY CONTROL SAMPLE: 1797691

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.1	103	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1797692 1797693

Parameter	Units	40180048017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.000084 mg/L	5	5	4.7	4.8	93	95	85-115	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

QC Batch: 308150 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40179993008, 40179993009, 40179993010

METHOD BLANK: 1800586 Matrix: Water
Associated Lab Samples: 40179993008, 40179993009, 40179993010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.084	0.28	12/04/18 08:27	

LABORATORY CONTROL SAMPLE: 1800587

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.7	95	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800588 1800589

Parameter	Units	40180332017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.000084 mg/L	5	5	4.9	5.2	96	102	85-115	7	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

QC Batch: 307499 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993011, 40179993012

METHOD BLANK: 1797704 Matrix: Water
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993011, 40179993012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.084	0.28	11/27/18 09:06	

LABORATORY CONTROL SAMPLE: 1797705

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.1	102	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1797706 1797707

Parameter	Units	40180048017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.000084 mg/L	5	5	5.1	5.0	102	100	85-115	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

QC Batch: 308152 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 40179993008, 40179993009, 40179993010

METHOD BLANK: 1800591 Matrix: Water
Associated Lab Samples: 40179993008, 40179993009, 40179993010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.084	0.28	12/04/18 09:01	

LABORATORY CONTROL SAMPLE: 1800592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.4	108	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1800593 1800594

Parameter	Units	40180182001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.40	5	5	5.2	5.2	105	104	85-115	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

QC Batch: 307570 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

METHOD BLANK: 1797886 Matrix: Water
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<8.3	25.0	12/01/18 17:26	
Barium	ug/L	<1.5	5.0	12/01/18 17:26	
Cadmium	ug/L	<1.3	5.0	12/01/18 17:26	
Chromium	ug/L	<2.5	10.0	12/01/18 17:26	
Lead	ug/L	<5.9	19.7	12/01/18 17:26	
Selenium	ug/L	<12.2	40.8	12/01/18 17:26	
Silver	ug/L	<3.3	10.0	12/01/18 17:26	

LABORATORY CONTROL SAMPLE: 1797887

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	463	93	80-120	
Barium	ug/L	500	478	96	80-120	
Cadmium	ug/L	500	466	93	80-120	
Chromium	ug/L	500	497	99	80-120	
Lead	ug/L	500	450	90	80-120	
Selenium	ug/L	500	447	89	80-120	
Silver	ug/L	250	262	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1797888 1797889

Parameter	Units	40179993001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	14.9J	500	500	482	492	93	95	75-125	2	20	
Barium	ug/L	358	500	500	853	839	99	96	75-125	2	20	
Cadmium	ug/L	1.8J	500	500	479	477	95	95	75-125	0	20	
Chromium	ug/L	471	500	500	955	940	97	94	75-125	2	20	
Lead	ug/L	35.5	500	500	477	472	88	87	75-125	1	20	
Selenium	ug/L	<12.2	500	500	452	466	90	93	75-125	3	20	
Silver	ug/L	<3.3	250	250	271	271	108	108	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

QC Batch: 307569 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET Dissolved
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

METHOD BLANK: 1797869 Matrix: Water
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<8.3	25.0	12/01/18 16:35	
Barium, Dissolved	ug/L	<1.5	5.0	12/01/18 16:35	
Cadmium, Dissolved	ug/L	<1.3	5.0	12/01/18 16:35	
Chromium, Dissolved	ug/L	<2.5	10.0	12/01/18 16:35	
Lead, Dissolved	ug/L	<5.9	19.7	12/01/18 16:35	
Selenium, Dissolved	ug/L	<12.2	40.8	12/01/18 16:35	
Silver, Dissolved	ug/L	<3.3	10.0	12/01/18 16:35	

LABORATORY CONTROL SAMPLE: 1797870

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	460	92	80-120	
Barium, Dissolved	ug/L	500	483	97	80-120	
Cadmium, Dissolved	ug/L	500	475	95	80-120	
Chromium, Dissolved	ug/L	500	492	98	80-120	
Lead, Dissolved	ug/L	500	465	93	80-120	
Selenium, Dissolved	ug/L	500	452	90	80-120	
Silver, Dissolved	ug/L	250	258	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1797871 1797872

Parameter	Units	40179993001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	ug/L	<8.3	500	500	471	458	94	92	75-125	3	20	
Barium, Dissolved	ug/L	83.1	500	500	578	566	99	97	75-125	2	20	
Cadmium, Dissolved	ug/L	<1.3	500	500	477	470	95	94	75-125	1	20	
Chromium, Dissolved	ug/L	385	500	500	916	902	106	103	75-125	2	20	
Lead, Dissolved	ug/L	<5.9	500	500	453	448	91	90	75-125	1	20	
Selenium, Dissolved	ug/L	<12.2	500	500	456	452	91	90	75-125	1	20	
Silver, Dissolved	ug/L	<3.3	250	250	272	271	109	108	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

QC Batch: 307451 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

METHOD BLANK: 1797562 Matrix: Water
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<2.7	10.0	11/27/18 07:36	
1,1,1-Trichloroethane	ug/L	<2.4	10.0	11/27/18 07:36	
1,1,2,2-Tetrachloroethane	ug/L	<2.8	10.0	11/27/18 07:36	
1,1,2-Trichloroethane	ug/L	<5.5	50.0	11/27/18 07:36	
1,1-Dichloroethane	ug/L	<2.7	10.0	11/27/18 07:36	
1,1-Dichloroethene	ug/L	<2.4	10.0	11/27/18 07:36	
1,1-Dichloropropene	ug/L	<5.4	18.0	11/27/18 07:36	
1,2,3-Trichlorobenzene	ug/L	<6.3	50.0	11/27/18 07:36	
1,2,3-Trichloropropane	ug/L	<5.9	50.0	11/27/18 07:36	
1,2,4-Trichlorobenzene	ug/L	<9.5	50.0	11/27/18 07:36	
1,2,4-Trimethylbenzene	ug/L	<8.4	28.0	11/27/18 07:36	
1,2-Dibromo-3-chloropropane	ug/L	<17.6	58.8	11/27/18 07:36	
1,2-Dibromoethane (EDB)	ug/L	<8.3	27.6	11/27/18 07:36	
1,2-Dichlorobenzene	ug/L	<7.1	23.5	11/27/18 07:36	
1,2-Dichloroethane	ug/L	<2.8	10.0	11/27/18 07:36	
1,2-Dichloropropane	ug/L	<2.8	10.0	11/27/18 07:36	
1,3,5-Trimethylbenzene	ug/L	<8.7	29.1	11/27/18 07:36	
1,3-Dichlorobenzene	ug/L	<6.3	20.9	11/27/18 07:36	
1,3-Dichloropropane	ug/L	<8.3	27.5	11/27/18 07:36	
1,4-Dichlorobenzene	ug/L	<9.4	31.5	11/27/18 07:36	
2,2-Dichloropropane	ug/L	<22.7	75.5	11/27/18 07:36	
2-Chlorotoluene	ug/L	<9.3	50.0	11/27/18 07:36	
4-Chlorotoluene	ug/L	<7.6	25.2	11/27/18 07:36	
Benzene	ug/L	<2.5	10.0	11/27/18 07:36	
Bromobenzene	ug/L	<2.4	10.0	11/27/18 07:36	
Bromochloromethane	ug/L	<3.6	50.0	11/27/18 07:36	
Bromodichloromethane	ug/L	<3.6	12.1	11/27/18 07:36	
Bromoform	ug/L	<39.7	132	11/27/18 07:36	
Bromomethane	ug/L	<9.7	50.0	11/27/18 07:36	
Carbon tetrachloride	ug/L	<1.7	10.0	11/27/18 07:36	
Chlorobenzene	ug/L	<7.1	23.7	11/27/18 07:36	
Chloroethane	ug/L	<13.4	50.0	11/27/18 07:36	
Chloroform	ug/L	<12.7	50.0	11/27/18 07:36	
Chloromethane	ug/L	<21.9	73.0	11/27/18 07:36	
cis-1,2-Dichloroethene	ug/L	<2.7	10.0	11/27/18 07:36	
cis-1,3-Dichloropropene	ug/L	<36.3	121	11/27/18 07:36	
Dibromochloromethane	ug/L	<26.0	86.7	11/27/18 07:36	
Dibromomethane	ug/L	<9.4	31.2	11/27/18 07:36	
Dichlorodifluoromethane	ug/L	<5.0	50.0	11/27/18 07:36	
Diisopropyl ether	ug/L	<18.9	62.9	11/27/18 07:36	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

METHOD BLANK: 1797562 Matrix: Water

Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<2.2	10.0	11/27/18 07:36	
Hexachloro-1,3-butadiene	ug/L	<11.8	50.0	11/27/18 07:36	
Isopropylbenzene (Cumene)	ug/L	<3.9	50.0	11/27/18 07:36	
m&p-Xylene	ug/L	<4.7	20.0	11/27/18 07:36	
Methyl-tert-butyl ether	ug/L	<12.5	41.5	11/27/18 07:36	
Methylene Chloride	ug/L	<5.8	50.0	11/27/18 07:36	
n-Butylbenzene	ug/L	<7.1	23.6	11/27/18 07:36	
n-Propylbenzene	ug/L	<8.1	50.0	11/27/18 07:36	
Naphthalene	ug/L	<11.8	50.0	11/27/18 07:36	
o-Xylene	ug/L	<2.6	10.0	11/27/18 07:36	
p-Isopropyltoluene	ug/L	<8.0	26.7	11/27/18 07:36	
sec-Butylbenzene	ug/L	<8.5	50.0	11/27/18 07:36	
Styrene	ug/L	<4.7	15.5	11/27/18 07:36	
tert-Butylbenzene	ug/L	<3.0	10.1	11/27/18 07:36	
Tetrachloroethene	ug/L	<3.3	10.9	11/27/18 07:36	
Toluene	ug/L	<1.7	50.0	11/27/18 07:36	
trans-1,2-Dichloroethene	ug/L	<10.9	36.4	11/27/18 07:36	
trans-1,3-Dichloropropene	ug/L	<43.7	146	11/27/18 07:36	
Trichloroethene	ug/L	<2.6	10.0	11/27/18 07:36	
Trichlorofluoromethane	ug/L	<2.1	10.0	11/27/18 07:36	
Vinyl chloride	ug/L	<1.7	10.0	11/27/18 07:36	
4-Bromofluorobenzene (S)	%	99	70-130	11/27/18 07:36	
Dibromofluoromethane (S)	%	97	70-130	11/27/18 07:36	
Toluene-d8 (S)	%	103	70-130	11/27/18 07:36	

LABORATORY CONTROL SAMPLE: 1797563

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	43.7	87	70-133	
1,1,2,2-Tetrachloroethane	ug/L	50	47.6	95	67-130	
1,1,2-Trichloroethane	ug/L	50	51.9	104	70-130	
1,1-Dichloroethane	ug/L	50	49.7	99	70-134	
1,1-Dichloroethene	ug/L	50	46.5	93	75-132	
1,2,4-Trichlorobenzene	ug/L	50	48.0	96	68-130	
1,2-Dibromo-3-chloropropane	ug/L	50	40.5	81	60-126	
1,2-Dibromoethane (EDB)	ug/L	50	48.6	97	70-130	
1,2-Dichlorobenzene	ug/L	50	48.0	96	70-130	
1,2-Dichloroethane	ug/L	50	48.0	96	73-134	
1,2-Dichloropropane	ug/L	50	52.5	105	79-128	
1,3-Dichlorobenzene	ug/L	50	48.0	96	70-130	
1,4-Dichlorobenzene	ug/L	50	48.4	97	70-130	
Benzene	ug/L	50	48.4	97	69-137	
Bromodichloromethane	ug/L	50	49.1	98	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

LABORATORY CONTROL SAMPLE: 1797563

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	50	51.8	104	64-133	
Bromomethane	ug/L	50	23.7	47	29-123	
Carbon tetrachloride	ug/L	50	43.6	87	73-142	
Chlorobenzene	ug/L	50	49.3	99	70-130	
Chloroethane	ug/L	50	49.3	99	59-133	
Chloroform	ug/L	50	47.8	96	80-129	
Chloromethane	ug/L	50	34.3	69	27-125	
cis-1,2-Dichloroethene	ug/L	50	46.5	93	70-134	
cis-1,3-Dichloropropene	ug/L	50	45.6	91	70-130	
Dibromochloromethane	ug/L	50	47.0	94	70-130	
Dichlorodifluoromethane	ug/L	50	37.1	74	12-127	
Ethylbenzene	ug/L	50	52.1	104	86-127	
Isopropylbenzene (Cumene)	ug/L	50	50.6	101	70-130	
m&p-Xylene	ug/L	100	103	103	70-131	
Methyl-tert-butyl ether	ug/L	50	38.9	78	65-136	
Methylene Chloride	ug/L	50	44.8	90	72-133	
o-Xylene	ug/L	50	49.7	99	70-130	
Styrene	ug/L	50	50.0	100	70-130	
Tetrachloroethene	ug/L	50	53.3	107	70-130	
Toluene	ug/L	50	51.2	102	84-124	
trans-1,2-Dichloroethene	ug/L	50	47.2	94	70-133	
trans-1,3-Dichloropropene	ug/L	50	43.5	87	67-130	
Trichloroethene	ug/L	50	51.6	103	70-130	
Trichlorofluoromethane	ug/L	50	51.3	103	69-147	
Vinyl chloride	ug/L	50	44.1	88	48-134	
4-Bromofluorobenzene (S)	%			103	70-130	
Dibromofluoromethane (S)	%			97	70-130	
Toluene-d8 (S)	%			102	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1798079 1798080

Parameter	Units	40180034001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<1.0	50	50	46.4	46.7	93	93	70-136	0	20	
1,1,2,2-Tetrachloroethane	ug/L	<1.0	50	50	51.9	51.9	104	104	67-133	0	20	
1,1,2-Trichloroethane	ug/L	<5.0	50	50	55.3	54.6	111	109	70-130	1	20	
1,1-Dichloroethane	ug/L	<1.0	50	50	51.8	52.4	104	105	70-139	1	20	
1,1-Dichloroethene	ug/L	<1.0	50	50	48.9	49.3	98	99	72-137	1	20	
1,2,4-Trichlorobenzene	ug/L	<5.0	50	50	51.8	52.3	104	105	68-130	1	20	
1,2-Dibromo-3-chloropropane	ug/L	<5.9	50	50	44.3	45.6	89	91	60-130	3	21	
1,2-Dibromoethane (EDB)	ug/L	<2.8	50	50	52.7	52.5	105	105	70-130	0	20	
1,2-Dichlorobenzene	ug/L	<2.4	50	50	51.1	51.2	102	102	70-130	0	20	
1,2-Dichloroethane	ug/L	<1.0	50	50	50.6	50.3	101	101	71-137	0	20	
1,2-Dichloropropane	ug/L	<1.0	50	50	54.7	55.0	109	110	78-130	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1798079 1798080

Parameter	Units	40180034001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,3-Dichlorobenzene	ug/L	<2.1	50	50	50.9	51.0	102	102	70-130	0	20	
1,4-Dichlorobenzene	ug/L	<3.1	50	50	51.3	51.2	103	102	70-130	0	20	
Benzene	ug/L	<1.0	50	50	50.9	51.0	102	102	66-143	0	20	
Bromodichloromethane	ug/L	<1.2	50	50	52.1	51.9	104	104	70-130	0	20	
Bromoform	ug/L	<13.2	50	50	56.7	57.0	113	114	64-134	1	20	
Bromomethane	ug/L	<5.0	50	50	27.9	30.1	55	60	29-136	8	25	
Carbon tetrachloride	ug/L	<1.0	50	50	46.7	47.0	93	94	73-142	1	20	
Chlorobenzene	ug/L	<2.4	50	50	52.3	52.5	105	105	70-130	0	20	
Chloroethane	ug/L	<5.0	50	50	51.2	51.5	102	103	58-138	1	20	
Chloroform	ug/L	<5.0	50	50	50.1	50.5	100	101	80-131	1	20	
Chloromethane	ug/L	<7.3	50	50	36.0	36.0	72	72	24-125	0	20	
cis-1,2-Dichloroethene	ug/L	<1.0	50	50	48.5	49.5	97	99	68-137	2	22	
cis-1,3-Dichloropropene	ug/L	<12.1	50	50	49.2	49.5	98	99	70-130	1	20	
Dibromochloromethane	ug/L	<8.7	50	50	51.1	50.7	102	101	70-131	1	20	
Dichlorodifluoromethane	ug/L	<5.0	50	50	37.9	37.5	76	75	10-127	1	20	
Ethylbenzene	ug/L	<1.0	50	50	55.0	55.2	110	110	81-136	0	20	
Isopropylbenzene (Cumene)	ug/L	<5.0	50	50	53.2	53.6	106	107	70-132	1	20	
m&p-Xylene	ug/L	<2.0	100	100	108	108	108	108	70-135	0	20	
Methyl-tert-butyl ether	ug/L	<4.2	50	50	41.8	41.9	84	84	58-142	0	23	
Methylene Chloride	ug/L	<5.0	50	50	46.6	47.6	93	95	69-137	2	20	
o-Xylene	ug/L	<1.0	50	50	52.6	52.9	105	106	70-132	1	20	
Styrene	ug/L	<1.6	50	50	52.3	52.9	105	106	70-130	1	20	
Tetrachloroethene	ug/L	<1.1	50	50	56.9	56.3	114	113	70-132	1	20	
Toluene	ug/L	<5.0	50	50	54.1	54.1	108	108	81-130	0	20	
trans-1,2-Dichloroethene	ug/L	<3.6	50	50	49.1	49.5	98	99	70-136	1	20	
trans-1,3-Dichloropropene	ug/L	<14.6	50	50	47.8	47.3	96	95	67-130	1	20	
Trichloroethene	ug/L	<1.0	50	50	54.8	54.1	110	108	70-131	1	20	
Trichlorofluoromethane	ug/L	<1.0	50	50	53.7	53.9	107	108	66-150	0	20	
Vinyl chloride	ug/L	<1.0	50	50	45.8	46.4	92	93	46-134	1	20	
4-Bromofluorobenzene (S)	%						103	104	70-130			
Dibromofluoromethane (S)	%						97	97	70-130			
Toluene-d8 (S)	%						102	101	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

QC Batch: 307735 Analysis Method: EPA 8082
QC Batch Method: EPA 3510 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

METHOD BLANK: 1798431 Matrix: Water
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	<0.25	0.50	11/29/18 03:34	
PCB-1221 (Aroclor 1221)	ug/L	<0.25	0.50	11/29/18 03:34	
PCB-1232 (Aroclor 1232)	ug/L	<0.25	0.50	11/29/18 03:34	
PCB-1242 (Aroclor 1242)	ug/L	<0.25	0.50	11/29/18 03:34	
PCB-1248 (Aroclor 1248)	ug/L	<0.25	0.50	11/29/18 03:34	
PCB-1254 (Aroclor 1254)	ug/L	<0.25	0.50	11/29/18 03:34	
PCB-1260 (Aroclor 1260)	ug/L	<0.25	0.50	11/29/18 03:34	
Decachlorobiphenyl (S)	%	27	10-119	11/29/18 03:34	
Tetrachloro-m-xylene (S)	%	70	44-121	11/29/18 03:34	

LABORATORY CONTROL SAMPLE & LCSD: 1798432 1798433

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L		<0.25	<0.25					20	
PCB-1221 (Aroclor 1221)	ug/L		<0.25	<0.25					20	
PCB-1232 (Aroclor 1232)	ug/L		<0.25	<0.25					20	
PCB-1242 (Aroclor 1242)	ug/L		<0.25	<0.25					20	
PCB-1248 (Aroclor 1248)	ug/L		<0.25	<0.25					20	
PCB-1254 (Aroclor 1254)	ug/L		<0.25	<0.25					20	
PCB-1260 (Aroclor 1260)	ug/L	5	4.2	4.2	83	85	63-116	2	20	
Decachlorobiphenyl (S)	%				55	52	10-119			
Tetrachloro-m-xylene (S)	%				75	80	44-121			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

QC Batch: 307467 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 Water MSSV
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

METHOD BLANK: 1797603 Matrix: Water
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	<2.0	6.8	11/27/18 09:00	
1,2-Dichlorobenzene	ug/L	<1.9	6.4	11/27/18 09:00	
1,3-Dichlorobenzene	ug/L	<1.9	6.3	11/27/18 09:00	
1,4-Dichlorobenzene	ug/L	<1.9	6.3	11/27/18 09:00	
2,2'-Oxybis(1-chloropropane)	ug/L	<1.5	5.1	11/27/18 09:00	
2,4,5-Trichlorophenol	ug/L	<0.84	2.8	11/27/18 09:00	
2,4,6-Trichlorophenol	ug/L	<2.1	7.0	11/27/18 09:00	
2,4-Dichlorophenol	ug/L	<1.4	4.6	11/27/18 09:00	
2,4-Dimethylphenol	ug/L	<1.3	4.2	11/27/18 09:00	
2,4-Dinitrophenol	ug/L	<0.71	2.4	11/27/18 09:00	
2,4-Dinitrotoluene	ug/L	<0.79	2.6	11/27/18 09:00	
2,6-Dinitrotoluene	ug/L	<0.60	2.0	11/27/18 09:00	
2-Chloronaphthalene	ug/L	<1.6	5.5	11/27/18 09:00	
2-Chlorophenol	ug/L	<1.2	3.9	11/27/18 09:00	
2-Methylnaphthalene	ug/L	<1.5	5.0	11/27/18 09:00	
2-Methylphenol(o-Cresol)	ug/L	<0.87	2.9	11/27/18 09:00	
2-Nitroaniline	ug/L	<0.77	2.6	11/27/18 09:00	
2-Nitrophenol	ug/L	<1.2	3.9	11/27/18 09:00	
3&4-Methylphenol(m&p Cresol)	ug/L	<1.6	5.2	11/27/18 09:00	
3,3'-Dichlorobenzidine	ug/L	<0.91	3.0	11/27/18 09:00	
3-Nitroaniline	ug/L	<0.97	3.2	11/27/18 09:00	
4,6-Dinitro-2-methylphenol	ug/L	<0.65	2.2	11/27/18 09:00	
4-Bromophenylphenyl ether	ug/L	<2.0	6.6	11/27/18 09:00	
4-Chloro-3-methylphenol	ug/L	<1.7	5.6	11/27/18 09:00	
4-Chloroaniline	ug/L	<1.1	3.7	11/27/18 09:00	
4-Chlorophenylphenyl ether	ug/L	<0.82	2.7	11/27/18 09:00	
4-Nitroaniline	ug/L	<1.8	6.1	11/27/18 09:00	
4-Nitrophenol	ug/L	<1.0	3.5	11/27/18 09:00	
Acenaphthene	ug/L	<1.3	4.5	11/27/18 09:00	
Acenaphthylene	ug/L	<1.1	3.5	11/27/18 09:00	
Anthracene	ug/L	<1.8	6.0	11/27/18 09:00	
Benzo(a)anthracene	ug/L	<0.53	1.8	11/27/18 09:00	
Benzo(a)pyrene	ug/L	<1.9	6.3	11/27/18 09:00	
Benzo(b)fluoranthene	ug/L	<0.65	2.2	11/27/18 09:00	
Benzo(g,h,i)perylene	ug/L	<0.81	2.7	11/27/18 09:00	
Benzo(k)fluoranthene	ug/L	<1.0	3.3	11/27/18 09:00	
bis(2-Chloroethoxy)methane	ug/L	<1.0	3.3	11/27/18 09:00	
bis(2-Chloroethyl) ether	ug/L	<1.6	5.3	11/27/18 09:00	
bis(2-Ethylhexyl)phthalate	ug/L	<0.69	2.3	11/27/18 09:00	
Butylbenzylphthalate	ug/L	<0.77	2.6	11/27/18 09:00	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

METHOD BLANK: 1797603 Matrix: Water

Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Carbazole	ug/L	<0.75	2.5	11/27/18 09:00	
Chrysene	ug/L	<1.7	5.8	11/27/18 09:00	
Di-n-butylphthalate	ug/L	<2.6	8.5	11/27/18 09:00	
Di-n-octylphthalate	ug/L	<1.9	6.3	11/27/18 09:00	
Dibenz(a,h)anthracene	ug/L	<1.3	4.4	11/27/18 09:00	
Dibenzofuran	ug/L	<0.77	2.6	11/27/18 09:00	
Diethylphthalate	ug/L	<1.1	3.6	11/27/18 09:00	
Dimethylphthalate	ug/L	<1.9	6.4	11/27/18 09:00	
Fluoranthene	ug/L	<0.56	1.9	11/27/18 09:00	
Fluorene	ug/L	<0.75	2.5	11/27/18 09:00	
Hexachloro-1,3-butadiene	ug/L	<2.5	8.2	11/27/18 09:00	
Hexachlorobenzene	ug/L	<1.7	5.6	11/27/18 09:00	
Hexachlorocyclopentadiene	ug/L	<0.68	2.3	11/27/18 09:00	
Hexachloroethane	ug/L	<2.7	8.9	11/27/18 09:00	
Indeno(1,2,3-cd)pyrene	ug/L	<1.5	5.0	11/27/18 09:00	
Isophorone	ug/L	<0.73	2.4	11/27/18 09:00	
N-Nitroso-di-n-propylamine	ug/L	<0.97	3.2	11/27/18 09:00	
N-Nitrosodiphenylamine	ug/L	<3.5	11.8	11/27/18 09:00	
Naphthalene	ug/L	<1.9	6.3	11/27/18 09:00	
Nitrobenzene	ug/L	<1.5	4.8	11/27/18 09:00	
Pentachlorophenol	ug/L	<1.4	4.8	11/27/18 09:00	
Phenanthrene	ug/L	<1.8	6.1	11/27/18 09:00	
Phenol	ug/L	<0.60	2.0	11/27/18 09:00	
Pyrene	ug/L	<1.3	4.5	11/27/18 09:00	
2,4,6-Tribromophenol (S)	%	98	58-134	11/27/18 09:00	
2-Fluorobiphenyl (S)	%	86	54-122	11/27/18 09:00	
2-Fluorophenol (S)	%	42	27-77	11/27/18 09:00	
Nitrobenzene-d5 (S)	%	100	56-120	11/27/18 09:00	
Phenol-d6 (S)	%	26	16-120	11/27/18 09:00	
Terphenyl-d14 (S)	%	125	59-136	11/27/18 09:00	

LABORATORY CONTROL SAMPLE & LCSD: 1797604 1797605

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	44.4	44.2	89	88	70-130	0	20	
1,2-Dichlorobenzene	ug/L	50	39.9	39.8	80	80	62-130	0	20	
1,3-Dichlorobenzene	ug/L	50	37.2	35.8	74	72	59-130	4	20	
1,4-Dichlorobenzene	ug/L	50	40.3	38.9	81	78	61-108	3	20	
2,2'-Oxybis(1-chloropropane)	ug/L	50	57.1	59.6	114	119	52-123	4	20	
2,4,5-Trichlorophenol	ug/L	50	49.6	44.2	99	88	70-127	12	20	
2,4,6-Trichlorophenol	ug/L	50	53.5	48.9	107	98	77-120	9	20	
2,4-Dichlorophenol	ug/L	50	48.4	42.3	97	85	71-112	14	20	
2,4-Dimethylphenol	ug/L	50	44.1	33.9	88	68	43-118	26	21	R1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

LABORATORY CONTROL SAMPLE & LCSD: 1797604 1797605

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4-Dinitrophenol	ug/L	50	39.2	37.3	78	75	36-130	5	28	
2,4-Dinitrotoluene	ug/L	50	57.4	56.3	115	113	70-130	2	20	
2,6-Dinitrotoluene	ug/L	50	57.5	56.5	115	113	70-130	2	20	
2-Chloronaphthalene	ug/L	50	51.9	52.2	104	104	70-130	1	20	
2-Chlorophenol	ug/L	50	44.9	39.7	90	79	65-108	12	20	
2-Methylnaphthalene	ug/L	50	51.1	51.2	102	102	70-130	0	20	
2-Methylphenol(o-Cresol)	ug/L	50	41.3	37.2	83	74	60-130	11	20	
2-Nitroaniline	ug/L	50	63.3	61.3	127	123	70-130	3	20	
2-Nitrophenol	ug/L	50	51.2	46.3	102	93	71-113	10	20	
3&4-Methylphenol(m&p Cresol)	ug/L	50	34.5	31.2	69	62	53-130	10	20	
3,3'-Dichlorobenzidine	ug/L	50	39.5	37.2	79	74	40-100	6	36	
3-Nitroaniline	ug/L	50	56.6	53.9	113	108	70-130	5	20	
4,6-Dinitro-2-methylphenol	ug/L	50	46.9	45.2	94	90	62-130	4	20	
4-Bromophenylphenyl ether	ug/L	50	52.3	52.4	105	105	70-130	0	20	
4-Chloro-3-methylphenol	ug/L	50	50.4	43.4	101	87	74-116	15	20	
4-Chloroaniline	ug/L	50	45.4	42.1	91	84	67-130	8	20	
4-Chlorophenylphenyl ether	ug/L	50	52.9	52.4	106	105	70-130	1	20	
4-Nitroaniline	ug/L	50	54.2	53.2	108	106	67-127	2	20	
4-Nitrophenol	ug/L	50	13.7	13.3	27	27	14-75	3	24	
Acenaphthene	ug/L	50	52.4	51.8	105	104	80-120	1	20	
Acenaphthylene	ug/L	50	54.2	53.6	108	107	70-130	1	20	
Anthracene	ug/L	50	60.2	60.0	120	120	70-130	0	20	
Benzo(a)anthracene	ug/L	50	51.9	52.8	104	106	70-130	2	20	
Benzo(a)pyrene	ug/L	50	59.6	62.3	119	125	78-118	4	20	L1
Benzo(b)fluoranthene	ug/L	50	56.7	60.1	113	120	70-130	6	20	
Benzo(g,h,i)perylene	ug/L	50	56.6	57.5	113	115	70-121	2	20	
Benzo(k)fluoranthene	ug/L	50	63.0	59.2	126	118	70-121	6	20	L1
bis(2-Chloroethoxy)methane	ug/L	50	56.7	56.4	113	113	70-130	1	20	
bis(2-Chloroethyl) ether	ug/L	50	48.6	51.9	97	104	70-115	7	20	
bis(2-Ethylhexyl)phthalate	ug/L	50	55.5	58.7	111	117	70-124	6	20	
Butylbenzylphthalate	ug/L	50	57.2	59.2	114	118	70-130	3	20	
Carbazole	ug/L	50	59.0	58.3	118	117	70-130	1	20	
Chrysene	ug/L	50	52.8	53.2	106	106	66-126	1	20	
Di-n-butylphthalate	ug/L	50	57.0	58.6	114	117	70-130	3	20	
Di-n-octylphthalate	ug/L	50	49.6	52.5	99	105	59-123	6	20	
Dibenz(a,h)anthracene	ug/L	50	51.4	51.5	103	103	52-133	0	20	
Dibenzofuran	ug/L	50	53.8	52.8	108	106	70-130	2	20	
Diethylphthalate	ug/L	50	56.3	54.8	113	110	70-130	3	20	
Dimethylphthalate	ug/L	50	55.1	51.8	110	104	70-130	6	20	
Fluoranthene	ug/L	50	57.4	57.5	115	115	85-122	0	20	
Fluorene	ug/L	50	55.9	55.4	112	111	70-130	1	20	
Hexachloro-1,3-butadiene	ug/L	50	40.8	41.7	82	83	66-114	2	20	
Hexachlorobenzene	ug/L	50	52.2	51.6	104	103	70-130	1	20	
Hexachlorocyclopentadiene	ug/L	50	26.1	27.3	52	55	19-81	4	25	
Hexachloroethane	ug/L	50	36.1	35.0	72	70	52-130	3	22	
Indeno(1,2,3-cd)pyrene	ug/L	50	56.6	56.1	113	112	58-125	1	20	
Isophorone	ug/L	50	56.8	56.8	114	114	70-130	0	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

LABORATORY CONTROL SAMPLE & LCSD: 1797604 1797605

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
N-Nitroso-di-n-propylamine	ug/L	50	53.2	54.8	106	110	70-127	3	20	
N-Nitrosodiphenylamine	ug/L	50	56.4	55.4	113	111	80-124	2	20	
Naphthalene	ug/L	50	49.3	49.2	99	98	70-130	0	20	
Nitrobenzene	ug/L	50	49.2	48.7	98	97	70-130	1	20	
Pentachlorophenol	ug/L	50	40.9	41.7	82	83	65-109	2	20	
Phenanthrene	ug/L	50	52.5	51.6	105	103	70-130	2	20	
Phenol	ug/L	50	15.3	16.1	31	32	28-120	5	20	
Pyrene	ug/L	50	58.2	58.3	116	117	70-130	0	20	
2,4,6-Tribromophenol (S)	%				115	103	58-134			
2-Fluorobiphenyl (S)	%				97	102	54-122			
2-Fluorophenol (S)	%				50	46	27-77			
Nitrobenzene-d5 (S)	%				106	107	56-120			
Phenol-d6 (S)	%				31	31	16-120			
Terphenyl-d14 (S)	%				121	119	59-136			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

QC Batch: 307348 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

METHOD BLANK: 1796917 Matrix: Water
Associated Lab Samples: 40179993001, 40179993002, 40179993003, 40179993004, 40179993005, 40179993006, 40179993007, 40179993008, 40179993009, 40179993010, 40179993011, 40179993012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	11/21/18 11:19	

LABORATORY CONTROL SAMPLE: 1796918

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	92.0	92	80-120	

SAMPLE DUPLICATE: 1796919

Parameter	Units	40179925002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	9.1	8.9	2	5	

SAMPLE DUPLICATE: 1796920

Parameter	Units	40179993006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	286	352	21	5	R1

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALIFIERS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

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 LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

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 at or above the adjusted LOD.

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.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: 307568

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 307792

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

1q	Analyte was measured in the associated method blank at a concentration of -13.72 ug/L.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
D9	Dissolved result is greater than the total. Data is within laboratory control limits.
L1	Analyte recovery in the laboratory control sample (LCS) was above QC limits. Results may be biased high.
P4	Sample field preservation does not meet EPA or method recommendations for this analysis.
R1	RPD value was outside control limits.
S0	Surrogate recovery outside laboratory control limits.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40179993001	**AMN-MW1**	EPA 3510	307735	EPA 8082	307792
40179993002	**FVMW-27**	EPA 3510	307735	EPA 8082	307792
40179993003	**FVMW-26**	EPA 3510	307735	EPA 8082	307792
40179993004	**GMMW-1**	EPA 3510	307735	EPA 8082	307792
40179993005	**GMMW-2**	EPA 3510	307735	EPA 8082	307792
40179993006	**FVMW-20**	EPA 3510	307735	EPA 8082	307792
40179993007	**GMMW-3**	EPA 3510	307735	EPA 8082	307792
40179993008	**GMMW-5**	EPA 3510	307735	EPA 8082	307792
40179993009	**AMSMW-01**	EPA 3510	307735	EPA 8082	307792
40179993010	**GMMW-4**	EPA 3510	307735	EPA 8082	307792
40179993011	**GMMW-6**	EPA 3510	307735	EPA 8082	307792
40179993012	**GMMW-7**	EPA 3510	307735	EPA 8082	307792
40179993001	**AMN-MW1**	EPA 3010	307570	EPA 6010	308106
40179993002	**FVMW-27**	EPA 3010	307570	EPA 6010	308106
40179993003	**FVMW-26**	EPA 3010	307570	EPA 6010	308106
40179993004	**GMMW-1**	EPA 3010	307570	EPA 6010	308106
40179993005	**GMMW-2**	EPA 3010	307570	EPA 6010	308106
40179993006	**FVMW-20**	EPA 3010	307570	EPA 6010	308106
40179993007	**GMMW-3**	EPA 3010	307570	EPA 6010	308106
40179993008	**GMMW-5**	EPA 3010	307570	EPA 6010	308106
40179993009	**AMSMW-01**	EPA 3010	307570	EPA 6010	308106
40179993010	**GMMW-4**	EPA 3010	307570	EPA 6010	308106
40179993011	**GMMW-6**	EPA 3010	307570	EPA 6010	308106
40179993012	**GMMW-7**	EPA 3010	307570	EPA 6010	308106
40179993001	**AMN-MW1**	EPA 3010	307569	EPA 6010	308105
40179993002	**FVMW-27**	EPA 3010	307569	EPA 6010	308105
40179993003	**FVMW-26**	EPA 3010	307569	EPA 6010	308105
40179993004	**GMMW-1**	EPA 3010	307569	EPA 6010	308105
40179993005	**GMMW-2**	EPA 3010	307569	EPA 6010	308105
40179993006	**FVMW-20**	EPA 3010	307569	EPA 6010	308105
40179993007	**GMMW-3**	EPA 3010	307569	EPA 6010	308105
40179993008	**GMMW-5**	EPA 3010	307569	EPA 6010	308105
40179993009	**AMSMW-01**	EPA 3010	307569	EPA 6010	308105
40179993010	**GMMW-4**	EPA 3010	307569	EPA 6010	308105
40179993011	**GMMW-6**	EPA 3010	307569	EPA 6010	308105
40179993012	**GMMW-7**	EPA 3010	307569	EPA 6010	308105
40179993001	**AMN-MW1**	EPA 7470	307496	EPA 7470	307574
40179993002	**FVMW-27**	EPA 7470	307496	EPA 7470	307574
40179993003	**FVMW-26**	EPA 7470	307496	EPA 7470	307574
40179993004	**GMMW-1**	EPA 7470	307496	EPA 7470	307574
40179993005	**GMMW-2**	EPA 7470	307496	EPA 7470	307574
40179993006	**FVMW-20**	EPA 7470	307496	EPA 7470	307574
40179993007	**GMMW-3**	EPA 7470	307496	EPA 7470	307574
40179993008	**GMMW-5**	EPA 7470	308150	EPA 7470	308247
40179993009	**AMSMW-01**	EPA 7470	308150	EPA 7470	308247
40179993010	**GMMW-4**	EPA 7470	308150	EPA 7470	308247

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40179993011	**GMMW-6**	EPA 7470	307496	EPA 7470	307574
40179993012	**GMMW-7**	EPA 7470	307496	EPA 7470	307574
40179993001	**AMN-MW1**	EPA 7470	307499	EPA 7470	307575
40179993002	**FVMW-27**	EPA 7470	307499	EPA 7470	307575
40179993003	**FVMW-26**	EPA 7470	307499	EPA 7470	307575
40179993004	**GMMW-1**	EPA 7470	307499	EPA 7470	307575
40179993005	**GMMW-2**	EPA 7470	307499	EPA 7470	307575
40179993006	**FVMW-20**	EPA 7470	307499	EPA 7470	307575
40179993007	**GMMW-3**	EPA 7470	307499	EPA 7470	307575
40179993008	**GMMW-5**	EPA 7470	308152	EPA 7470	308228
40179993009	**AMSMW-01**	EPA 7470	308152	EPA 7470	308228
40179993010	**GMMW-4**	EPA 7470	308152	EPA 7470	308228
40179993011	**GMMW-6**	EPA 7470	307499	EPA 7470	307575
40179993012	**GMMW-7**	EPA 7470	307499	EPA 7470	307575
40179993001	**AMN-MW1**	EPA 3510	307467	EPA 8270	307568
40179993002	**FVMW-27**	EPA 3510	307467	EPA 8270	307568
40179993003	**FVMW-26**	EPA 3510	307467	EPA 8270	307568
40179993004	**GMMW-1**	EPA 3510	307467	EPA 8270	307568
40179993005	**GMMW-2**	EPA 3510	307467	EPA 8270	307568
40179993006	**FVMW-20**	EPA 3510	307467	EPA 8270	307568
40179993007	**GMMW-3**	EPA 3510	307467	EPA 8270	307568
40179993008	**GMMW-5**	EPA 3510	307467	EPA 8270	307568
40179993009	**AMSMW-01**	EPA 3510	307467	EPA 8270	307568
40179993010	**GMMW-4**	EPA 3510	307467	EPA 8270	307568
40179993011	**GMMW-6**	EPA 3510	307467	EPA 8270	307568
40179993012	**GMMW-7**	EPA 3510	307467	EPA 8270	307568
40179993001	**AMN-MW1**	EPA 8260	307451		
40179993002	**FVMW-27**	EPA 8260	307451		
40179993003	**FVMW-26**	EPA 8260	307451		
40179993004	**GMMW-1**	EPA 8260	307451		
40179993005	**GMMW-2**	EPA 8260	307451		
40179993006	**FVMW-20**	EPA 8260	307451		
40179993007	**GMMW-3**	EPA 8260	307451		
40179993008	**GMMW-5**	EPA 8260	307451		
40179993009	**AMSMW-01**	EPA 8260	307451		
40179993010	**GMMW-4**	EPA 8260	307451		
40179993011	**GMMW-6**	EPA 8260	307451		
40179993012	**GMMW-7**	EPA 8260	307451		
40179993001	**AMN-MW1**	SM 2540D	307348		
40179993002	**FVMW-27**	SM 2540D	307348		
40179993003	**FVMW-26**	SM 2540D	307348		
40179993004	**GMMW-1**	SM 2540D	307348		
40179993005	**GMMW-2**	SM 2540D	307348		
40179993006	**FVMW-20**	SM 2540D	307348		
40179993007	**GMMW-3**	SM 2540D	307348		
40179993008	**GMMW-5**	SM 2540D	307348		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40179993

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40179993009	**AMSMW-01**	SM 2540D	307348		
40179993010	**GMMW-4**	SM 2540D	307348		
40179993011	**GMMW-6**	SM 2540D	307348		
40179993012	**GMMW-7**	SM 2540D	307348		

JK

Pace Analytical®
www.pacelabs.com

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

40179993

CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	DRAKE
Branch/Location:	
Project Contact:	DJ BURNS/CHELSEA WORSON
Phone:	262.241.0005
Project Number:	J16001
Project Name:	AMCAST NORTH/SOUTH
Project State:	WI
Sampled By (Print):	TIM GIULIANI
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	00054232 (DRAKE)
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, B = Biota, C = Charcoal, O = Oil, S = Soil, SI = Sludge, W = Water, DW = Drinking Water, GW = Ground Water, SW = Surface Water, WW = Waste Water, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	PCB's	VOC's	TSS Total Suspended Solids	SVOC 8270	RCRA METALS (NO PRESERV. & HNO3)	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N		A	B	A	A	A+D			
001	AMN-MW1	11/19	12:00	GW			X	X	X	X	X	Lab to filter samples		
002	FVMW-27		12:18				X	X	X	X	X	As required.		
003	FVMW-26		12:38				X	X	X	X	X			
004	GMMW-1		1310				X	X	X	X	X			
005	GMMW-2		1345				X	X	X	X	X			
006	FVMW-20		1405				X	X	X	X	X			
007	GMMW-3		1420				X	X	X	X	X			
008	GMMW-5		14:35				X	X	X	X	X			
009	AMSMW-01		14:45				X	X	X	X	X			
010	GMMW-4		1500				X	X	X	X	X			
011	GMMW-6		15:30				X	X	X	X	X			
012	GMMW-7		15:50				X	X	X	X	X			

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):
Email #1:
Email #2:
Telephone:
Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11/20/18 3:27	Mary Fannin	11/20/18 10:45
Mary Fannin	11/20/18 1315		
CS Logistics	11/21/18 0825		

PACE Project No.: 40179993
Receipt Temp = 2.0 °C
Sample Receipt pH: OK / Adjusted
Cooler Custody Seal: Present / Not Present
Intact / Not Intact

C019a(27Jun2006)
Version 6.0 06/14/06
ORIGINAL

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

December 09, 2019

Chelsea Corson
Drake Consulting Group, LLC
118 N. Green Bay Road
Suite 2
Thiensville, WI 53092

RE: Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Dear Chelsea Corson:
Enclosed are the analytical results for sample(s) received by the laboratory on November 22, 2019. 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,

Steven Mleczko
steve.mleczko@pacelabs.com
(920)469-2436
Project Manager

Enclosures

cc: Carly Corson, Drake Consulting Group, LLC
Tim Giuliani, Drake Consulting Group, LLC

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

CERTIFICATIONS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Pace Analytical Services Green Bay
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky UST Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
New York Certification #: 12064
North Dakota Certification #: R-150
Virginia VELAP ID: 460263
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444
USDA Soil Permit #: P330-16-00157
Federal Fish & Wildlife Permit #: LE51774A-0

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(920)469-2436

SAMPLE SUMMARY

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40199755001	**FVMW-26**	Water	11/19/19 09:30	11/22/19 08:55
40199755002	**FVMW-27**	Water	11/19/19 09:50	11/22/19 08:55
40199755003	**AMN-MW1**	Water	11/19/19 10:15	11/22/19 08:55
40199755004	**GMMW-1**	Water	11/19/19 12:00	11/22/19 08:55
40199755005	**GMMW-2**	Water	11/19/19 12:25	11/22/19 08:55
40199755006	**GMMW-3**	Water	11/19/19 15:00	11/22/19 08:55
40199755007	**GMMW-4**	Water	11/19/19 13:10	11/22/19 08:55
40199755008	**GMMW-5**	Water	11/19/19 14:20	11/22/19 08:55
40199755009	**GMMW-6**	Water	11/19/19 14:00	11/22/19 08:55
40199755010	**GMMW-7**	Water	11/19/19 13:40	11/22/19 08:55
40199755011	**FVMW-20**	Water	11/19/19 12:45	11/22/19 08:55
40199755012	**AMS-MW1**	Water	11/19/19 14:45	11/22/19 08:55
40199755013	**TB**	Water	11/19/19 00:00	11/22/19 08:55

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SAMPLE ANALYTE COUNT

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40199755001	**FVMW-26**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755002	**FVMW-27**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755003	**AMN-MW1**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755004	**GMMW-1**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755005	**GMMW-2**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G

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SAMPLE ANALYTE COUNT

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755006	**GMMW-3**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755007	**GMMW-4**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755008	**GMMW-5**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755009	**GMMW-6**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755010	**GMMW-7**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G

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SAMPLE ANALYTE COUNT

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755011	**FVMW-20**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755012	**AMS-MW1**	EPA 8082	BLM	10	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 6010	TXW	7	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 8270	RJN	70	PASI-G
		EPA 8260	HNW	64	PASI-G
		SM 2540D	JXM	1	PASI-G
40199755013	**TB**	EPA 8260	HNW	64	PASI-G

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Method: **EPA 8082**
Description: 8082 GCS PCB
Client: Drake Consulting Group, LLC
Date: December 09, 2019

General Information:
12 samples were analyzed for EPA 8082. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 342009

S4: Surrogate recovery not evaluated against control limits due to sample dilution.

- GMMW-3 (Lab ID: 40199755006)
  - Decachlorobiphenyl (S)
  - Tetrachloro-m-xylene (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 342009

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Method: **EPA 6010**
Description: 6010 MET ICP
Client: Drake Consulting Group, LLC
Date: December 09, 2019

General Information:
12 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3010 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Method: **EPA 6010**
Description: 6010 MET ICP, Dissolved
Client: Drake Consulting Group, LLC
Date: December 09, 2019

General Information:
12 samples were analyzed for EPA 6010. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

P4: Sample field preservation does not meet EPA or method recommendations for this analysis.
- AMN-MW1 (Lab ID: 40199755003)
- AMS-MW1 (Lab ID: 40199755012)
- FVMW-20 (Lab ID: 40199755011)
- FVMW-26 (Lab ID: 40199755001)
- FVMW-27 (Lab ID: 40199755002)
- GMMW-1 (Lab ID: 40199755004)
- GMMW-2 (Lab ID: 40199755005)
- GMMW-3 (Lab ID: 40199755006)
- GMMW-4 (Lab ID: 40199755007)
- GMMW-5 (Lab ID: 40199755008)
- GMMW-6 (Lab ID: 40199755009)
- GMMW-7 (Lab ID: 40199755010)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Method: **EPA 7470**
Description: 7470 Mercury
Client: Drake Consulting Group, LLC
Date: December 09, 2019

General Information:
12 samples were analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Method: **EPA 7470**
Description: 7470 Mercury, Dissolved
Client: Drake Consulting Group, LLC
Date: December 09, 2019

General Information:
12 samples were analyzed for EPA 7470. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

P4: Sample field preservation does not meet EPA or method recommendations for this analysis.
- AMN-MW1 (Lab ID: 40199755003)
- AMS-MW1 (Lab ID: 40199755012)
- FVMW-20 (Lab ID: 40199755011)
- FVMW-26 (Lab ID: 40199755001)
- FVMW-27 (Lab ID: 40199755002)
- GMMW-1 (Lab ID: 40199755004)
- GMMW-2 (Lab ID: 40199755005)
- GMMW-3 (Lab ID: 40199755006)
- GMMW-4 (Lab ID: 40199755007)
- GMMW-5 (Lab ID: 40199755008)
- GMMW-6 (Lab ID: 40199755009)
- GMMW-7 (Lab ID: 40199755010)

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 7470 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Drake Consulting Group, LLC
Date: December 09, 2019

General Information:
12 samples were analyzed for EPA 8270. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Sample Preparation:
The samples were prepared in accordance with EPA 3510 with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

QC Batch: 341844

S0: Surrogate recovery outside laboratory control limits.
- FVMW-20 (Lab ID: 40199755011)
  - 2-Fluorophenol (S)

S3: Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
- GMMW-5 (Lab ID: 40199755008)
  - 2,4,6-Tribromophenol (S)

S4: Surrogate recovery not evaluated against control limits due to sample dilution.
- GMMW-3 (Lab ID: 40199755006)
  - 2,4,6-Tribromophenol (S)
  - 2-Fluorobiphenyl (S)
  - 2-Fluorophenol (S)
  - Nitrobenzene-d5 (S)
  - Phenol-d6 (S)
  - Terphenyl-d14 (S)

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Method: **EPA 8270**
Description: 8270 MSSV Semivolatile Organic
Client: Drake Consulting Group, LLC
Date: December 09, 2019

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

QC Batch: 341844

A matrix spike/matrix spike duplicate was not performed due to insufficient sample volume.

Additional Comments:

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Method: **EPA 8260**
Description: 8260 MSV
Client: Drake Consulting Group, LLC
Date: December 09, 2019

General Information:
13 samples were analyzed for EPA 8260. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):
All criteria were within method requirements with any exceptions noted below.

Continuing Calibration:
All criteria were within method requirements with any exceptions noted below.

Internal Standards:
All internal standards were within QC limits with any exceptions noted below.

Surrogates:
All surrogates were within QC limits with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Method: **SM 2540D**
Description: 2540D Total Suspended Solids
Client: Drake Consulting Group, LLC
Date: December 09, 2019

General Information:
12 samples were analyzed for SM 2540D. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:
The samples were analyzed within the method required hold times with any exceptions noted below.

Method Blank:
All analytes were below the report limit in the method blank, where applicable, with any exceptions noted below.

Laboratory Control Spike:
All laboratory control spike compounds were within QC limits with any exceptions noted below.

Matrix Spikes:
All percent recoveries and relative percent differences (RPDs) were within acceptance criteria with any exceptions noted below.

Duplicate Sample:
All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

This data package has been reviewed for quality and completeness and is approved for release.

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-26 **Lab ID: 40199755001** Collected: 11/19/19 09:30 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 22:12	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 22:12	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 22:12	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 22:12	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 22:12	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 22:12	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 22:12	11096-82-5	
PCB, Total	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 22:12	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	80	%	43-112		1	11/27/19 08:24	12/02/19 22:12	877-09-8	
Decachlorobiphenyl (S)	59	%	10-103		1	11/27/19 08:24	12/02/19 22:12	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 14:41	7440-38-2	
Barium	**133**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 14:41	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 14:41	7440-43-9	
Chromium	**5.0J**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 14:41	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 14:41	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 14:41	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 14:41	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:23	7440-38-2	
Barium, Dissolved	**102**	ug/L	5.0	1.5	1		12/02/19 18:23	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:23	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		12/02/19 18:23	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:23	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:23	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:23	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 08:46	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 09:58	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.5**	ug/L	5.0	1.5	1	11/26/19 05:21	11/26/19 14:58	120-82-1	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 14:58	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 14:58	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 14:58	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 14:58	108-60-1	
2,4,5-Trichlorophenol	**<0.61**	ug/L	4.8	0.61	1	11/26/19 05:21	11/26/19 14:58	95-95-4	
2,4,6-Trichlorophenol	**<0.76**	ug/L	4.8	0.76	1	11/26/19 05:21	11/26/19 14:58	88-06-2	
2,4-Dichlorophenol	**<0.85**	ug/L	4.8	0.85	1	11/26/19 05:21	11/26/19 14:58	120-83-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-26 **Lab ID: 40199755001** Collected: 11/19/19 09:30 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 14:58	105-67-9	
2,4-Dinitrophenol	**<2.3**	ug/L	7.8	2.3	1	11/26/19 05:21	11/26/19 14:58	51-28-5	
2,4-Dinitrotoluene	**<1.0**	ug/L	4.8	1.0	1	11/26/19 05:21	11/26/19 14:58	121-14-2	
2,6-Dinitrotoluene	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 14:58	606-20-2	
2-Chloronaphthalene	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 14:58	91-58-7	
2-Chlorophenol	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 14:58	95-57-8	
2-Methylnaphthalene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 14:58	91-57-6	
2-Methylphenol(o-Cresol)	**<0.89**	ug/L	4.8	0.89	1	11/26/19 05:21	11/26/19 14:58	95-48-7	
2-Nitroaniline	**<0.90**	ug/L	4.8	0.90	1	11/26/19 05:21	11/26/19 14:58	88-74-4	
2-Nitrophenol	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 14:58	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<0.58**	ug/L	4.8	0.58	1	11/26/19 05:21	11/26/19 14:58		
3,3'-Dichlorobenzidine	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 14:58	91-94-1	
3-Nitroaniline	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 14:58	99-09-2	
4,6-Dinitro-2-methylphenol	**<3.0**	ug/L	9.9	3.0	1	11/26/19 05:21	11/26/19 14:58	534-52-1	
4-Bromophenylphenyl ether	**<0.91**	ug/L	4.8	0.91	1	11/26/19 05:21	11/26/19 14:58	101-55-3	
4-Chloro-3-methylphenol	**<0.65**	ug/L	4.8	0.65	1	11/26/19 05:21	11/26/19 14:58	59-50-7	
4-Chloroaniline	**<1.7**	ug/L	5.7	1.7	1	11/26/19 05:21	11/26/19 14:58	106-47-8	
4-Chlorophenylphenyl ether	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 14:58	7005-72-3	
4-Nitroaniline	**<2.9**	ug/L	9.5	2.9	1	11/26/19 05:21	11/26/19 14:58	100-01-6	
4-Nitrophenol	**<2.9**	ug/L	9.7	2.9	1	11/26/19 05:21	11/26/19 14:58	100-02-7	
Acenaphthene	**<0.73**	ug/L	4.8	0.73	1	11/26/19 05:21	11/26/19 14:58	83-32-9	
Acenaphthylene	**<0.70**	ug/L	4.8	0.70	1	11/26/19 05:21	11/26/19 14:58	208-96-8	
Anthracene	**<0.77**	ug/L	4.8	0.77	1	11/26/19 05:21	11/26/19 14:58	120-12-7	
Benzo(a)anthracene	**<0.81**	ug/L	4.8	0.81	1	11/26/19 05:21	11/26/19 14:58	56-55-3	
Benzo(a)pyrene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 14:58	50-32-8	
Benzo(b)fluoranthene	**<0.99**	ug/L	4.8	0.99	1	11/26/19 05:21	11/26/19 14:58	205-99-2	
Benzo(g,h,i)perylene	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 14:58	191-24-2	
Benzo(k)fluoranthene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 14:58	207-08-9	
Butylbenzylphthalate	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 14:58	85-68-7	
Carbazole	**<0.87**	ug/L	4.8	0.87	1	11/26/19 05:21	11/26/19 14:58	86-74-8	
Chrysene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 14:58	218-01-9	
Di-n-butylphthalate	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 14:58	84-74-2	
Di-n-octylphthalate	**<4.5**	ug/L	15.1	4.5	1	11/26/19 05:21	11/26/19 14:58	117-84-0	
Dibenz(a,h)anthracene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 14:58	53-70-3	
Dibenzofuran	**<0.81**	ug/L	4.8	0.81	1	11/26/19 05:21	11/26/19 14:58	132-64-9	
Diethylphthalate	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 14:58	84-66-2	
Dimethylphthalate	**<0.69**	ug/L	4.8	0.69	1	11/26/19 05:21	11/26/19 14:58	131-11-3	
Fluoranthene	**<0.94**	ug/L	4.8	0.94	1	11/26/19 05:21	11/26/19 14:58	206-44-0	
Fluorene	**<0.86**	ug/L	4.8	0.86	1	11/26/19 05:21	11/26/19 14:58	86-73-7	
Hexachloro-1,3-butadiene	**<1.1**	ug/L	5.2	1.1	1	11/26/19 05:21	11/26/19 14:58	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	4.8	1.6	1	11/26/19 05:21	11/26/19 14:58	118-74-1	
Hexachlorocyclopentadiene	**<0.96**	ug/L	4.8	0.96	1	11/26/19 05:21	11/26/19 14:58	77-47-4	
Hexachloroethane	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 14:58	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 14:58	193-39-5	
Isophorone	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 14:58	78-59-1	
N-Nitroso-di-n-propylamine	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 14:58	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-26 **Lab ID: 40199755001** Collected: 11/19/19 09:30 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.0	3.3	1	11/26/19 05:21	11/26/19 14:58	86-30-6	
Naphthalene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 14:58	91-20-3	
Nitrobenzene	**<1.0**	ug/L	4.8	1.0	1	11/26/19 05:21	11/26/19 14:58	98-95-3	
Pentachlorophenol	**<4.3**	ug/L	14.5	4.3	1	11/26/19 05:21	11/26/19 14:58	87-86-5	
Phenanthrene	**<0.91**	ug/L	4.8	0.91	1	11/26/19 05:21	11/26/19 14:58	85-01-8	
Phenol	**<0.31**	ug/L	4.8	0.31	1	11/26/19 05:21	11/26/19 14:58	108-95-2	
Pyrene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 14:58	129-00-0	
bis(2-Chloroethoxy)methane	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 14:58	111-91-1	
bis(2-Chloroethyl) ether	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 14:58	111-44-4	
bis(2-Ethylhexyl)phthalate	**<2.7**	ug/L	9.1	2.7	1	11/26/19 05:21	11/26/19 14:58	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	79	%	51-108		1	11/26/19 05:21	11/26/19 14:58	4165-60-0	
2-Fluorobiphenyl (S)	68	%	47-105		1	11/26/19 05:21	11/26/19 14:58	321-60-8	
Terphenyl-d14 (S)	104	%	65-147		1	11/26/19 05:21	11/26/19 14:58	1718-51-0	
Phenol-d6 (S)	26	%	18-120		1	11/26/19 05:21	11/26/19 14:58	13127-88-3	
2-Fluorophenol (S)	41	%	32-120		1	11/26/19 05:21	11/26/19 14:58	367-12-4	
2,4,6-Tribromophenol (S)	108	%	57-131		1	11/26/19 05:21	11/26/19 14:58	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 21:07	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/25/19 21:07	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 21:07	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/25/19 21:07	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 21:07	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 21:07	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/25/19 21:07	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/25/19 21:07	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/25/19 21:07	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/25/19 21:07	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/25/19 21:07	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/25/19 21:07	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/25/19 21:07	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 21:07	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 21:07	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 21:07	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/25/19 21:07	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/25/19 21:07	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/25/19 21:07	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/25/19 21:07	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/25/19 21:07	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/25/19 21:07	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/25/19 21:07	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/25/19 21:07	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 21:07	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/25/19 21:07	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/25/19 21:07	75-27-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-26 **Lab ID: 40199755001** Collected: 11/19/19 09:30 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/25/19 21:07	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/25/19 21:07	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 21:07	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 21:07	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/25/19 21:07	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/25/19 21:07	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/25/19 21:07	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/25/19 21:07	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/25/19 21:07	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/25/19 21:07	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/25/19 21:07	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/25/19 21:07	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 21:07	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/25/19 21:07	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/25/19 21:07	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/25/19 21:07	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 21:07	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/25/19 21:07	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/25/19 21:07	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/25/19 21:07	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 21:07	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/25/19 21:07	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 21:07	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/25/19 21:07	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/25/19 21:07	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/25/19 21:07	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 21:07	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/25/19 21:07	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 21:07	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/25/19 21:07	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/25/19 21:07	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/25/19 21:07	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/25/19 21:07	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/25/19 21:07	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/25/19 21:07	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		11/25/19 21:07	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 21:07	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**367**	mg/L	33.3	15.8	1		11/26/19 12:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-27 **Lab ID: 40199755002** Collected: 11/19/19 09:50 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:30	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:30	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:30	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:30	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:30	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:30	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:30	11096-82-5	
PCB, Total	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:30	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	77	%	43-112		1	11/27/19 08:24	12/02/19 22:30	877-09-8	
Decachlorobiphenyl (S)	68	%	10-103		1	11/27/19 08:24	12/02/19 22:30	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 14:48	7440-38-2	
Barium	**94.9**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 14:48	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 14:48	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 14:48	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 14:48	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 14:48	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 14:48	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:25	7440-38-2	
Barium, Dissolved	**87.5**	ug/L	5.0	1.5	1		12/02/19 18:25	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:25	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		12/02/19 18:25	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:25	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:25	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:25	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 08:53	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 10:00	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 15:19	120-82-1	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 15:19	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 15:19	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 15:19	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:19	108-60-1	
2,4,5-Trichlorophenol	**<0.61**	ug/L	4.7	0.61	1	11/26/19 05:21	11/26/19 15:19	95-95-4	
2,4,6-Trichlorophenol	**<0.75**	ug/L	4.7	0.75	1	11/26/19 05:21	11/26/19 15:19	88-06-2	
2,4-Dichlorophenol	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 15:19	120-83-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-27 **Lab ID: 40199755002** Collected: 11/19/19 09:50 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:19	105-67-9	
2,4-Dinitrophenol	**<2.3**	ug/L	7.7	2.3	1	11/26/19 05:21	11/26/19 15:19	51-28-5	
2,4-Dinitrotoluene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 15:19	121-14-2	
2,6-Dinitrotoluene	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 15:19	606-20-2	
2-Chloronaphthalene	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 15:19	91-58-7	
2-Chlorophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 15:19	95-57-8	
2-Methylnaphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:19	91-57-6	
2-Methylphenol(o-Cresol)	**<0.88**	ug/L	4.7	0.88	1	11/26/19 05:21	11/26/19 15:19	95-48-7	
2-Nitroaniline	**<0.89**	ug/L	4.7	0.89	1	11/26/19 05:21	11/26/19 15:19	88-74-4	
2-Nitrophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 15:19	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<0.58**	ug/L	4.7	0.58	1	11/26/19 05:21	11/26/19 15:19		
3,3'-Dichlorobenzidine	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 15:19	91-94-1	
3-Nitroaniline	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 15:19	99-09-2	
4,6-Dinitro-2-methylphenol	**<2.9**	ug/L	9.8	2.9	1	11/26/19 05:21	11/26/19 15:19	534-52-1	
4-Bromophenylphenyl ether	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 15:19	101-55-3	
4-Chloro-3-methylphenol	**<0.64**	ug/L	4.7	0.64	1	11/26/19 05:21	11/26/19 15:19	59-50-7	
4-Chloroaniline	**<1.7**	ug/L	5.6	1.7	1	11/26/19 05:21	11/26/19 15:19	106-47-8	
4-Chlorophenylphenyl ether	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 15:19	7005-72-3	
4-Nitroaniline	**<2.8**	ug/L	9.4	2.8	1	11/26/19 05:21	11/26/19 15:19	100-01-6	
4-Nitrophenol	**<2.9**	ug/L	9.6	2.9	1	11/26/19 05:21	11/26/19 15:19	100-02-7	
Acenaphthene	**<0.72**	ug/L	4.7	0.72	1	11/26/19 05:21	11/26/19 15:19	83-32-9	
Acenaphthylene	**<0.69**	ug/L	4.7	0.69	1	11/26/19 05:21	11/26/19 15:19	208-96-8	
Anthracene	**<0.76**	ug/L	4.7	0.76	1	11/26/19 05:21	11/26/19 15:19	120-12-7	
Benzo(a)anthracene	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 15:19	56-55-3	
Benzo(a)pyrene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:19	50-32-8	
Benzo(b)fluoranthene	**<0.98**	ug/L	4.7	0.98	1	11/26/19 05:21	11/26/19 15:19	205-99-2	
Benzo(g,h,i)perylene	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 15:19	191-24-2	
Benzo(k)fluoranthene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:19	207-08-9	
Butylbenzylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:19	85-68-7	
Carbazole	**<0.86**	ug/L	4.7	0.86	1	11/26/19 05:21	11/26/19 15:19	86-74-8	
Chrysene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:19	218-01-9	
Di-n-butylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:19	84-74-2	
Di-n-octylphthalate	**<4.5**	ug/L	15.0	4.5	1	11/26/19 05:21	11/26/19 15:19	117-84-0	
Dibenz(a,h)anthracene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 15:19	53-70-3	
Dibenzofuran	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 15:19	132-64-9	
Diethylphthalate	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 15:19	84-66-2	
Dimethylphthalate	**<0.68**	ug/L	4.7	0.68	1	11/26/19 05:21	11/26/19 15:19	131-11-3	
Fluoranthene	**<0.93**	ug/L	4.7	0.93	1	11/26/19 05:21	11/26/19 15:19	206-44-0	
Fluorene	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 15:19	86-73-7	
Hexachloro-1,3-butadiene	**<1.1**	ug/L	5.2	1.1	1	11/26/19 05:21	11/26/19 15:19	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	4.7	1.6	1	11/26/19 05:21	11/26/19 15:19	118-74-1	
Hexachlorocyclopentadiene	**<0.95**	ug/L	4.7	0.95	1	11/26/19 05:21	11/26/19 15:19	77-47-4	
Hexachloroethane	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 15:19	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:19	193-39-5	
Isophorone	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 15:19	78-59-1	
N-Nitroso-di-n-propylamine	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:19	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-27 **Lab ID: 40199755002** Collected: 11/19/19 09:50 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	10.8	3.3	1	11/26/19 05:21	11/26/19 15:19	86-30-6	
Naphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:19	91-20-3	
Nitrobenzene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 15:19	98-95-3	
Pentachlorophenol	**<4.3**	ug/L	14.3	4.3	1	11/26/19 05:21	11/26/19 15:19	87-86-5	
Phenanthrene	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 15:19	85-01-8	
Phenol	**<0.30**	ug/L	4.7	0.30	1	11/26/19 05:21	11/26/19 15:19	108-95-2	
Pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:19	129-00-0	
bis(2-Chloroethoxy)methane	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:19	111-91-1	
bis(2-Chloroethyl) ether	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:19	111-44-4	
bis(2-Ethylhexyl)phthalate	**<2.7**	ug/L	9.1	2.7	1	11/26/19 05:21	11/26/19 15:19	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	94	%	51-108		1	11/26/19 05:21	11/26/19 15:19	4165-60-0	
2-Fluorobiphenyl (S)	77	%	47-105		1	11/26/19 05:21	11/26/19 15:19	321-60-8	
Terphenyl-d14 (S)	104	%	65-147		1	11/26/19 05:21	11/26/19 15:19	1718-51-0	
Phenol-d6 (S)	26	%	18-120		1	11/26/19 05:21	11/26/19 15:19	13127-88-3	
2-Fluorophenol (S)	41	%	32-120		1	11/26/19 05:21	11/26/19 15:19	367-12-4	
2,4,6-Tribromophenol (S)	97	%	57-131		1	11/26/19 05:21	11/26/19 15:19	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 21:30	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/25/19 21:30	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 21:30	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/25/19 21:30	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 21:30	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 21:30	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/25/19 21:30	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/25/19 21:30	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/25/19 21:30	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/25/19 21:30	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/25/19 21:30	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/25/19 21:30	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/25/19 21:30	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 21:30	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 21:30	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 21:30	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/25/19 21:30	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/25/19 21:30	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/25/19 21:30	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/25/19 21:30	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/25/19 21:30	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/25/19 21:30	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/25/19 21:30	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/25/19 21:30	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 21:30	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/25/19 21:30	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/25/19 21:30	75-27-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-27 **Lab ID: 40199755002** Collected: 11/19/19 09:50 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/25/19 21:30	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/25/19 21:30	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 21:30	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 21:30	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/25/19 21:30	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/25/19 21:30	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/25/19 21:30	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/25/19 21:30	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/25/19 21:30	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/25/19 21:30	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/25/19 21:30	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/25/19 21:30	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 21:30	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/25/19 21:30	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/25/19 21:30	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/25/19 21:30	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 21:30	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/25/19 21:30	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/25/19 21:30	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/25/19 21:30	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 21:30	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/25/19 21:30	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 21:30	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/25/19 21:30	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/25/19 21:30	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/25/19 21:30	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 21:30	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/25/19 21:30	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 21:30	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/25/19 21:30	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/25/19 21:30	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/25/19 21:30	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/25/19 21:30	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/25/19 21:30	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		11/25/19 21:30	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		11/25/19 21:30	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 21:30	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**48.6**	mg/L	2.0	0.95	1		11/26/19 12:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: AMN-MW1 **Lab ID: 40199755003** Collected: 11/19/19 10:15 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:48	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:48	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:48	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:48	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:48	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:48	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:48	11096-82-5	
PCB, Total	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 22:48	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	92	%	43-112		1	11/27/19 08:24	12/02/19 22:48	877-09-8	
Decachlorobiphenyl (S)	85	%	10-103		1	11/27/19 08:24	12/02/19 22:48	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 14:55	7440-38-2	
Barium	**128**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 14:55	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 14:55	7440-43-9	
Chromium	**336**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 14:55	7440-47-3	
Lead	**8.7J**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 14:55	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 14:55	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 14:55	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:27	7440-38-2	
Barium, Dissolved	**90.7**	ug/L	5.0	1.5	1		12/02/19 18:27	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:27	7440-43-9	
Chromium, Dissolved	**311**	ug/L	10.0	2.5	1		12/02/19 18:27	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:27	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:27	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:27	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 08:55	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 10:03	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 15:40	120-82-1	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 15:40	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 15:40	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 15:40	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:40	108-60-1	
2,4,5-Trichlorophenol	**<0.61**	ug/L	4.7	0.61	1	11/26/19 05:21	11/26/19 15:40	95-95-4	
2,4,6-Trichlorophenol	**<0.75**	ug/L	4.7	0.75	1	11/26/19 05:21	11/26/19 15:40	88-06-2	
2,4-Dichlorophenol	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 15:40	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: AMN-MW1 **Lab ID: 40199755003** Collected: 11/19/19 10:15 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:40	105-67-9	
2,4-Dinitrophenol	**<2.3**	ug/L	7.7	2.3	1	11/26/19 05:21	11/26/19 15:40	51-28-5	
2,4-Dinitrotoluene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 15:40	121-14-2	
2,6-Dinitrotoluene	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 15:40	606-20-2	
2-Chloronaphthalene	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 15:40	91-58-7	
2-Chlorophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 15:40	95-57-8	
2-Methylnaphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:40	91-57-6	
2-Methylphenol(o-Cresol)	**<0.88**	ug/L	4.7	0.88	1	11/26/19 05:21	11/26/19 15:40	95-48-7	
2-Nitroaniline	**<0.89**	ug/L	4.7	0.89	1	11/26/19 05:21	11/26/19 15:40	88-74-4	
2-Nitrophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 15:40	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<0.58**	ug/L	4.7	0.58	1	11/26/19 05:21	11/26/19 15:40		
3,3'-Dichlorobenzidine	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 15:40	91-94-1	
3-Nitroaniline	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 15:40	99-09-2	
4,6-Dinitro-2-methylphenol	**<2.9**	ug/L	9.8	2.9	1	11/26/19 05:21	11/26/19 15:40	534-52-1	
4-Bromophenylphenyl ether	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 15:40	101-55-3	
4-Chloro-3-methylphenol	**<0.64**	ug/L	4.7	0.64	1	11/26/19 05:21	11/26/19 15:40	59-50-7	
4-Chloroaniline	**<1.7**	ug/L	5.6	1.7	1	11/26/19 05:21	11/26/19 15:40	106-47-8	
4-Chlorophenylphenyl ether	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 15:40	7005-72-3	
4-Nitroaniline	**<2.8**	ug/L	9.4	2.8	1	11/26/19 05:21	11/26/19 15:40	100-01-6	
4-Nitrophenol	**<2.9**	ug/L	9.6	2.9	1	11/26/19 05:21	11/26/19 15:40	100-02-7	
Acenaphthene	**<0.72**	ug/L	4.7	0.72	1	11/26/19 05:21	11/26/19 15:40	83-32-9	
Acenaphthylene	**<0.69**	ug/L	4.7	0.69	1	11/26/19 05:21	11/26/19 15:40	208-96-8	
Anthracene	**<0.76**	ug/L	4.7	0.76	1	11/26/19 05:21	11/26/19 15:40	120-12-7	
Benzo(a)anthracene	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 15:40	56-55-3	
Benzo(a)pyrene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:40	50-32-8	
Benzo(b)fluoranthene	**<0.98**	ug/L	4.7	0.98	1	11/26/19 05:21	11/26/19 15:40	205-99-2	
Benzo(g,h,i)perylene	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 15:40	191-24-2	
Benzo(k)fluoranthene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:40	207-08-9	
Butylbenzylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:40	85-68-7	
Carbazole	**<0.86**	ug/L	4.7	0.86	1	11/26/19 05:21	11/26/19 15:40	86-74-8	
Chrysene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:40	218-01-9	
Di-n-butylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:40	84-74-2	
Di-n-octylphthalate	**<4.5**	ug/L	15.0	4.5	1	11/26/19 05:21	11/26/19 15:40	117-84-0	
Dibenz(a,h)anthracene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 15:40	53-70-3	
Dibenzofuran	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 15:40	132-64-9	
Diethylphthalate	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 15:40	84-66-2	
Dimethylphthalate	**<0.68**	ug/L	4.7	0.68	1	11/26/19 05:21	11/26/19 15:40	131-11-3	
Fluoranthene	**<0.93**	ug/L	4.7	0.93	1	11/26/19 05:21	11/26/19 15:40	206-44-0	
Fluorene	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 15:40	86-73-7	
Hexachloro-1,3-butadiene	**<1.1**	ug/L	5.2	1.1	1	11/26/19 05:21	11/26/19 15:40	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	4.7	1.6	1	11/26/19 05:21	11/26/19 15:40	118-74-1	
Hexachlorocyclopentadiene	**<0.95**	ug/L	4.7	0.95	1	11/26/19 05:21	11/26/19 15:40	77-47-4	
Hexachloroethane	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 15:40	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:40	193-39-5	
Isophorone	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 15:40	78-59-1	
N-Nitroso-di-n-propylamine	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:40	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: AMN-MW1 **Lab ID: 40199755003** Collected: 11/19/19 10:15 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	10.8	3.3	1	11/26/19 05:21	11/26/19 15:40	86-30-6	
Naphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:40	91-20-3	
Nitrobenzene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 15:40	98-95-3	
Pentachlorophenol	**<4.3**	ug/L	14.3	4.3	1	11/26/19 05:21	11/26/19 15:40	87-86-5	
Phenanthrene	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 15:40	85-01-8	
Phenol	**<0.30**	ug/L	4.7	0.30	1	11/26/19 05:21	11/26/19 15:40	108-95-2	
Pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:40	129-00-0	
bis(2-Chloroethoxy)methane	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 15:40	111-91-1	
bis(2-Chloroethyl) ether	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 15:40	111-44-4	
bis(2-Ethylhexyl)phthalate	**<2.7**	ug/L	9.1	2.7	1	11/26/19 05:21	11/26/19 15:40	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	82	%	51-108		1	11/26/19 05:21	11/26/19 15:40	4165-60-0	
2-Fluorobiphenyl (S)	70	%	47-105		1	11/26/19 05:21	11/26/19 15:40	321-60-8	
Terphenyl-d14 (S)	102	%	65-147		1	11/26/19 05:21	11/26/19 15:40	1718-51-0	
Phenol-d6 (S)	25	%	18-120		1	11/26/19 05:21	11/26/19 15:40	13127-88-3	
2-Fluorophenol (S)	42	%	32-120		1	11/26/19 05:21	11/26/19 15:40	367-12-4	
2,4,6-Tribromophenol (S)	104	%	57-131		1	11/26/19 05:21	11/26/19 15:40	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 21:53	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/25/19 21:53	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 21:53	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/25/19 21:53	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 21:53	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 21:53	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/25/19 21:53	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/25/19 21:53	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/25/19 21:53	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/25/19 21:53	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/25/19 21:53	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/25/19 21:53	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/25/19 21:53	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 21:53	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 21:53	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 21:53	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/25/19 21:53	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/25/19 21:53	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/25/19 21:53	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/25/19 21:53	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/25/19 21:53	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/25/19 21:53	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/25/19 21:53	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/25/19 21:53	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 21:53	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/25/19 21:53	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/25/19 21:53	75-27-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: AMN-MW1 **Lab ID: 40199755003** Collected: 11/19/19 10:15 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/25/19 21:53	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/25/19 21:53	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 21:53	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 21:53	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/25/19 21:53	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/25/19 21:53	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/25/19 21:53	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/25/19 21:53	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/25/19 21:53	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/25/19 21:53	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/25/19 21:53	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/25/19 21:53	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 21:53	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/25/19 21:53	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/25/19 21:53	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/25/19 21:53	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 21:53	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/25/19 21:53	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/25/19 21:53	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/25/19 21:53	108-88-3	
Trichloroethene	**1.7**	ug/L	1.0	0.26	1		11/25/19 21:53	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/25/19 21:53	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 21:53	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/25/19 21:53	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/25/19 21:53	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/25/19 21:53	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 21:53	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/25/19 21:53	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 21:53	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/25/19 21:53	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/25/19 21:53	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/25/19 21:53	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/25/19 21:53	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/25/19 21:53	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		11/25/19 21:53	460-00-4	HS
Dibromofluoromethane (S)	104	%	70-130		1		11/25/19 21:53	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 21:53	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**285**	mg/L	4.0	1.9	1		11/26/19 12:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-1 **Lab ID: 40199755004** Collected: 11/19/19 12:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 23:06	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 23:06	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 23:06	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 23:06	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 23:06	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 23:06	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 23:06	11096-82-5	
PCB, Total	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/02/19 23:06	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	82	%	43-112		1	11/27/19 08:24	12/02/19 23:06	877-09-8	
Decachlorobiphenyl (S)	78	%	10-103		1	11/27/19 08:24	12/02/19 23:06	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 14:58	7440-38-2	
Barium	**101**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 14:58	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 14:58	7440-43-9	
Chromium	**4.4J**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 14:58	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 14:58	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 14:58	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 14:58	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:30	7440-38-2	
Barium, Dissolved	**95.0**	ug/L	5.0	1.5	1		12/02/19 18:30	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:30	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		12/02/19 18:30	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:30	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:30	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:30	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 09:02	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 10:05	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 16:02	120-82-1	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 16:02	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 16:02	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 16:02	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:02	108-60-1	
2,4,5-Trichlorophenol	**<0.61**	ug/L	4.7	0.61	1	11/26/19 05:21	11/26/19 16:02	95-95-4	
2,4,6-Trichlorophenol	**<0.75**	ug/L	4.7	0.75	1	11/26/19 05:21	11/26/19 16:02	88-06-2	
2,4-Dichlorophenol	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 16:02	120-83-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-1 **Lab ID: 40199755004** Collected: 11/19/19 12:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:02	105-67-9	
2,4-Dinitrophenol	**<2.3**	ug/L	7.7	2.3	1	11/26/19 05:21	11/26/19 16:02	51-28-5	
2,4-Dinitrotoluene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 16:02	121-14-2	
2,6-Dinitrotoluene	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 16:02	606-20-2	
2-Chloronaphthalene	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 16:02	91-58-7	
2-Chlorophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 16:02	95-57-8	
2-Methylnaphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:02	91-57-6	
2-Methylphenol(o-Cresol)	**<0.88**	ug/L	4.7	0.88	1	11/26/19 05:21	11/26/19 16:02	95-48-7	
2-Nitroaniline	**<0.89**	ug/L	4.7	0.89	1	11/26/19 05:21	11/26/19 16:02	88-74-4	
2-Nitrophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 16:02	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<0.58**	ug/L	4.7	0.58	1	11/26/19 05:21	11/26/19 16:02		
3,3'-Dichlorobenzidine	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 16:02	91-94-1	
3-Nitroaniline	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 16:02	99-09-2	
4,6-Dinitro-2-methylphenol	**<2.9**	ug/L	9.8	2.9	1	11/26/19 05:21	11/26/19 16:02	534-52-1	
4-Bromophenylphenyl ether	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 16:02	101-55-3	
4-Chloro-3-methylphenol	**<0.64**	ug/L	4.7	0.64	1	11/26/19 05:21	11/26/19 16:02	59-50-7	
4-Chloroaniline	**<1.7**	ug/L	5.6	1.7	1	11/26/19 05:21	11/26/19 16:02	106-47-8	
4-Chlorophenylphenyl ether	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 16:02	7005-72-3	
4-Nitroaniline	**<2.8**	ug/L	9.4	2.8	1	11/26/19 05:21	11/26/19 16:02	100-01-6	
4-Nitrophenol	**<2.9**	ug/L	9.6	2.9	1	11/26/19 05:21	11/26/19 16:02	100-02-7	
Acenaphthene	**<0.72**	ug/L	4.7	0.72	1	11/26/19 05:21	11/26/19 16:02	83-32-9	
Acenaphthylene	**<0.69**	ug/L	4.7	0.69	1	11/26/19 05:21	11/26/19 16:02	208-96-8	
Anthracene	**<0.76**	ug/L	4.7	0.76	1	11/26/19 05:21	11/26/19 16:02	120-12-7	
Benzo(a)anthracene	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 16:02	56-55-3	
Benzo(a)pyrene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:02	50-32-8	
Benzo(b)fluoranthene	**<0.98**	ug/L	4.7	0.98	1	11/26/19 05:21	11/26/19 16:02	205-99-2	
Benzo(g,h,i)perylene	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 16:02	191-24-2	
Benzo(k)fluoranthene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:02	207-08-9	
Butylbenzylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:02	85-68-7	
Carbazole	**<0.86**	ug/L	4.7	0.86	1	11/26/19 05:21	11/26/19 16:02	86-74-8	
Chrysene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:02	218-01-9	
Di-n-butylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:02	84-74-2	
Di-n-octylphthalate	**<4.5**	ug/L	15.0	4.5	1	11/26/19 05:21	11/26/19 16:02	117-84-0	
Dibenz(a,h)anthracene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 16:02	53-70-3	
Dibenzofuran	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 16:02	132-64-9	
Diethylphthalate	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 16:02	84-66-2	
Dimethylphthalate	**<0.68**	ug/L	4.7	0.68	1	11/26/19 05:21	11/26/19 16:02	131-11-3	
Fluoranthene	**<0.93**	ug/L	4.7	0.93	1	11/26/19 05:21	11/26/19 16:02	206-44-0	
Fluorene	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 16:02	86-73-7	
Hexachloro-1,3-butadiene	**<1.1**	ug/L	5.2	1.1	1	11/26/19 05:21	11/26/19 16:02	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	4.7	1.6	1	11/26/19 05:21	11/26/19 16:02	118-74-1	
Hexachlorocyclopentadiene	**<0.95**	ug/L	4.7	0.95	1	11/26/19 05:21	11/26/19 16:02	77-47-4	
Hexachloroethane	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 16:02	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:02	193-39-5	
Isophorone	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 16:02	78-59-1	
N-Nitroso-di-n-propylamine	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:02	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-1 **Lab ID: 40199755004** Collected: 11/19/19 12:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	10.8	3.3	1	11/26/19 05:21	11/26/19 16:02	86-30-6	
Naphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:02	91-20-3	
Nitrobenzene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 16:02	98-95-3	
Pentachlorophenol	**<4.3**	ug/L	14.3	4.3	1	11/26/19 05:21	11/26/19 16:02	87-86-5	
Phenanthrene	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 16:02	85-01-8	
Phenol	**<0.30**	ug/L	4.7	0.30	1	11/26/19 05:21	11/26/19 16:02	108-95-2	
Pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:02	129-00-0	
bis(2-Chloroethoxy)methane	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:02	111-91-1	
bis(2-Chloroethyl) ether	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:02	111-44-4	
bis(2-Ethylhexyl)phthalate	**<2.7**	ug/L	9.1	2.7	1	11/26/19 05:21	11/26/19 16:02	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	61	%	51-108		1	11/26/19 05:21	11/26/19 16:02	4165-60-0	
2-Fluorobiphenyl (S)	57	%	47-105		1	11/26/19 05:21	11/26/19 16:02	321-60-8	
Terphenyl-d14 (S)	109	%	65-147		1	11/26/19 05:21	11/26/19 16:02	1718-51-0	
Phenol-d6 (S)	22	%	18-120		1	11/26/19 05:21	11/26/19 16:02	13127-88-3	
2-Fluorophenol (S)	34	%	32-120		1	11/26/19 05:21	11/26/19 16:02	367-12-4	
2,4,6-Tribromophenol (S)	116	%	57-131		1	11/26/19 05:21	11/26/19 16:02	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 22:15	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/25/19 22:15	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 22:15	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/25/19 22:15	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 22:15	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 22:15	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/25/19 22:15	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/25/19 22:15	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/25/19 22:15	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/25/19 22:15	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/25/19 22:15	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/25/19 22:15	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/25/19 22:15	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 22:15	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 22:15	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 22:15	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/25/19 22:15	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/25/19 22:15	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/25/19 22:15	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/25/19 22:15	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/25/19 22:15	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/25/19 22:15	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/25/19 22:15	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/25/19 22:15	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 22:15	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/25/19 22:15	74-97-5	
Bromodichloromethane	**0.56J**	ug/L	1.2	0.36	1		11/25/19 22:15	75-27-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-1 **Lab ID: 40199755004** Collected: 11/19/19 12:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/25/19 22:15	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/25/19 22:15	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 22:15	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 22:15	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/25/19 22:15	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/25/19 22:15	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/25/19 22:15	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/25/19 22:15	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/25/19 22:15	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/25/19 22:15	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/25/19 22:15	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/25/19 22:15	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 22:15	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/25/19 22:15	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/25/19 22:15	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/25/19 22:15	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 22:15	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/25/19 22:15	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/25/19 22:15	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/25/19 22:15	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 22:15	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/25/19 22:15	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 22:15	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/25/19 22:15	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/25/19 22:15	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/25/19 22:15	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 22:15	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/25/19 22:15	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 22:15	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/25/19 22:15	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/25/19 22:15	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/25/19 22:15	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/25/19 22:15	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/25/19 22:15	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/25/19 22:15	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		11/25/19 22:15	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 22:15	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**230**	mg/L	3.1	1.5	1		11/26/19 12:16		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-2 **Lab ID: 40199755005** Collected: 11/19/19 12:25 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 23:24	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 23:24	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 23:24	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 23:24	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 23:24	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 23:24	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 23:24	11096-82-5	
PCB, Total	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/02/19 23:24	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	91	%	43-112		1	11/27/19 08:24	12/02/19 23:24	877-09-8	
Decachlorobiphenyl (S)	79	%	10-103		1	11/27/19 08:24	12/02/19 23:24	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 15:00	7440-38-2	
Barium	**62.8**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 15:00	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 15:00	7440-43-9	
Chromium	**5.9J**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 15:00	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 15:00	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 15:00	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 15:00	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:32	7440-38-2	
Barium, Dissolved	**57.4**	ug/L	5.0	1.5	1		12/02/19 18:32	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:32	7440-43-9	
Chromium, Dissolved	**3.7J**	ug/L	10.0	2.5	1		12/02/19 18:32	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:32	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:32	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:32	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 09:05	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 10:07	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 17:05	120-82-1	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 17:05	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 17:05	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 17:05	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:05	108-60-1	
2,4,5-Trichlorophenol	**<0.61**	ug/L	4.7	0.61	1	11/26/19 05:21	11/26/19 17:05	95-95-4	
2,4,6-Trichlorophenol	**<0.75**	ug/L	4.7	0.75	1	11/26/19 05:21	11/26/19 17:05	88-06-2	
2,4-Dichlorophenol	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 17:05	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-2 **Lab ID: 40199755005** Collected: 11/19/19 12:25 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:05	105-67-9	
2,4-Dinitrophenol	**<2.3**	ug/L	7.7	2.3	1	11/26/19 05:21	11/26/19 17:05	51-28-5	
2,4-Dinitrotoluene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 17:05	121-14-2	
2,6-Dinitrotoluene	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 17:05	606-20-2	
2-Chloronaphthalene	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 17:05	91-58-7	
2-Chlorophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 17:05	95-57-8	
2-Methylnaphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:05	91-57-6	
2-Methylphenol(o-Cresol)	**<0.88**	ug/L	4.7	0.88	1	11/26/19 05:21	11/26/19 17:05	95-48-7	
2-Nitroaniline	**<0.89**	ug/L	4.7	0.89	1	11/26/19 05:21	11/26/19 17:05	88-74-4	
2-Nitrophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 17:05	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<0.58**	ug/L	4.7	0.58	1	11/26/19 05:21	11/26/19 17:05		
3,3'-Dichlorobenzidine	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 17:05	91-94-1	
3-Nitroaniline	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 17:05	99-09-2	
4,6-Dinitro-2-methylphenol	**<2.9**	ug/L	9.8	2.9	1	11/26/19 05:21	11/26/19 17:05	534-52-1	
4-Bromophenylphenyl ether	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 17:05	101-55-3	
4-Chloro-3-methylphenol	**<0.64**	ug/L	4.7	0.64	1	11/26/19 05:21	11/26/19 17:05	59-50-7	
4-Chloroaniline	**<1.7**	ug/L	5.6	1.7	1	11/26/19 05:21	11/26/19 17:05	106-47-8	
4-Chlorophenylphenyl ether	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 17:05	7005-72-3	
4-Nitroaniline	**<2.8**	ug/L	9.4	2.8	1	11/26/19 05:21	11/26/19 17:05	100-01-6	
4-Nitrophenol	**<2.9**	ug/L	9.6	2.9	1	11/26/19 05:21	11/26/19 17:05	100-02-7	
Acenaphthene	**<0.72**	ug/L	4.7	0.72	1	11/26/19 05:21	11/26/19 17:05	83-32-9	
Acenaphthylene	**<0.69**	ug/L	4.7	0.69	1	11/26/19 05:21	11/26/19 17:05	208-96-8	
Anthracene	**<0.76**	ug/L	4.7	0.76	1	11/26/19 05:21	11/26/19 17:05	120-12-7	
Benzo(a)anthracene	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 17:05	56-55-3	
Benzo(a)pyrene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:05	50-32-8	
Benzo(b)fluoranthene	**<0.98**	ug/L	4.7	0.98	1	11/26/19 05:21	11/26/19 17:05	205-99-2	
Benzo(g,h,i)perylene	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 17:05	191-24-2	
Benzo(k)fluoranthene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:05	207-08-9	
Butylbenzylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:05	85-68-7	
Carbazole	**<0.86**	ug/L	4.7	0.86	1	11/26/19 05:21	11/26/19 17:05	86-74-8	
Chrysene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:05	218-01-9	
Di-n-butylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:05	84-74-2	
Di-n-octylphthalate	**<4.5**	ug/L	15.0	4.5	1	11/26/19 05:21	11/26/19 17:05	117-84-0	
Dibenz(a,h)anthracene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 17:05	53-70-3	
Dibenzofuran	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 17:05	132-64-9	
Diethylphthalate	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 17:05	84-66-2	
Dimethylphthalate	**<0.68**	ug/L	4.7	0.68	1	11/26/19 05:21	11/26/19 17:05	131-11-3	
Fluoranthene	**<0.93**	ug/L	4.7	0.93	1	11/26/19 05:21	11/26/19 17:05	206-44-0	
Fluorene	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 17:05	86-73-7	
Hexachloro-1,3-butadiene	**<1.1**	ug/L	5.2	1.1	1	11/26/19 05:21	11/26/19 17:05	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	4.7	1.6	1	11/26/19 05:21	11/26/19 17:05	118-74-1	
Hexachlorocyclopentadiene	**<0.95**	ug/L	4.7	0.95	1	11/26/19 05:21	11/26/19 17:05	77-47-4	
Hexachloroethane	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 17:05	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:05	193-39-5	
Isophorone	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 17:05	78-59-1	
N-Nitroso-di-n-propylamine	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:05	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-2 **Lab ID: 40199755005** Collected: 11/19/19 12:25 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	10.8	3.3	1	11/26/19 05:21	11/26/19 17:05	86-30-6	
Naphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:05	91-20-3	
Nitrobenzene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 17:05	98-95-3	
Pentachlorophenol	**<4.3**	ug/L	14.3	4.3	1	11/26/19 05:21	11/26/19 17:05	87-86-5	
Phenanthrene	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 17:05	85-01-8	
Phenol	**<0.30**	ug/L	4.7	0.30	1	11/26/19 05:21	11/26/19 17:05	108-95-2	
Pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:05	129-00-0	
bis(2-Chloroethoxy)methane	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:05	111-91-1	
bis(2-Chloroethyl) ether	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:05	111-44-4	
bis(2-Ethylhexyl)phthalate	**<2.7**	ug/L	9.1	2.7	1	11/26/19 05:21	11/26/19 17:05	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	88	%	51-108		1	11/26/19 05:21	11/26/19 17:05	4165-60-0	
2-Fluorobiphenyl (S)	75	%	47-105		1	11/26/19 05:21	11/26/19 17:05	321-60-8	
Terphenyl-d14 (S)	109	%	65-147		1	11/26/19 05:21	11/26/19 17:05	1718-51-0	
Phenol-d6 (S)	28	%	18-120		1	11/26/19 05:21	11/26/19 17:05	13127-88-3	
2-Fluorophenol (S)	46	%	32-120		1	11/26/19 05:21	11/26/19 17:05	367-12-4	
2,4,6-Tribromophenol (S)	119	%	57-131		1	11/26/19 05:21	11/26/19 17:05	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 20:45	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/25/19 20:45	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 20:45	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/25/19 20:45	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 20:45	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 20:45	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/25/19 20:45	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/25/19 20:45	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/25/19 20:45	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/25/19 20:45	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/25/19 20:45	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/25/19 20:45	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/25/19 20:45	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 20:45	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 20:45	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 20:45	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/25/19 20:45	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/25/19 20:45	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/25/19 20:45	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/25/19 20:45	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/25/19 20:45	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/25/19 20:45	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/25/19 20:45	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/25/19 20:45	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 20:45	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/25/19 20:45	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/25/19 20:45	75-27-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-2 **Lab ID: 40199755005** Collected: 11/19/19 12:25 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/25/19 20:45	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/25/19 20:45	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 20:45	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 20:45	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/25/19 20:45	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/25/19 20:45	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/25/19 20:45	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/25/19 20:45	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/25/19 20:45	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/25/19 20:45	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/25/19 20:45	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/25/19 20:45	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 20:45	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/25/19 20:45	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/25/19 20:45	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/25/19 20:45	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 20:45	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/25/19 20:45	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/25/19 20:45	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/25/19 20:45	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 20:45	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/25/19 20:45	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 20:45	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/25/19 20:45	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/25/19 20:45	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/25/19 20:45	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 20:45	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/25/19 20:45	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 20:45	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/25/19 20:45	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/25/19 20:45	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/25/19 20:45	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/25/19 20:45	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/25/19 20:45	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		11/25/19 20:45	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		11/25/19 20:45	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 20:45	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**62.4**	mg/L	2.0	0.95	1		11/26/19 12:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-3 **Lab ID: 40199755006** Collected: 11/19/19 15:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<1.6**	ug/L	7.1	1.6	15	11/27/19 08:24	12/02/19 23:42	12674-11-2	
PCB-1221 (Aroclor 1221)	**<1.6**	ug/L	7.1	1.6	15	11/27/19 08:24	12/02/19 23:42	11104-28-2	
PCB-1232 (Aroclor 1232)	**<1.6**	ug/L	7.1	1.6	15	11/27/19 08:24	12/02/19 23:42	11141-16-5	
PCB-1242 (Aroclor 1242)	**<1.6**	ug/L	7.1	1.6	15	11/27/19 08:24	12/02/19 23:42	53469-21-9	
PCB-1248 (Aroclor 1248)	**75.5**	ug/L	7.1	1.6	15	11/27/19 08:24	12/02/19 23:42	12672-29-6	
PCB-1254 (Aroclor 1254)	**<1.6**	ug/L	7.1	1.6	15	11/27/19 08:24	12/02/19 23:42	11097-69-1	
PCB-1260 (Aroclor 1260)	**4.4J**	ug/L	7.1	1.6	15	11/27/19 08:24	12/02/19 23:42	11096-82-5	
PCB, Total	**79.8**	ug/L	7.1	1.6	15	11/27/19 08:24	12/02/19 23:42	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	0	%	43-112		15	11/27/19 08:24	12/02/19 23:42	877-09-8	S4
Decachlorobiphenyl (S)	0	%	10-103		15	11/27/19 08:24	12/02/19 23:42	2051-24-3	S4
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**18.3J**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 15:03	7440-38-2	
Barium	**68.8**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 15:03	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 15:03	7440-43-9	
Chromium	**<2.5**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 15:03	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 15:03	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 15:03	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 15:03	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:35	7440-38-2	
Barium, Dissolved	**46.6**	ug/L	5.0	1.5	1		12/02/19 18:35	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:35	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		12/02/19 18:35	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:35	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:35	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:35	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 09:07	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 10:10	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<148**	ug/L	493	148	50	11/26/19 05:21	11/26/19 18:31	120-82-1	
1,2-Dichlorobenzene	**<136**	ug/L	472	136	50	11/26/19 05:21	11/26/19 18:31	95-50-1	
1,3-Dichlorobenzene	**<146**	ug/L	486	146	50	11/26/19 05:21	11/26/19 18:31	541-73-1	
1,4-Dichlorobenzene	**<136**	ug/L	472	136	50	11/26/19 05:21	11/26/19 18:31	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<116**	ug/L	472	116	50	11/26/19 05:21	11/26/19 18:31	108-60-1	
2,4,5-Trichlorophenol	**<60.8**	ug/L	472	60.8	50	11/26/19 05:21	11/26/19 18:31	95-95-4	
2,4,6-Trichlorophenol	**<75.2**	ug/L	472	75.2	50	11/26/19 05:21	11/26/19 18:31	88-06-2	
2,4-Dichlorophenol	**<84.6**	ug/L	472	84.6	50	11/26/19 05:21	11/26/19 18:31	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-3 **Lab ID: 40199755006** Collected: 11/19/19 15:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<109**	ug/L	472	109	50	11/26/19 05:21	11/26/19 18:31	105-67-9	
2,4-Dinitrophenol	**<231**	ug/L	771	231	50	11/26/19 05:21	11/26/19 18:31	51-28-5	
2,4-Dinitrotoluene	**<100**	ug/L	472	100	50	11/26/19 05:21	11/26/19 18:31	121-14-2	
2,6-Dinitrotoluene	**<72.9**	ug/L	472	72.9	50	11/26/19 05:21	11/26/19 18:31	606-20-2	
2-Chloronaphthalene	**<78.2**	ug/L	472	78.2	50	11/26/19 05:21	11/26/19 18:31	91-58-7	
2-Chlorophenol	**<78.1**	ug/L	472	78.1	50	11/26/19 05:21	11/26/19 18:31	95-57-8	
2-Methylnaphthalene	**2580**	ug/L	472	110	50	11/26/19 05:21	11/26/19 18:31	91-57-6	
2-Methylphenol(o-Cresol)	**<87.8**	ug/L	472	87.8	50	11/26/19 05:21	11/26/19 18:31	95-48-7	
2-Nitroaniline	**<89.4**	ug/L	472	89.4	50	11/26/19 05:21	11/26/19 18:31	88-74-4	
2-Nitrophenol	**<77.9**	ug/L	472	77.9	50	11/26/19 05:21	11/26/19 18:31	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<57.8**	ug/L	472	57.8	50	11/26/19 05:21	11/26/19 18:31		
3,3'-Dichlorobenzidine	**<127**	ug/L	472	127	50	11/26/19 05:21	11/26/19 18:31	91-94-1	
3-Nitroaniline	**<129**	ug/L	472	129	50	11/26/19 05:21	11/26/19 18:31	99-09-2	
4,6-Dinitro-2-methylphenol	**<294**	ug/L	981	294	50	11/26/19 05:21	11/26/19 18:31	534-52-1	
4-Bromophenylphenyl ether	**<90.2**	ug/L	472	90.2	50	11/26/19 05:21	11/26/19 18:31	101-55-3	
4-Chloro-3-methylphenol	**<64.4**	ug/L	472	64.4	50	11/26/19 05:21	11/26/19 18:31	59-50-7	
4-Chloroaniline	**<169**	ug/L	562	169	50	11/26/19 05:21	11/26/19 18:31	106-47-8	
4-Chlorophenylphenyl ether	**<78.2**	ug/L	472	78.2	50	11/26/19 05:21	11/26/19 18:31	7005-72-3	
4-Nitroaniline	**<283**	ug/L	942	283	50	11/26/19 05:21	11/26/19 18:31	100-01-6	
4-Nitrophenol	**<288**	ug/L	962	288	50	11/26/19 05:21	11/26/19 18:31	100-02-7	
Acenaphthene	**313J**	ug/L	472	72.0	50	11/26/19 05:21	11/26/19 18:31	83-32-9	
Acenaphthylene	**89.3J**	ug/L	472	68.8	50	11/26/19 05:21	11/26/19 18:31	208-96-8	
Anthracene	**<76.4**	ug/L	472	76.4	50	11/26/19 05:21	11/26/19 18:31	120-12-7	
Benzo(a)anthracene	**<79.9**	ug/L	472	79.9	50	11/26/19 05:21	11/26/19 18:31	56-55-3	
Benzo(a)pyrene	**<120**	ug/L	472	120	50	11/26/19 05:21	11/26/19 18:31	50-32-8	
Benzo(b)fluoranthene	**<97.7**	ug/L	472	97.7	50	11/26/19 05:21	11/26/19 18:31	205-99-2	
Benzo(g,h,i)perylene	**<130**	ug/L	472	130	50	11/26/19 05:21	11/26/19 18:31	191-24-2	
Benzo(k)fluoranthene	**<106**	ug/L	472	106	50	11/26/19 05:21	11/26/19 18:31	207-08-9	
Butylbenzylphthalate	**<122**	ug/L	472	122	50	11/26/19 05:21	11/26/19 18:31	85-68-7	
Carbazole	**<86.2**	ug/L	472	86.2	50	11/26/19 05:21	11/26/19 18:31	86-74-8	
Chrysene	**<120**	ug/L	472	120	50	11/26/19 05:21	11/26/19 18:31	218-01-9	
Di-n-butylphthalate	**<116**	ug/L	472	116	50	11/26/19 05:21	11/26/19 18:31	84-74-2	
Di-n-octylphthalate	**<450**	ug/L	1500	450	50	11/26/19 05:21	11/26/19 18:31	117-84-0	
Dibenz(a,h)anthracene	**<104**	ug/L	472	104	50	11/26/19 05:21	11/26/19 18:31	53-70-3	
Dibenzofuran	**204J**	ug/L	472	80.0	50	11/26/19 05:21	11/26/19 18:31	132-64-9	
Diethylphthalate	**<73.2**	ug/L	472	73.2	50	11/26/19 05:21	11/26/19 18:31	84-66-2	
Dimethylphthalate	**<67.9**	ug/L	472	67.9	50	11/26/19 05:21	11/26/19 18:31	131-11-3	
Fluoranthene	**<93.2**	ug/L	472	93.2	50	11/26/19 05:21	11/26/19 18:31	206-44-0	
Fluorene	**418J**	ug/L	472	85.4	50	11/26/19 05:21	11/26/19 18:31	86-73-7	
Hexachloro-1,3-butadiene	**<108**	ug/L	520	108	50	11/26/19 05:21	11/26/19 18:31	87-68-3	
Hexachlorobenzene	**<156**	ug/L	472	156	50	11/26/19 05:21	11/26/19 18:31	118-74-1	
Hexachlorocyclopentadiene	**<95.1**	ug/L	472	95.1	50	11/26/19 05:21	11/26/19 18:31	77-47-4	
Hexachloroethane	**<134**	ug/L	472	134	50	11/26/19 05:21	11/26/19 18:31	67-72-1	
Indeno(1,2,3-cd)pyrene	**<115**	ug/L	472	115	50	11/26/19 05:21	11/26/19 18:31	193-39-5	
Isophorone	**<73.1**	ug/L	472	73.1	50	11/26/19 05:21	11/26/19 18:31	78-59-1	
N-Nitroso-di-n-propylamine	**<107**	ug/L	472	107	50	11/26/19 05:21	11/26/19 18:31	621-64-7	

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-3 **Lab ID: 40199755006** Collected: 11/19/19 15:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<325**	ug/L	1080	325	50	11/26/19 05:21	11/26/19 18:31	86-30-6	
Naphthalene	**951**	ug/L	472	115	50	11/26/19 05:21	11/26/19 18:31	91-20-3	
Nitrobenzene	**<101**	ug/L	472	101	50	11/26/19 05:21	11/26/19 18:31	98-95-3	
Pentachlorophenol	**<430**	ug/L	1430	430	50	11/26/19 05:21	11/26/19 18:31	87-86-5	
Phenanthrene	**373J**	ug/L	472	89.9	50	11/26/19 05:21	11/26/19 18:31	85-01-8	
Phenol	**<30.3**	ug/L	472	30.3	50	11/26/19 05:21	11/26/19 18:31	108-95-2	
Pyrene	**<113**	ug/L	472	113	50	11/26/19 05:21	11/26/19 18:31	129-00-0	
bis(2-Chloroethoxy)methane	**<123**	ug/L	472	123	50	11/26/19 05:21	11/26/19 18:31	111-91-1	
bis(2-Chloroethyl) ether	**<110**	ug/L	472	110	50	11/26/19 05:21	11/26/19 18:31	111-44-4	
bis(2-Ethylhexyl)phthalate	**<272**	ug/L	906	272	50	11/26/19 05:21	11/26/19 18:31	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	220	%	51-108		50	11/26/19 05:21	11/26/19 18:31	4165-60-0	S4
2-Fluorobiphenyl (S)	110	%	47-105		50	11/26/19 05:21	11/26/19 18:31	321-60-8	S4
Terphenyl-d14 (S)	0	%	65-147		50	11/26/19 05:21	11/26/19 18:31	1718-51-0	S4
Phenol-d6 (S)	0	%	18-120		50	11/26/19 05:21	11/26/19 18:31	13127-88-3	S4
2-Fluorophenol (S)	0	%	32-120		50	11/26/19 05:21	11/26/19 18:31	367-12-4	S4
2,4,6-Tribromophenol (S)	0	%	57-131		50	11/26/19 05:21	11/26/19 18:31	118-79-6	S4
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.54**	ug/L	2.0	0.54	2		11/26/19 02:22	630-20-6	
1,1,1-Trichloroethane	**<0.49**	ug/L	2.0	0.49	2		11/26/19 02:22	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.55**	ug/L	2.0	0.55	2		11/26/19 02:22	79-34-5	
1,1,2-Trichloroethane	**<1.1**	ug/L	10.0	1.1	2		11/26/19 02:22	79-00-5	
1,1-Dichloroethane	**<0.55**	ug/L	2.0	0.55	2		11/26/19 02:22	75-34-3	
1,1-Dichloroethene	**<0.49**	ug/L	2.0	0.49	2		11/26/19 02:22	75-35-4	
1,1-Dichloropropene	**<1.1**	ug/L	3.6	1.1	2		11/26/19 02:22	563-58-6	
1,2,3-Trichlorobenzene	**<1.3**	ug/L	10.0	1.3	2		11/26/19 02:22	87-61-6	
1,2,3-Trichloropropane	**<1.2**	ug/L	10.0	1.2	2		11/26/19 02:22	96-18-4	
1,2,4-Trichlorobenzene	**<1.9**	ug/L	10.0	1.9	2		11/26/19 02:22	120-82-1	
1,2,4-Trimethylbenzene	**97.3**	ug/L	5.6	1.7	2		11/26/19 02:22	95-63-6	
1,2-Dibromo-3-chloropropane	**<3.5**	ug/L	11.8	3.5	2		11/26/19 02:22	96-12-8	
1,2-Dibromoethane (EDB)	**<1.7**	ug/L	5.5	1.7	2		11/26/19 02:22	106-93-4	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	2		11/26/19 02:22	95-50-1	
1,2-Dichloroethane	**<0.56**	ug/L	2.0	0.56	2		11/26/19 02:22	107-06-2	
1,2-Dichloropropane	**<0.57**	ug/L	2.0	0.57	2		11/26/19 02:22	78-87-5	
1,3,5-Trimethylbenzene	**<1.7**	ug/L	5.8	1.7	2		11/26/19 02:22	108-67-8	
1,3-Dichlorobenzene	**<1.3**	ug/L	4.2	1.3	2		11/26/19 02:22	541-73-1	
1,3-Dichloropropane	**<1.7**	ug/L	5.5	1.7	2		11/26/19 02:22	142-28-9	
1,4-Dichlorobenzene	**<1.9**	ug/L	6.3	1.9	2		11/26/19 02:22	106-46-7	
2,2-Dichloropropane	**<4.5**	ug/L	15.1	4.5	2		11/26/19 02:22	594-20-7	
2-Chlorotoluene	**<1.9**	ug/L	10.0	1.9	2		11/26/19 02:22	95-49-8	
4-Chlorotoluene	**<1.5**	ug/L	5.0	1.5	2		11/26/19 02:22	106-43-4	
Benzene	**0.72J**	ug/L	2.0	0.49	2		11/26/19 02:22	71-43-2	
Bromobenzene	**<0.48**	ug/L	2.0	0.48	2		11/26/19 02:22	108-86-1	
Bromochloromethane	**<0.72**	ug/L	10.0	0.72	2		11/26/19 02:22	74-97-5	
Bromodichloromethane	**<0.73**	ug/L	2.4	0.73	2		11/26/19 02:22	75-27-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-3 **Lab ID: 40199755006** Collected: 11/19/19 15:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<7.9**	ug/L	26.5	7.9	2		11/26/19 02:22	75-25-2	
Bromomethane	**<1.9**	ug/L	10.0	1.9	2		11/26/19 02:22	74-83-9	
Carbon tetrachloride	**<0.33**	ug/L	2.0	0.33	2		11/26/19 02:22	56-23-5	
Chlorobenzene	**<1.4**	ug/L	4.7	1.4	2		11/26/19 02:22	108-90-7	
Chloroethane	**<2.7**	ug/L	10.0	2.7	2		11/26/19 02:22	75-00-3	
Chloroform	**<2.5**	ug/L	10.0	2.5	2		11/26/19 02:22	67-66-3	
Chloromethane	**<4.4**	ug/L	14.6	4.4	2		11/26/19 02:22	74-87-3	
Dibromochloromethane	**<5.2**	ug/L	17.3	5.2	2		11/26/19 02:22	124-48-1	
Dibromomethane	**<1.9**	ug/L	6.2	1.9	2		11/26/19 02:22	74-95-3	
Dichlorodifluoromethane	**<1.0**	ug/L	10.0	1.0	2		11/26/19 02:22	75-71-8	
Diisopropyl ether	**<3.8**	ug/L	12.6	3.8	2		11/26/19 02:22	108-20-3	
Ethylbenzene	**31.1**	ug/L	2.0	0.44	2		11/26/19 02:22	100-41-4	
Hexachloro-1,3-butadiene	**<2.4**	ug/L	10.0	2.4	2		11/26/19 02:22	87-68-3	
Isopropylbenzene (Cumene)	**6.0J**	ug/L	10.0	0.79	2		11/26/19 02:22	98-82-8	
Methyl-tert-butyl ether	**<2.5**	ug/L	8.3	2.5	2		11/26/19 02:22	1634-04-4	
Methylene Chloride	**<1.2**	ug/L	10.0	1.2	2		11/26/19 02:22	75-09-2	
Naphthalene	**240**	ug/L	10.0	2.4	2		11/26/19 02:22	91-20-3	
Styrene	**<0.93**	ug/L	3.1	0.93	2		11/26/19 02:22	100-42-5	
Tetrachloroethene	**<0.65**	ug/L	2.2	0.65	2		11/26/19 02:22	127-18-4	
Toluene	**<0.34**	ug/L	10.0	0.34	2		11/26/19 02:22	108-88-3	
Trichloroethene	**<0.51**	ug/L	2.0	0.51	2		11/26/19 02:22	79-01-6	
Trichlorofluoromethane	**<0.43**	ug/L	2.0	0.43	2		11/26/19 02:22	75-69-4	
Vinyl chloride	**<0.35**	ug/L	2.0	0.35	2		11/26/19 02:22	75-01-4	
cis-1,2-Dichloroethene	**<0.54**	ug/L	2.0	0.54	2		11/26/19 02:22	156-59-2	
cis-1,3-Dichloropropene	**<7.3**	ug/L	24.2	7.3	2		11/26/19 02:22	10061-01-5	
m&p-Xylene	**15.7**	ug/L	4.0	0.93	2		11/26/19 02:22	179601-23-1	
n-Butylbenzene	**3.4J**	ug/L	4.7	1.4	2		11/26/19 02:22	104-51-8	
n-Propylbenzene	**10.2**	ug/L	10.0	1.6	2		11/26/19 02:22	103-65-1	
o-Xylene	**3.6**	ug/L	2.0	0.52	2		11/26/19 02:22	95-47-6	
p-Isopropyltoluene	**2.0J**	ug/L	5.3	1.6	2		11/26/19 02:22	99-87-6	
sec-Butylbenzene	**2.1J**	ug/L	10.0	1.7	2		11/26/19 02:22	135-98-8	
tert-Butylbenzene	**<0.61**	ug/L	2.0	0.61	2		11/26/19 02:22	98-06-6	
trans-1,2-Dichloroethene	**<2.2**	ug/L	7.3	2.2	2		11/26/19 02:22	156-60-5	
trans-1,3-Dichloropropene	**<8.7**	ug/L	29.1	8.7	2		11/26/19 02:22	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	99	%	70-130		2		11/26/19 02:22	460-00-4	
Dibromofluoromethane (S)	102	%	70-130		2		11/26/19 02:22	1868-53-7	
Toluene-d8 (S)	100	%	70-130		2		11/26/19 02:22	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**92.4**	mg/L	4.0	1.9	1		11/26/19 12:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-4 **Lab ID: 40199755007** Collected: 11/19/19 13:10 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:01	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:01	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:01	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:01	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:01	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:01	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:01	11096-82-5	
PCB, Total	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:01	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	57	%	43-112		1	11/27/19 08:24	12/03/19 00:01	877-09-8	
Decachlorobiphenyl (S)	52	%	10-103		1	11/27/19 08:24	12/03/19 00:01	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**20.1J**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 15:05	7440-38-2	
Barium	**84.6**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 15:05	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 15:05	7440-43-9	
Chromium	**10.5**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 15:05	7440-47-3	
Lead	**21.2**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 15:05	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 15:05	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 15:05	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:37	7440-38-2	
Barium, Dissolved	**55.3**	ug/L	5.0	1.5	1		12/02/19 18:37	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:37	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		12/02/19 18:37	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:37	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:37	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:37	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**0.19J**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 09:09	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 10:12	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<3.0**	ug/L	9.9	3.0	2	11/26/19 05:21	11/26/19 18:52	120-82-1	
1,2-Dichlorobenzene	**<2.7**	ug/L	9.4	2.7	2	11/26/19 05:21	11/26/19 18:52	95-50-1	
1,3-Dichlorobenzene	**<2.9**	ug/L	9.7	2.9	2	11/26/19 05:21	11/26/19 18:52	541-73-1	
1,4-Dichlorobenzene	**<2.7**	ug/L	9.4	2.7	2	11/26/19 05:21	11/26/19 18:52	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<2.3**	ug/L	9.4	2.3	2	11/26/19 05:21	11/26/19 18:52	108-60-1	
2,4,5-Trichlorophenol	**<1.2**	ug/L	9.4	1.2	2	11/26/19 05:21	11/26/19 18:52	95-95-4	
2,4,6-Trichlorophenol	**<1.5**	ug/L	9.4	1.5	2	11/26/19 05:21	11/26/19 18:52	88-06-2	
2,4-Dichlorophenol	**<1.7**	ug/L	9.4	1.7	2	11/26/19 05:21	11/26/19 18:52	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-4 **Lab ID: 40199755007** Collected: 11/19/19 13:10 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<2.2**	ug/L	9.4	2.2	2	11/26/19 05:21	11/26/19 18:52	105-67-9	
2,4-Dinitrophenol	**<4.6**	ug/L	15.4	4.6	2	11/26/19 05:21	11/26/19 18:52	51-28-5	
2,4-Dinitrotoluene	**<2.0**	ug/L	9.4	2.0	2	11/26/19 05:21	11/26/19 18:52	121-14-2	
2,6-Dinitrotoluene	**<1.5**	ug/L	9.4	1.5	2	11/26/19 05:21	11/26/19 18:52	606-20-2	
2-Chloronaphthalene	**<1.6**	ug/L	9.4	1.6	2	11/26/19 05:21	11/26/19 18:52	91-58-7	
2-Chlorophenol	**<1.6**	ug/L	9.4	1.6	2	11/26/19 05:21	11/26/19 18:52	95-57-8	
2-Methylnaphthalene	**<2.2**	ug/L	9.4	2.2	2	11/26/19 05:21	11/26/19 18:52	91-57-6	
2-Methylphenol(o-Cresol)	**<1.8**	ug/L	9.4	1.8	2	11/26/19 05:21	11/26/19 18:52	95-48-7	
2-Nitroaniline	**<1.8**	ug/L	9.4	1.8	2	11/26/19 05:21	11/26/19 18:52	88-74-4	
2-Nitrophenol	**<1.6**	ug/L	9.4	1.6	2	11/26/19 05:21	11/26/19 18:52	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<1.2**	ug/L	9.4	1.2	2	11/26/19 05:21	11/26/19 18:52		
3,3'-Dichlorobenzidine	**<2.5**	ug/L	9.4	2.5	2	11/26/19 05:21	11/26/19 18:52	91-94-1	
3-Nitroaniline	**<2.6**	ug/L	9.4	2.6	2	11/26/19 05:21	11/26/19 18:52	99-09-2	
4,6-Dinitro-2-methylphenol	**<5.9**	ug/L	19.6	5.9	2	11/26/19 05:21	11/26/19 18:52	534-52-1	
4-Bromophenylphenyl ether	**<1.8**	ug/L	9.4	1.8	2	11/26/19 05:21	11/26/19 18:52	101-55-3	
4-Chloro-3-methylphenol	**<1.3**	ug/L	9.4	1.3	2	11/26/19 05:21	11/26/19 18:52	59-50-7	
4-Chloroaniline	**<3.4**	ug/L	11.2	3.4	2	11/26/19 05:21	11/26/19 18:52	106-47-8	
4-Chlorophenylphenyl ether	**<1.6**	ug/L	9.4	1.6	2	11/26/19 05:21	11/26/19 18:52	7005-72-3	
4-Nitroaniline	**<5.7**	ug/L	18.8	5.7	2	11/26/19 05:21	11/26/19 18:52	100-01-6	
4-Nitrophenol	**<5.8**	ug/L	19.2	5.8	2	11/26/19 05:21	11/26/19 18:52	100-02-7	
Acenaphthene	**<1.4**	ug/L	9.4	1.4	2	11/26/19 05:21	11/26/19 18:52	83-32-9	
Acenaphthylene	**<1.4**	ug/L	9.4	1.4	2	11/26/19 05:21	11/26/19 18:52	208-96-8	
Anthracene	**1.9J**	ug/L	9.4	1.5	2	11/26/19 05:21	11/26/19 18:52	120-12-7	
Benzo(a)anthracene	**24.9**	ug/L	9.4	1.6	2	11/26/19 05:21	11/26/19 18:52	56-55-3	
Benzo(a)pyrene	**47.2**	ug/L	9.4	2.4	2	11/26/19 05:21	11/26/19 18:52	50-32-8	
Benzo(b)fluoranthene	**91.0**	ug/L	9.4	2.0	2	11/26/19 05:21	11/26/19 18:52	205-99-2	
Benzo(g,h,i)perylene	**51.8**	ug/L	9.4	2.6	2	11/26/19 05:21	11/26/19 18:52	191-24-2	
Benzo(k)fluoranthene	**38.8**	ug/L	9.4	2.1	2	11/26/19 05:21	11/26/19 18:52	207-08-9	
Butylbenzylphthalate	**<2.4**	ug/L	9.4	2.4	2	11/26/19 05:21	11/26/19 18:52	85-68-7	
Carbazole	**5.7J**	ug/L	9.4	1.7	2	11/26/19 05:21	11/26/19 18:52	86-74-8	
Chrysene	**69.2**	ug/L	9.4	2.4	2	11/26/19 05:21	11/26/19 18:52	218-01-9	
Di-n-butylphthalate	**<2.3**	ug/L	9.4	2.3	2	11/26/19 05:21	11/26/19 18:52	84-74-2	
Di-n-octylphthalate	**<9.0**	ug/L	30.0	9.0	2	11/26/19 05:21	11/26/19 18:52	117-84-0	
Dibenz(a,h)anthracene	**10.7**	ug/L	9.4	2.1	2	11/26/19 05:21	11/26/19 18:52	53-70-3	
Dibenzofuran	**<1.6**	ug/L	9.4	1.6	2	11/26/19 05:21	11/26/19 18:52	132-64-9	
Diethylphthalate	**<1.5**	ug/L	9.4	1.5	2	11/26/19 05:21	11/26/19 18:52	84-66-2	
Dimethylphthalate	**<1.4**	ug/L	9.4	1.4	2	11/26/19 05:21	11/26/19 18:52	131-11-3	
Fluoranthene	**121**	ug/L	9.4	1.9	2	11/26/19 05:21	11/26/19 18:52	206-44-0	
Fluorene	**<1.7**	ug/L	9.4	1.7	2	11/26/19 05:21	11/26/19 18:52	86-73-7	
Hexachloro-1,3-butadiene	**<2.2**	ug/L	10.4	2.2	2	11/26/19 05:21	11/26/19 18:52	87-68-3	
Hexachlorobenzene	**<3.1**	ug/L	9.4	3.1	2	11/26/19 05:21	11/26/19 18:52	118-74-1	
Hexachlorocyclopentadiene	**<1.9**	ug/L	9.4	1.9	2	11/26/19 05:21	11/26/19 18:52	77-47-4	
Hexachloroethane	**<2.7**	ug/L	9.4	2.7	2	11/26/19 05:21	11/26/19 18:52	67-72-1	
Indeno(1,2,3-cd)pyrene	**57.4**	ug/L	9.4	2.3	2	11/26/19 05:21	11/26/19 18:52	193-39-5	
Isophorone	**<1.5**	ug/L	9.4	1.5	2	11/26/19 05:21	11/26/19 18:52	78-59-1	
N-Nitroso-di-n-propylamine	**<2.1**	ug/L	9.4	2.1	2	11/26/19 05:21	11/26/19 18:52	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-4 **Lab ID: 40199755007** Collected: 11/19/19 13:10 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<6.5**	ug/L	21.7	6.5	2	11/26/19 05:21	11/26/19 18:52	86-30-6	
Naphthalene	**<2.3**	ug/L	9.4	2.3	2	11/26/19 05:21	11/26/19 18:52	91-20-3	
Nitrobenzene	**<2.0**	ug/L	9.4	2.0	2	11/26/19 05:21	11/26/19 18:52	98-95-3	
Pentachlorophenol	**<8.6**	ug/L	28.7	8.6	2	11/26/19 05:21	11/26/19 18:52	87-86-5	
Phenanthrene	**27.9**	ug/L	9.4	1.8	2	11/26/19 05:21	11/26/19 18:52	85-01-8	
Phenol	**<0.61**	ug/L	9.4	0.61	2	11/26/19 05:21	11/26/19 18:52	108-95-2	
Pyrene	**84.1**	ug/L	9.4	2.3	2	11/26/19 05:21	11/26/19 18:52	129-00-0	
bis(2-Chloroethoxy)methane	**<2.5**	ug/L	9.4	2.5	2	11/26/19 05:21	11/26/19 18:52	111-91-1	
bis(2-Chloroethyl) ether	**<2.2**	ug/L	9.4	2.2	2	11/26/19 05:21	11/26/19 18:52	111-44-4	
bis(2-Ethylhexyl)phthalate	**<5.4**	ug/L	18.1	5.4	2	11/26/19 05:21	11/26/19 18:52	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	69	%	51-108		2	11/26/19 05:21	11/26/19 18:52	4165-60-0	
2-Fluorobiphenyl (S)	69	%	47-105		2	11/26/19 05:21	11/26/19 18:52	321-60-8	
Terphenyl-d14 (S)	94	%	65-147		2	11/26/19 05:21	11/26/19 18:52	1718-51-0	
Phenol-d6 (S)	22	%	18-120		2	11/26/19 05:21	11/26/19 18:52	13127-88-3	
2-Fluorophenol (S)	40	%	32-120		2	11/26/19 05:21	11/26/19 18:52	367-12-4	
2,4,6-Tribromophenol (S)	108	%	57-131		2	11/26/19 05:21	11/26/19 18:52	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 22:37	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/25/19 22:37	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 22:37	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/25/19 22:37	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 22:37	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 22:37	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/25/19 22:37	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/25/19 22:37	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/25/19 22:37	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/25/19 22:37	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/25/19 22:37	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/25/19 22:37	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/25/19 22:37	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 22:37	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 22:37	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 22:37	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/25/19 22:37	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/25/19 22:37	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/25/19 22:37	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/25/19 22:37	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/25/19 22:37	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/25/19 22:37	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/25/19 22:37	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/25/19 22:37	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 22:37	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/25/19 22:37	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/25/19 22:37	75-27-4	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-4 **Lab ID: 40199755007** Collected: 11/19/19 13:10 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/25/19 22:37	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/25/19 22:37	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 22:37	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 22:37	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/25/19 22:37	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/25/19 22:37	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/25/19 22:37	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/25/19 22:37	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/25/19 22:37	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/25/19 22:37	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/25/19 22:37	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/25/19 22:37	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 22:37	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/25/19 22:37	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/25/19 22:37	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/25/19 22:37	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 22:37	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/25/19 22:37	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/25/19 22:37	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/25/19 22:37	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 22:37	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/25/19 22:37	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 22:37	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/25/19 22:37	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/25/19 22:37	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/25/19 22:37	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 22:37	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/25/19 22:37	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 22:37	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/25/19 22:37	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/25/19 22:37	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/25/19 22:37	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/25/19 22:37	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/25/19 22:37	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		11/25/19 22:37	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		11/25/19 22:37	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 22:37	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**180**	mg/L	6.7	3.2	1		11/26/19 12:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-5 **Lab ID: 40199755008** Collected: 11/19/19 14:20 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/03/19 00:19	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/03/19 00:19	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/03/19 00:19	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/03/19 00:19	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/03/19 00:19	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/03/19 00:19	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/03/19 00:19	11096-82-5	
PCB, Total	**<0.11**	ug/L	0.48	0.11	1	11/27/19 08:24	12/03/19 00:19	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	73	%	43-112		1	11/27/19 08:24	12/03/19 00:19	877-09-8	
Decachlorobiphenyl (S)	56	%	10-103		1	11/27/19 08:24	12/03/19 00:19	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**158**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 15:08	7440-38-2	
Barium	**280**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 15:08	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 15:08	7440-43-9	
Chromium	**70.9**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 15:08	7440-47-3	
Lead	**32.7**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 15:08	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 15:08	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 15:08	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:40	7440-38-2	
Barium, Dissolved	**104**	ug/L	5.0	1.5	1		12/02/19 18:40	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:40	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		12/02/19 18:40	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:40	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:40	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:40	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 09:12	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 10:14	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.5**	ug/L	5.0	1.5	1	11/26/19 05:21	11/26/19 16:23	120-82-1	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 16:23	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 16:23	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 16:23	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 16:23	108-60-1	
2,4,5-Trichlorophenol	**<0.61**	ug/L	4.8	0.61	1	11/26/19 05:21	11/26/19 16:23	95-95-4	
2,4,6-Trichlorophenol	**<0.76**	ug/L	4.8	0.76	1	11/26/19 05:21	11/26/19 16:23	88-06-2	
2,4-Dichlorophenol	**<0.85**	ug/L	4.8	0.85	1	11/26/19 05:21	11/26/19 16:23	120-83-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-5 **Lab ID: 40199755008** Collected: 11/19/19 14:20 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 16:23	105-67-9	
2,4-Dinitrophenol	**<2.3**	ug/L	7.8	2.3	1	11/26/19 05:21	11/26/19 16:23	51-28-5	
2,4-Dinitrotoluene	**<1.0**	ug/L	4.8	1.0	1	11/26/19 05:21	11/26/19 16:23	121-14-2	
2,6-Dinitrotoluene	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 16:23	606-20-2	
2-Chloronaphthalene	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 16:23	91-58-7	
2-Chlorophenol	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 16:23	95-57-8	
2-Methylnaphthalene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 16:23	91-57-6	
2-Methylphenol(o-Cresol)	**<0.89**	ug/L	4.8	0.89	1	11/26/19 05:21	11/26/19 16:23	95-48-7	
2-Nitroaniline	**<0.90**	ug/L	4.8	0.90	1	11/26/19 05:21	11/26/19 16:23	88-74-4	
2-Nitrophenol	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 16:23	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<0.58**	ug/L	4.8	0.58	1	11/26/19 05:21	11/26/19 16:23		
3,3'-Dichlorobenzidine	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 16:23	91-94-1	
3-Nitroaniline	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 16:23	99-09-2	
4,6-Dinitro-2-methylphenol	**<3.0**	ug/L	9.9	3.0	1	11/26/19 05:21	11/26/19 16:23	534-52-1	
4-Bromophenylphenyl ether	**<0.91**	ug/L	4.8	0.91	1	11/26/19 05:21	11/26/19 16:23	101-55-3	
4-Chloro-3-methylphenol	**<0.65**	ug/L	4.8	0.65	1	11/26/19 05:21	11/26/19 16:23	59-50-7	
4-Chloroaniline	**<1.7**	ug/L	5.7	1.7	1	11/26/19 05:21	11/26/19 16:23	106-47-8	
4-Chlorophenylphenyl ether	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 16:23	7005-72-3	
4-Nitroaniline	**<2.9**	ug/L	9.5	2.9	1	11/26/19 05:21	11/26/19 16:23	100-01-6	
4-Nitrophenol	**<2.9**	ug/L	9.7	2.9	1	11/26/19 05:21	11/26/19 16:23	100-02-7	
Acenaphthene	**<0.73**	ug/L	4.8	0.73	1	11/26/19 05:21	11/26/19 16:23	83-32-9	
Acenaphthylene	**<0.70**	ug/L	4.8	0.70	1	11/26/19 05:21	11/26/19 16:23	208-96-8	
Anthracene	**<0.77**	ug/L	4.8	0.77	1	11/26/19 05:21	11/26/19 16:23	120-12-7	
Benzo(a)anthracene	**<0.81**	ug/L	4.8	0.81	1	11/26/19 05:21	11/26/19 16:23	56-55-3	
Benzo(a)pyrene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 16:23	50-32-8	
Benzo(b)fluoranthene	**<0.99**	ug/L	4.8	0.99	1	11/26/19 05:21	11/26/19 16:23	205-99-2	
Benzo(g,h,i)perylene	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 16:23	191-24-2	
Benzo(k)fluoranthene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 16:23	207-08-9	
Butylbenzylphthalate	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 16:23	85-68-7	
Carbazole	**<0.87**	ug/L	4.8	0.87	1	11/26/19 05:21	11/26/19 16:23	86-74-8	
Chrysene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 16:23	218-01-9	
Di-n-butylphthalate	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 16:23	84-74-2	
Di-n-octylphthalate	**<4.5**	ug/L	15.1	4.5	1	11/26/19 05:21	11/26/19 16:23	117-84-0	
Dibenz(a,h)anthracene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 16:23	53-70-3	
Dibenzofuran	**<0.81**	ug/L	4.8	0.81	1	11/26/19 05:21	11/26/19 16:23	132-64-9	
Diethylphthalate	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 16:23	84-66-2	
Dimethylphthalate	**<0.69**	ug/L	4.8	0.69	1	11/26/19 05:21	11/26/19 16:23	131-11-3	
Fluoranthene	**<0.94**	ug/L	4.8	0.94	1	11/26/19 05:21	11/26/19 16:23	206-44-0	
Fluorene	**<0.86**	ug/L	4.8	0.86	1	11/26/19 05:21	11/26/19 16:23	86-73-7	
Hexachloro-1,3-butadiene	**<1.1**	ug/L	5.2	1.1	1	11/26/19 05:21	11/26/19 16:23	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	4.8	1.6	1	11/26/19 05:21	11/26/19 16:23	118-74-1	
Hexachlorocyclopentadiene	**<0.96**	ug/L	4.8	0.96	1	11/26/19 05:21	11/26/19 16:23	77-47-4	
Hexachloroethane	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 16:23	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 16:23	193-39-5	
Isophorone	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 16:23	78-59-1	
N-Nitroso-di-n-propylamine	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 16:23	621-64-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-5 **Lab ID: 40199755008** Collected: 11/19/19 14:20 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.0	3.3	1	11/26/19 05:21	11/26/19 16:23	86-30-6	
Naphthalene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 16:23	91-20-3	
Nitrobenzene	**<1.0**	ug/L	4.8	1.0	1	11/26/19 05:21	11/26/19 16:23	98-95-3	
Pentachlorophenol	**<4.3**	ug/L	14.5	4.3	1	11/26/19 05:21	11/26/19 16:23	87-86-5	
Phenanthrene	**<0.91**	ug/L	4.8	0.91	1	11/26/19 05:21	11/26/19 16:23	85-01-8	
Phenol	**<0.31**	ug/L	4.8	0.31	1	11/26/19 05:21	11/26/19 16:23	108-95-2	
Pyrene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 16:23	129-00-0	
bis(2-Chloroethoxy)methane	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 16:23	111-91-1	
bis(2-Chloroethyl) ether	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 16:23	111-44-4	
bis(2-Ethylhexyl)phthalate	**<2.7**	ug/L	9.1	2.7	1	11/26/19 05:21	11/26/19 16:23	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	89	%	51-108		1	11/26/19 05:21	11/26/19 16:23	4165-60-0	
2-Fluorobiphenyl (S)	94	%	47-105		1	11/26/19 05:21	11/26/19 16:23	321-60-8	
Terphenyl-d14 (S)	114	%	65-147		1	11/26/19 05:21	11/26/19 16:23	1718-51-0	
Phenol-d6 (S)	30	%	18-120		1	11/26/19 05:21	11/26/19 16:23	13127-88-3	
2-Fluorophenol (S)	50	%	32-120		1	11/26/19 05:21	11/26/19 16:23	367-12-4	
2,4,6-Tribromophenol (S)	133	%	57-131		1	11/26/19 05:21	11/26/19 16:23	118-79-6	S3
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 23:00	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/25/19 23:00	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 23:00	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/25/19 23:00	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 23:00	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 23:00	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/25/19 23:00	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/25/19 23:00	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/25/19 23:00	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/25/19 23:00	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/25/19 23:00	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/25/19 23:00	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/25/19 23:00	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 23:00	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 23:00	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 23:00	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/25/19 23:00	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/25/19 23:00	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/25/19 23:00	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/25/19 23:00	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/25/19 23:00	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/25/19 23:00	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/25/19 23:00	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/25/19 23:00	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 23:00	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/25/19 23:00	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/25/19 23:00	75-27-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-5 **Lab ID: 40199755008** Collected: 11/19/19 14:20 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/25/19 23:00	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/25/19 23:00	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 23:00	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 23:00	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/25/19 23:00	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/25/19 23:00	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/25/19 23:00	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/25/19 23:00	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/25/19 23:00	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/25/19 23:00	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/25/19 23:00	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/25/19 23:00	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 23:00	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/25/19 23:00	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/25/19 23:00	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/25/19 23:00	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 23:00	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/25/19 23:00	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/25/19 23:00	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/25/19 23:00	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 23:00	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/25/19 23:00	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 23:00	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/25/19 23:00	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/25/19 23:00	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/25/19 23:00	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 23:00	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/25/19 23:00	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 23:00	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/25/19 23:00	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/25/19 23:00	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/25/19 23:00	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/25/19 23:00	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/25/19 23:00	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		11/25/19 23:00	460-00-4	
Dibromofluoromethane (S)	106	%	70-130		1		11/25/19 23:00	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 23:00	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**1030**	mg/L	33.3	15.8	1		11/26/19 12:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-6 **Lab ID: 40199755009** Collected: 11/19/19 14:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:37	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:37	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:37	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:37	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:37	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:37	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:37	11096-82-5	
PCB, Total	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:37	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	78	%	43-112		1	11/27/19 08:24	12/03/19 00:37	877-09-8	
Decachlorobiphenyl (S)	60	%	10-103		1	11/27/19 08:24	12/03/19 00:37	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 15:10	7440-38-2	
Barium	**142**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 15:10	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 15:10	7440-43-9	
Chromium	**10.6**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 15:10	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 15:10	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 15:10	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 15:10	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:42	7440-38-2	
Barium, Dissolved	**97.8**	ug/L	5.0	1.5	1		12/02/19 18:42	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:42	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		12/02/19 18:42	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:42	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:42	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:42	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 09:14	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 10:17	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 16:44	120-82-1	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 16:44	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 16:44	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 16:44	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:44	108-60-1	
2,4,5-Trichlorophenol	**<0.61**	ug/L	4.7	0.61	1	11/26/19 05:21	11/26/19 16:44	95-95-4	
2,4,6-Trichlorophenol	**<0.75**	ug/L	4.7	0.75	1	11/26/19 05:21	11/26/19 16:44	88-06-2	
2,4-Dichlorophenol	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 16:44	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-6 **Lab ID: 40199755009** Collected: 11/19/19 14:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:44	105-67-9	
2,4-Dinitrophenol	**<2.3**	ug/L	7.7	2.3	1	11/26/19 05:21	11/26/19 16:44	51-28-5	
2,4-Dinitrotoluene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 16:44	121-14-2	
2,6-Dinitrotoluene	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 16:44	606-20-2	
2-Chloronaphthalene	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 16:44	91-58-7	
2-Chlorophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 16:44	95-57-8	
2-Methylnaphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:44	91-57-6	
2-Methylphenol(o-Cresol)	**<0.88**	ug/L	4.7	0.88	1	11/26/19 05:21	11/26/19 16:44	95-48-7	
2-Nitroaniline	**<0.89**	ug/L	4.7	0.89	1	11/26/19 05:21	11/26/19 16:44	88-74-4	
2-Nitrophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 16:44	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<0.58**	ug/L	4.7	0.58	1	11/26/19 05:21	11/26/19 16:44		
3,3'-Dichlorobenzidine	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 16:44	91-94-1	
3-Nitroaniline	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 16:44	99-09-2	
4,6-Dinitro-2-methylphenol	**<2.9**	ug/L	9.8	2.9	1	11/26/19 05:21	11/26/19 16:44	534-52-1	
4-Bromophenylphenyl ether	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 16:44	101-55-3	
4-Chloro-3-methylphenol	**<0.64**	ug/L	4.7	0.64	1	11/26/19 05:21	11/26/19 16:44	59-50-7	
4-Chloroaniline	**<1.7**	ug/L	5.6	1.7	1	11/26/19 05:21	11/26/19 16:44	106-47-8	
4-Chlorophenylphenyl ether	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 16:44	7005-72-3	
4-Nitroaniline	**<2.8**	ug/L	9.4	2.8	1	11/26/19 05:21	11/26/19 16:44	100-01-6	
4-Nitrophenol	**<2.9**	ug/L	9.6	2.9	1	11/26/19 05:21	11/26/19 16:44	100-02-7	
Acenaphthene	**<0.72**	ug/L	4.7	0.72	1	11/26/19 05:21	11/26/19 16:44	83-32-9	
Acenaphthylene	**<0.69**	ug/L	4.7	0.69	1	11/26/19 05:21	11/26/19 16:44	208-96-8	
Anthracene	**<0.76**	ug/L	4.7	0.76	1	11/26/19 05:21	11/26/19 16:44	120-12-7	
Benzo(a)anthracene	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 16:44	56-55-3	
Benzo(a)pyrene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:44	50-32-8	
Benzo(b)fluoranthene	**<0.98**	ug/L	4.7	0.98	1	11/26/19 05:21	11/26/19 16:44	205-99-2	
Benzo(g,h,i)perylene	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 16:44	191-24-2	
Benzo(k)fluoranthene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:44	207-08-9	
Butylbenzylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:44	85-68-7	
Carbazole	**<0.86**	ug/L	4.7	0.86	1	11/26/19 05:21	11/26/19 16:44	86-74-8	
Chrysene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:44	218-01-9	
Di-n-butylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:44	84-74-2	
Di-n-octylphthalate	**<4.5**	ug/L	15.0	4.5	1	11/26/19 05:21	11/26/19 16:44	117-84-0	
Dibenz(a,h)anthracene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 16:44	53-70-3	
Dibenzofuran	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 16:44	132-64-9	
Diethylphthalate	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 16:44	84-66-2	
Dimethylphthalate	**<0.68**	ug/L	4.7	0.68	1	11/26/19 05:21	11/26/19 16:44	131-11-3	
Fluoranthene	**<0.93**	ug/L	4.7	0.93	1	11/26/19 05:21	11/26/19 16:44	206-44-0	
Fluorene	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 16:44	86-73-7	
Hexachloro-1,3-butadiene	**<1.1**	ug/L	5.2	1.1	1	11/26/19 05:21	11/26/19 16:44	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	4.7	1.6	1	11/26/19 05:21	11/26/19 16:44	118-74-1	
Hexachlorocyclopentadiene	**<0.95**	ug/L	4.7	0.95	1	11/26/19 05:21	11/26/19 16:44	77-47-4	
Hexachloroethane	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 16:44	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:44	193-39-5	
Isophorone	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 16:44	78-59-1	
N-Nitroso-di-n-propylamine	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:44	621-64-7	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-6 **Lab ID: 40199755009** Collected: 11/19/19 14:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	10.8	3.3	1	11/26/19 05:21	11/26/19 16:44	86-30-6	
Naphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:44	91-20-3	
Nitrobenzene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 16:44	98-95-3	
Pentachlorophenol	**<4.3**	ug/L	14.3	4.3	1	11/26/19 05:21	11/26/19 16:44	87-86-5	
Phenanthrene	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 16:44	85-01-8	
Phenol	**<0.30**	ug/L	4.7	0.30	1	11/26/19 05:21	11/26/19 16:44	108-95-2	
Pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:44	129-00-0	
bis(2-Chloroethoxy)methane	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 16:44	111-91-1	
bis(2-Chloroethyl) ether	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 16:44	111-44-4	
bis(2-Ethylhexyl)phthalate	**<2.7**	ug/L	9.1	2.7	1	11/26/19 05:21	11/26/19 16:44	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	91	%	51-108		1	11/26/19 05:21	11/26/19 16:44	4165-60-0	
2-Fluorobiphenyl (S)	95	%	47-105		1	11/26/19 05:21	11/26/19 16:44	321-60-8	
Terphenyl-d14 (S)	110	%	65-147		1	11/26/19 05:21	11/26/19 16:44	1718-51-0	
Phenol-d6 (S)	28	%	18-120		1	11/26/19 05:21	11/26/19 16:44	13127-88-3	
2-Fluorophenol (S)	48	%	32-120		1	11/26/19 05:21	11/26/19 16:44	367-12-4	
2,4,6-Tribromophenol (S)	125	%	57-131		1	11/26/19 05:21	11/26/19 16:44	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 23:22	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/25/19 23:22	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 23:22	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/25/19 23:22	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 23:22	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 23:22	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/25/19 23:22	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/25/19 23:22	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/25/19 23:22	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/25/19 23:22	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/25/19 23:22	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/25/19 23:22	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/25/19 23:22	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 23:22	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 23:22	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 23:22	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/25/19 23:22	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/25/19 23:22	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/25/19 23:22	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/25/19 23:22	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/25/19 23:22	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/25/19 23:22	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/25/19 23:22	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/25/19 23:22	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 23:22	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/25/19 23:22	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/25/19 23:22	75-27-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-6 **Lab ID: 40199755009** Collected: 11/19/19 14:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/25/19 23:22	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/25/19 23:22	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 23:22	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 23:22	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/25/19 23:22	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/25/19 23:22	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/25/19 23:22	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/25/19 23:22	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/25/19 23:22	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/25/19 23:22	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/25/19 23:22	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/25/19 23:22	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 23:22	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/25/19 23:22	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/25/19 23:22	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/25/19 23:22	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 23:22	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/25/19 23:22	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/25/19 23:22	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/25/19 23:22	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 23:22	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/25/19 23:22	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 23:22	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/25/19 23:22	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/25/19 23:22	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/25/19 23:22	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 23:22	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/25/19 23:22	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 23:22	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/25/19 23:22	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/25/19 23:22	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/25/19 23:22	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/25/19 23:22	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/25/19 23:22	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		11/25/19 23:22	460-00-4	
Dibromofluoromethane (S)	104	%	70-130		1		11/25/19 23:22	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 23:22	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**349**	mg/L	7.1	3.4	1		11/26/19 12:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-7 **Lab ID: 40199755010** Collected: 11/19/19 13:40 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:55	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:55	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:55	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:55	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:55	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:55	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:55	11096-82-5	
PCB, Total	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 00:55	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	82	%	43-112		1	11/27/19 08:24	12/03/19 00:55	877-09-8	
Decachlorobiphenyl (S)	54	%	10-103		1	11/27/19 08:24	12/03/19 00:55	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 15:12	7440-38-2	
Barium	**177**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 15:12	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 15:12	7440-43-9	
Chromium	**12.1**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 15:12	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 15:12	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 15:12	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 15:12	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:44	7440-38-2	
Barium, Dissolved	**122**	ug/L	5.0	1.5	1		12/02/19 18:44	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:44	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		12/02/19 18:44	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:44	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:44	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:44	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 09:16	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 10:19	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.5**	ug/L	5.0	1.5	1	11/26/19 05:21	11/26/19 17:27	120-82-1	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 17:27	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 17:27	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 17:27	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 17:27	108-60-1	
2,4,5-Trichlorophenol	**<0.61**	ug/L	4.8	0.61	1	11/26/19 05:21	11/26/19 17:27	95-95-4	
2,4,6-Trichlorophenol	**<0.76**	ug/L	4.8	0.76	1	11/26/19 05:21	11/26/19 17:27	88-06-2	
2,4-Dichlorophenol	**<0.85**	ug/L	4.8	0.85	1	11/26/19 05:21	11/26/19 17:27	120-83-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-7 **Lab ID: 40199755010** Collected: 11/19/19 13:40 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 17:27	105-67-9	
2,4-Dinitrophenol	**<2.3**	ug/L	7.8	2.3	1	11/26/19 05:21	11/26/19 17:27	51-28-5	
2,4-Dinitrotoluene	**<1.0**	ug/L	4.8	1.0	1	11/26/19 05:21	11/26/19 17:27	121-14-2	
2,6-Dinitrotoluene	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 17:27	606-20-2	
2-Chloronaphthalene	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 17:27	91-58-7	
2-Chlorophenol	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 17:27	95-57-8	
2-Methylnaphthalene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 17:27	91-57-6	
2-Methylphenol(o-Cresol)	**<0.89**	ug/L	4.8	0.89	1	11/26/19 05:21	11/26/19 17:27	95-48-7	
2-Nitroaniline	**<0.90**	ug/L	4.8	0.90	1	11/26/19 05:21	11/26/19 17:27	88-74-4	
2-Nitrophenol	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 17:27	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<0.58**	ug/L	4.8	0.58	1	11/26/19 05:21	11/26/19 17:27		
3,3'-Dichlorobenzidine	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 17:27	91-94-1	
3-Nitroaniline	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 17:27	99-09-2	
4,6-Dinitro-2-methylphenol	**<3.0**	ug/L	9.9	3.0	1	11/26/19 05:21	11/26/19 17:27	534-52-1	
4-Bromophenylphenyl ether	**<0.91**	ug/L	4.8	0.91	1	11/26/19 05:21	11/26/19 17:27	101-55-3	
4-Chloro-3-methylphenol	**<0.65**	ug/L	4.8	0.65	1	11/26/19 05:21	11/26/19 17:27	59-50-7	
4-Chloroaniline	**<1.7**	ug/L	5.7	1.7	1	11/26/19 05:21	11/26/19 17:27	106-47-8	
4-Chlorophenylphenyl ether	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 17:27	7005-72-3	
4-Nitroaniline	**<2.9**	ug/L	9.5	2.9	1	11/26/19 05:21	11/26/19 17:27	100-01-6	
4-Nitrophenol	**<2.9**	ug/L	9.7	2.9	1	11/26/19 05:21	11/26/19 17:27	100-02-7	
Acenaphthene	**<0.73**	ug/L	4.8	0.73	1	11/26/19 05:21	11/26/19 17:27	83-32-9	
Acenaphthylene	**<0.70**	ug/L	4.8	0.70	1	11/26/19 05:21	11/26/19 17:27	208-96-8	
Anthracene	**<0.77**	ug/L	4.8	0.77	1	11/26/19 05:21	11/26/19 17:27	120-12-7	
Benzo(a)anthracene	**<0.81**	ug/L	4.8	0.81	1	11/26/19 05:21	11/26/19 17:27	56-55-3	
Benzo(a)pyrene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 17:27	50-32-8	
Benzo(b)fluoranthene	**<0.99**	ug/L	4.8	0.99	1	11/26/19 05:21	11/26/19 17:27	205-99-2	
Benzo(g,h,i)perylene	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 17:27	191-24-2	
Benzo(k)fluoranthene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 17:27	207-08-9	
Butylbenzylphthalate	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 17:27	85-68-7	
Carbazole	**<0.87**	ug/L	4.8	0.87	1	11/26/19 05:21	11/26/19 17:27	86-74-8	
Chrysene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 17:27	218-01-9	
Di-n-butylphthalate	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 17:27	84-74-2	
Di-n-octylphthalate	**<4.5**	ug/L	15.1	4.5	1	11/26/19 05:21	11/26/19 17:27	117-84-0	
Dibenz(a,h)anthracene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 17:27	53-70-3	
Dibenzofuran	**<0.81**	ug/L	4.8	0.81	1	11/26/19 05:21	11/26/19 17:27	132-64-9	
Diethylphthalate	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 17:27	84-66-2	
Dimethylphthalate	**<0.69**	ug/L	4.8	0.69	1	11/26/19 05:21	11/26/19 17:27	131-11-3	
Fluoranthene	**<0.94**	ug/L	4.8	0.94	1	11/26/19 05:21	11/26/19 17:27	206-44-0	
Fluorene	**<0.86**	ug/L	4.8	0.86	1	11/26/19 05:21	11/26/19 17:27	86-73-7	
Hexachloro-1,3-butadiene	**<1.1**	ug/L	5.2	1.1	1	11/26/19 05:21	11/26/19 17:27	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	4.8	1.6	1	11/26/19 05:21	11/26/19 17:27	118-74-1	
Hexachlorocyclopentadiene	**<0.96**	ug/L	4.8	0.96	1	11/26/19 05:21	11/26/19 17:27	77-47-4	
Hexachloroethane	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 17:27	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 17:27	193-39-5	
Isophorone	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 17:27	78-59-1	
N-Nitroso-di-n-propylamine	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 17:27	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-7 **Lab ID: 40199755010** Collected: 11/19/19 13:40 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.0	3.3	1	11/26/19 05:21	11/26/19 17:27	86-30-6	
Naphthalene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 17:27	91-20-3	
Nitrobenzene	**<1.0**	ug/L	4.8	1.0	1	11/26/19 05:21	11/26/19 17:27	98-95-3	
Pentachlorophenol	**<4.3**	ug/L	14.5	4.3	1	11/26/19 05:21	11/26/19 17:27	87-86-5	
Phenanthrene	**<0.91**	ug/L	4.8	0.91	1	11/26/19 05:21	11/26/19 17:27	85-01-8	
Phenol	**<0.31**	ug/L	4.8	0.31	1	11/26/19 05:21	11/26/19 17:27	108-95-2	
Pyrene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 17:27	129-00-0	
bis(2-Chloroethoxy)methane	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 17:27	111-91-1	
bis(2-Chloroethyl) ether	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 17:27	111-44-4	
bis(2-Ethylhexyl)phthalate	**<2.7**	ug/L	9.1	2.7	1	11/26/19 05:21	11/26/19 17:27	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	64	%	51-108		1	11/26/19 05:21	11/26/19 17:27	4165-60-0	
2-Fluorobiphenyl (S)	70	%	47-105		1	11/26/19 05:21	11/26/19 17:27	321-60-8	
Terphenyl-d14 (S)	112	%	65-147		1	11/26/19 05:21	11/26/19 17:27	1718-51-0	
Phenol-d6 (S)	21	%	18-120		1	11/26/19 05:21	11/26/19 17:27	13127-88-3	
2-Fluorophenol (S)	34	%	32-120		1	11/26/19 05:21	11/26/19 17:27	367-12-4	
2,4,6-Tribromophenol (S)	120	%	57-131		1	11/26/19 05:21	11/26/19 17:27	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 23:45	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/25/19 23:45	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 23:45	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/25/19 23:45	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 23:45	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 23:45	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/25/19 23:45	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/25/19 23:45	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/25/19 23:45	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/25/19 23:45	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/25/19 23:45	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/25/19 23:45	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/25/19 23:45	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 23:45	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 23:45	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 23:45	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/25/19 23:45	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/25/19 23:45	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/25/19 23:45	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/25/19 23:45	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/25/19 23:45	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/25/19 23:45	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/25/19 23:45	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/25/19 23:45	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 23:45	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/25/19 23:45	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/25/19 23:45	75-27-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: GMMW-7 **Lab ID: 40199755010** Collected: 11/19/19 13:40 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/25/19 23:45	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/25/19 23:45	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 23:45	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 23:45	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/25/19 23:45	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/25/19 23:45	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/25/19 23:45	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/25/19 23:45	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/25/19 23:45	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/25/19 23:45	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/25/19 23:45	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/25/19 23:45	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 23:45	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/25/19 23:45	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/25/19 23:45	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/25/19 23:45	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 23:45	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/25/19 23:45	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/25/19 23:45	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/25/19 23:45	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 23:45	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/25/19 23:45	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 23:45	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/25/19 23:45	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/25/19 23:45	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/25/19 23:45	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 23:45	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/25/19 23:45	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 23:45	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/25/19 23:45	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/25/19 23:45	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/25/19 23:45	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/25/19 23:45	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/25/19 23:45	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		11/25/19 23:45	460-00-4	
Dibromofluoromethane (S)	107	%	70-130		1		11/25/19 23:45	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 23:45	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**140**	mg/L	6.7	3.2	1		11/26/19 12:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-20 **Lab ID: 40199755011** Collected: 11/19/19 12:45 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 01:13	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 01:13	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 01:13	11141-16-5	
PCB-1242 (Aroclor 1242)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 01:13	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 01:13	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 01:13	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 01:13	11096-82-5	
PCB, Total	**<0.11**	ug/L	0.47	0.11	1	11/27/19 08:24	12/03/19 01:13	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	90	%	43-112		1	11/27/19 08:24	12/03/19 01:13	877-09-8	
Decachlorobiphenyl (S)	69	%	10-103		1	11/27/19 08:24	12/03/19 01:13	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**<8.3**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 15:15	7440-38-2	
Barium	**84.3**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 15:15	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 15:15	7440-43-9	
Chromium	**5.6J**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 15:15	7440-47-3	
Lead	**<5.9**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 15:15	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 15:15	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 15:15	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:52	7440-38-2	
Barium, Dissolved	**82.6**	ug/L	5.0	1.5	1		12/02/19 18:52	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:52	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		12/02/19 18:52	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:52	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:52	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:52	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 09:19	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 10:26	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 17:48	120-82-1	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 17:48	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 17:48	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/L	4.7	1.4	1	11/26/19 05:21	11/26/19 17:48	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:48	108-60-1	
2,4,5-Trichlorophenol	**<0.61**	ug/L	4.7	0.61	1	11/26/19 05:21	11/26/19 17:48	95-95-4	
2,4,6-Trichlorophenol	**<0.75**	ug/L	4.7	0.75	1	11/26/19 05:21	11/26/19 17:48	88-06-2	
2,4-Dichlorophenol	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 17:48	120-83-2	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-20 **Lab ID: 40199755011** Collected: 11/19/19 12:45 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:48	105-67-9	
2,4-Dinitrophenol	**<2.3**	ug/L	7.7	2.3	1	11/26/19 05:21	11/26/19 17:48	51-28-5	
2,4-Dinitrotoluene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 17:48	121-14-2	
2,6-Dinitrotoluene	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 17:48	606-20-2	
2-Chloronaphthalene	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 17:48	91-58-7	
2-Chlorophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 17:48	95-57-8	
2-Methylnaphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:48	91-57-6	
2-Methylphenol(o-Cresol)	**<0.88**	ug/L	4.7	0.88	1	11/26/19 05:21	11/26/19 17:48	95-48-7	
2-Nitroaniline	**<0.89**	ug/L	4.7	0.89	1	11/26/19 05:21	11/26/19 17:48	88-74-4	
2-Nitrophenol	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 17:48	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<0.58**	ug/L	4.7	0.58	1	11/26/19 05:21	11/26/19 17:48		
3,3'-Dichlorobenzidine	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 17:48	91-94-1	
3-Nitroaniline	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 17:48	99-09-2	
4,6-Dinitro-2-methylphenol	**<2.9**	ug/L	9.8	2.9	1	11/26/19 05:21	11/26/19 17:48	534-52-1	
4-Bromophenylphenyl ether	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 17:48	101-55-3	
4-Chloro-3-methylphenol	**<0.64**	ug/L	4.7	0.64	1	11/26/19 05:21	11/26/19 17:48	59-50-7	
4-Chloroaniline	**<1.7**	ug/L	5.6	1.7	1	11/26/19 05:21	11/26/19 17:48	106-47-8	
4-Chlorophenylphenyl ether	**<0.78**	ug/L	4.7	0.78	1	11/26/19 05:21	11/26/19 17:48	7005-72-3	
4-Nitroaniline	**<2.8**	ug/L	9.4	2.8	1	11/26/19 05:21	11/26/19 17:48	100-01-6	
4-Nitrophenol	**<2.9**	ug/L	9.6	2.9	1	11/26/19 05:21	11/26/19 17:48	100-02-7	
Acenaphthene	**<0.72**	ug/L	4.7	0.72	1	11/26/19 05:21	11/26/19 17:48	83-32-9	
Acenaphthylene	**<0.69**	ug/L	4.7	0.69	1	11/26/19 05:21	11/26/19 17:48	208-96-8	
Anthracene	**<0.76**	ug/L	4.7	0.76	1	11/26/19 05:21	11/26/19 17:48	120-12-7	
Benzo(a)anthracene	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 17:48	56-55-3	
Benzo(a)pyrene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:48	50-32-8	
Benzo(b)fluoranthene	**<0.98**	ug/L	4.7	0.98	1	11/26/19 05:21	11/26/19 17:48	205-99-2	
Benzo(g,h,i)perylene	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 17:48	191-24-2	
Benzo(k)fluoranthene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:48	207-08-9	
Butylbenzylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:48	85-68-7	
Carbazole	**<0.86**	ug/L	4.7	0.86	1	11/26/19 05:21	11/26/19 17:48	86-74-8	
Chrysene	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:48	218-01-9	
Di-n-butylphthalate	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:48	84-74-2	
Di-n-octylphthalate	**<4.5**	ug/L	15.0	4.5	1	11/26/19 05:21	11/26/19 17:48	117-84-0	
Dibenz(a,h)anthracene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 17:48	53-70-3	
Dibenzofuran	**<0.80**	ug/L	4.7	0.80	1	11/26/19 05:21	11/26/19 17:48	132-64-9	
Diethylphthalate	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 17:48	84-66-2	
Dimethylphthalate	**<0.68**	ug/L	4.7	0.68	1	11/26/19 05:21	11/26/19 17:48	131-11-3	
Fluoranthene	**<0.93**	ug/L	4.7	0.93	1	11/26/19 05:21	11/26/19 17:48	206-44-0	
Fluorene	**<0.85**	ug/L	4.7	0.85	1	11/26/19 05:21	11/26/19 17:48	86-73-7	
Hexachloro-1,3-butadiene	**<1.1**	ug/L	5.2	1.1	1	11/26/19 05:21	11/26/19 17:48	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	4.7	1.6	1	11/26/19 05:21	11/26/19 17:48	118-74-1	
Hexachlorocyclopentadiene	**<0.95**	ug/L	4.7	0.95	1	11/26/19 05:21	11/26/19 17:48	77-47-4	
Hexachloroethane	**<1.3**	ug/L	4.7	1.3	1	11/26/19 05:21	11/26/19 17:48	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:48	193-39-5	
Isophorone	**<0.73**	ug/L	4.7	0.73	1	11/26/19 05:21	11/26/19 17:48	78-59-1	
N-Nitroso-di-n-propylamine	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:48	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-20 **Lab ID: 40199755011** Collected: 11/19/19 12:45 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	10.8	3.3	1	11/26/19 05:21	11/26/19 17:48	86-30-6	
Naphthalene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:48	91-20-3	
Nitrobenzene	**<1.0**	ug/L	4.7	1.0	1	11/26/19 05:21	11/26/19 17:48	98-95-3	
Pentachlorophenol	**<4.3**	ug/L	14.3	4.3	1	11/26/19 05:21	11/26/19 17:48	87-86-5	
Phenanthrene	**<0.90**	ug/L	4.7	0.90	1	11/26/19 05:21	11/26/19 17:48	85-01-8	
Phenol	**<0.30**	ug/L	4.7	0.30	1	11/26/19 05:21	11/26/19 17:48	108-95-2	
Pyrene	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:48	129-00-0	
bis(2-Chloroethoxy)methane	**<1.2**	ug/L	4.7	1.2	1	11/26/19 05:21	11/26/19 17:48	111-91-1	
bis(2-Chloroethyl) ether	**<1.1**	ug/L	4.7	1.1	1	11/26/19 05:21	11/26/19 17:48	111-44-4	
bis(2-Ethylhexyl)phthalate	**<2.7**	ug/L	9.1	2.7	1	11/26/19 05:21	11/26/19 17:48	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	63	%	51-108		1	11/26/19 05:21	11/26/19 17:48	4165-60-0	
2-Fluorobiphenyl (S)	67	%	47-105		1	11/26/19 05:21	11/26/19 17:48	321-60-8	
Terphenyl-d14 (S)	104	%	65-147		1	11/26/19 05:21	11/26/19 17:48	1718-51-0	
Phenol-d6 (S)	20	%	18-120		1	11/26/19 05:21	11/26/19 17:48	13127-88-3	
2-Fluorophenol (S)	31	%	32-120		1	11/26/19 05:21	11/26/19 17:48	367-12-4	S0
2,4,6-Tribromophenol (S)	123	%	57-131		1	11/26/19 05:21	11/26/19 17:48	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/26/19 00:07	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/26/19 00:07	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/26/19 00:07	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/26/19 00:07	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/26/19 00:07	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/26/19 00:07	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/26/19 00:07	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/26/19 00:07	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/26/19 00:07	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/26/19 00:07	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/26/19 00:07	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/26/19 00:07	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/26/19 00:07	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/26/19 00:07	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/26/19 00:07	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/26/19 00:07	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/26/19 00:07	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/26/19 00:07	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/26/19 00:07	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/26/19 00:07	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/26/19 00:07	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/26/19 00:07	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/26/19 00:07	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/26/19 00:07	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/26/19 00:07	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/26/19 00:07	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/26/19 00:07	75-27-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: FVMW-20 **Lab ID: 40199755011** Collected: 11/19/19 12:45 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/26/19 00:07	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/26/19 00:07	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/26/19 00:07	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/26/19 00:07	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/26/19 00:07	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/26/19 00:07	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/26/19 00:07	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/26/19 00:07	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/26/19 00:07	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/26/19 00:07	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/26/19 00:07	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/26/19 00:07	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/26/19 00:07	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/26/19 00:07	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/26/19 00:07	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/26/19 00:07	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/26/19 00:07	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/26/19 00:07	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/26/19 00:07	127-18-4	
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/26/19 00:07	108-88-3	
Trichloroethene	**0.72J**	ug/L	1.0	0.26	1		11/26/19 00:07	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/26/19 00:07	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/26/19 00:07	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/26/19 00:07	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/26/19 00:07	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/26/19 00:07	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/26/19 00:07	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/26/19 00:07	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/26/19 00:07	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/26/19 00:07	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/26/19 00:07	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/26/19 00:07	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/26/19 00:07	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/26/19 00:07	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	93	%	70-130		1		11/26/19 00:07	460-00-4	
Dibromofluoromethane (S)	105	%	70-130		1		11/26/19 00:07	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/26/19 00:07	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**168**	mg/L	2.9	1.4	1		11/26/19 12:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: AMS-MW1 **Lab ID: 40199755012** Collected: 11/19/19 14:45 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8082 GCS PCB	Analytical Method: EPA 8082 Preparation Method: EPA 3510								
PCB-1016 (Aroclor 1016)	**<0.21**	ug/L	0.95	0.21	2	11/27/19 08:24	12/03/19 01:32	12674-11-2	
PCB-1221 (Aroclor 1221)	**<0.21**	ug/L	0.95	0.21	2	11/27/19 08:24	12/03/19 01:32	11104-28-2	
PCB-1232 (Aroclor 1232)	**<0.21**	ug/L	0.95	0.21	2	11/27/19 08:24	12/03/19 01:32	11141-16-5	
PCB-1242 (Aroclor 1242)	**7.2**	ug/L	0.95	0.21	2	11/27/19 08:24	12/03/19 01:32	53469-21-9	
PCB-1248 (Aroclor 1248)	**<0.21**	ug/L	0.95	0.21	2	11/27/19 08:24	12/03/19 01:32	12672-29-6	
PCB-1254 (Aroclor 1254)	**<0.21**	ug/L	0.95	0.21	2	11/27/19 08:24	12/03/19 01:32	11097-69-1	
PCB-1260 (Aroclor 1260)	**<0.21**	ug/L	0.95	0.21	2	11/27/19 08:24	12/03/19 01:32	11096-82-5	
PCB, Total	**7.2**	ug/L	0.95	0.21	2	11/27/19 08:24	12/03/19 01:32	1336-36-3	
Surrogates									
Tetrachloro-m-xylene (S)	75	%	43-112		2	11/27/19 08:24	12/03/19 01:32	877-09-8	
Decachlorobiphenyl (S)	51	%	10-103		2	11/27/19 08:24	12/03/19 01:32	2051-24-3	
6010 MET ICP	Analytical Method: EPA 6010 Preparation Method: EPA 3010								
Arsenic	**108**	ug/L	25.0	8.3	1	11/25/19 13:44	11/26/19 15:17	7440-38-2	
Barium	**355**	ug/L	5.0	1.5	1	11/25/19 13:44	11/26/19 15:17	7440-39-3	
Cadmium	**<1.3**	ug/L	5.0	1.3	1	11/25/19 13:44	11/26/19 15:17	7440-43-9	
Chromium	**51.2**	ug/L	10.0	2.5	1	11/25/19 13:44	11/26/19 15:17	7440-47-3	
Lead	**20.6**	ug/L	19.7	5.9	1	11/25/19 13:44	11/26/19 15:17	7439-92-1	
Selenium	**<12.2**	ug/L	40.8	12.2	1	11/25/19 13:44	11/26/19 15:17	7782-49-2	
Silver	**<3.2**	ug/L	10.7	3.2	1	11/25/19 13:44	11/26/19 15:17	7440-22-4	
6010 MET ICP, Dissolved	Analytical Method: EPA 6010								
Arsenic, Dissolved	**<13.2**	ug/L	44.0	13.2	1		12/02/19 18:54	7440-38-2	
Barium, Dissolved	**159**	ug/L	5.0	1.5	1		12/02/19 18:54	7440-39-3	
Cadmium, Dissolved	**<1.3**	ug/L	5.0	1.3	1		12/02/19 18:54	7440-43-9	
Chromium, Dissolved	**<2.5**	ug/L	10.0	2.5	1		12/02/19 18:54	7440-47-3	
Lead, Dissolved	**<6.4**	ug/L	21.4	6.4	1		12/02/19 18:54	7439-92-1	
Selenium, Dissolved	**<12.3**	ug/L	41.1	12.3	1		12/02/19 18:54	7782-49-2	
Silver, Dissolved	**<3.2**	ug/L	10.0	3.2	1		12/02/19 18:54	7440-22-4	P4
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 09:21	7439-97-6	
7470 Mercury, Dissolved	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury, Dissolved	**<0.084**	ug/L	0.28	0.084	1	12/06/19 09:55	12/09/19 10:28	7439-97-6	P4
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
1,2,4-Trichlorobenzene	**<1.5**	ug/L	5.0	1.5	1	11/26/19 05:21	11/26/19 18:09	120-82-1	
1,2-Dichlorobenzene	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 18:09	95-50-1	
1,3-Dichlorobenzene	**<1.5**	ug/L	4.9	1.5	1	11/26/19 05:21	11/26/19 18:09	541-73-1	
1,4-Dichlorobenzene	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 18:09	106-46-7	
2,2'-Oxybis(1-chloropropane)	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 18:09	108-60-1	
2,4,5-Trichlorophenol	**<0.61**	ug/L	4.8	0.61	1	11/26/19 05:21	11/26/19 18:09	95-95-4	
2,4,6-Trichlorophenol	**<0.76**	ug/L	4.8	0.76	1	11/26/19 05:21	11/26/19 18:09	88-06-2	
2,4-Dichlorophenol	**<0.85**	ug/L	4.8	0.85	1	11/26/19 05:21	11/26/19 18:09	120-83-2	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: AMS-MW1 **Lab ID: 40199755012** Collected: 11/19/19 14:45 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
2,4-Dimethylphenol	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 18:09	105-67-9	
2,4-Dinitrophenol	**<2.3**	ug/L	7.8	2.3	1	11/26/19 05:21	11/26/19 18:09	51-28-5	
2,4-Dinitrotoluene	**<1.0**	ug/L	4.8	1.0	1	11/26/19 05:21	11/26/19 18:09	121-14-2	
2,6-Dinitrotoluene	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 18:09	606-20-2	
2-Chloronaphthalene	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 18:09	91-58-7	
2-Chlorophenol	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 18:09	95-57-8	
2-Methylnaphthalene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 18:09	91-57-6	
2-Methylphenol(o-Cresol)	**<0.89**	ug/L	4.8	0.89	1	11/26/19 05:21	11/26/19 18:09	95-48-7	
2-Nitroaniline	**<0.90**	ug/L	4.8	0.90	1	11/26/19 05:21	11/26/19 18:09	88-74-4	
2-Nitrophenol	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 18:09	88-75-5	
3&4-Methylphenol(m&p Cresol)	**<0.58**	ug/L	4.8	0.58	1	11/26/19 05:21	11/26/19 18:09		
3,3'-Dichlorobenzidine	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 18:09	91-94-1	
3-Nitroaniline	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 18:09	99-09-2	
4,6-Dinitro-2-methylphenol	**<3.0**	ug/L	9.9	3.0	1	11/26/19 05:21	11/26/19 18:09	534-52-1	
4-Bromophenylphenyl ether	**<0.91**	ug/L	4.8	0.91	1	11/26/19 05:21	11/26/19 18:09	101-55-3	
4-Chloro-3-methylphenol	**<0.65**	ug/L	4.8	0.65	1	11/26/19 05:21	11/26/19 18:09	59-50-7	
4-Chloroaniline	**<1.7**	ug/L	5.7	1.7	1	11/26/19 05:21	11/26/19 18:09	106-47-8	
4-Chlorophenylphenyl ether	**<0.79**	ug/L	4.8	0.79	1	11/26/19 05:21	11/26/19 18:09	7005-72-3	
4-Nitroaniline	**<2.9**	ug/L	9.5	2.9	1	11/26/19 05:21	11/26/19 18:09	100-01-6	
4-Nitrophenol	**<2.9**	ug/L	9.7	2.9	1	11/26/19 05:21	11/26/19 18:09	100-02-7	
Acenaphthene	**<0.73**	ug/L	4.8	0.73	1	11/26/19 05:21	11/26/19 18:09	83-32-9	
Acenaphthylene	**<0.70**	ug/L	4.8	0.70	1	11/26/19 05:21	11/26/19 18:09	208-96-8	
Anthracene	**<0.77**	ug/L	4.8	0.77	1	11/26/19 05:21	11/26/19 18:09	120-12-7	
Benzo(a)anthracene	**<0.81**	ug/L	4.8	0.81	1	11/26/19 05:21	11/26/19 18:09	56-55-3	
Benzo(a)pyrene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 18:09	50-32-8	
Benzo(b)fluoranthene	**<0.99**	ug/L	4.8	0.99	1	11/26/19 05:21	11/26/19 18:09	205-99-2	
Benzo(g,h,i)perylene	**<1.3**	ug/L	4.8	1.3	1	11/26/19 05:21	11/26/19 18:09	191-24-2	
Benzo(k)fluoranthene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 18:09	207-08-9	
Butylbenzylphthalate	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 18:09	85-68-7	
Carbazole	**<0.87**	ug/L	4.8	0.87	1	11/26/19 05:21	11/26/19 18:09	86-74-8	
Chrysene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 18:09	218-01-9	
Di-n-butylphthalate	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 18:09	84-74-2	
Di-n-octylphthalate	**<4.5**	ug/L	15.1	4.5	1	11/26/19 05:21	11/26/19 18:09	117-84-0	
Dibenz(a,h)anthracene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 18:09	53-70-3	
Dibenzofuran	**<0.81**	ug/L	4.8	0.81	1	11/26/19 05:21	11/26/19 18:09	132-64-9	
Diethylphthalate	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 18:09	84-66-2	
Dimethylphthalate	**<0.69**	ug/L	4.8	0.69	1	11/26/19 05:21	11/26/19 18:09	131-11-3	
Fluoranthene	**<0.94**	ug/L	4.8	0.94	1	11/26/19 05:21	11/26/19 18:09	206-44-0	
Fluorene	**<0.86**	ug/L	4.8	0.86	1	11/26/19 05:21	11/26/19 18:09	86-73-7	
Hexachloro-1,3-butadiene	**<1.1**	ug/L	5.2	1.1	1	11/26/19 05:21	11/26/19 18:09	87-68-3	
Hexachlorobenzene	**<1.6**	ug/L	4.8	1.6	1	11/26/19 05:21	11/26/19 18:09	118-74-1	
Hexachlorocyclopentadiene	**<0.96**	ug/L	4.8	0.96	1	11/26/19 05:21	11/26/19 18:09	77-47-4	
Hexachloroethane	**<1.4**	ug/L	4.8	1.4	1	11/26/19 05:21	11/26/19 18:09	67-72-1	
Indeno(1,2,3-cd)pyrene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 18:09	193-39-5	
Isophorone	**<0.74**	ug/L	4.8	0.74	1	11/26/19 05:21	11/26/19 18:09	78-59-1	
N-Nitroso-di-n-propylamine	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 18:09	621-64-7	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: AMS-MW1 **Lab ID: 40199755012** Collected: 11/19/19 14:45 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV Semivolatile Organic	Analytical Method: EPA 8270 Preparation Method: EPA 3510								
N-Nitrosodiphenylamine	**<3.3**	ug/L	11.0	3.3	1	11/26/19 05:21	11/26/19 18:09	86-30-6	
Naphthalene	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 18:09	91-20-3	
Nitrobenzene	**<1.0**	ug/L	4.8	1.0	1	11/26/19 05:21	11/26/19 18:09	98-95-3	
Pentachlorophenol	**<4.3**	ug/L	14.5	4.3	1	11/26/19 05:21	11/26/19 18:09	87-86-5	
Phenanthrene	**<0.91**	ug/L	4.8	0.91	1	11/26/19 05:21	11/26/19 18:09	85-01-8	
Phenol	**<0.31**	ug/L	4.8	0.31	1	11/26/19 05:21	11/26/19 18:09	108-95-2	
Pyrene	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 18:09	129-00-0	
bis(2-Chloroethoxy)methane	**<1.2**	ug/L	4.8	1.2	1	11/26/19 05:21	11/26/19 18:09	111-91-1	
bis(2-Chloroethyl) ether	**<1.1**	ug/L	4.8	1.1	1	11/26/19 05:21	11/26/19 18:09	111-44-4	
bis(2-Ethylhexyl)phthalate	**<2.7**	ug/L	9.1	2.7	1	11/26/19 05:21	11/26/19 18:09	117-81-7	
Surrogates									
Nitrobenzene-d5 (S)	76	%	51-108		1	11/26/19 05:21	11/26/19 18:09	4165-60-0	
2-Fluorobiphenyl (S)	65	%	47-105		1	11/26/19 05:21	11/26/19 18:09	321-60-8	
Terphenyl-d14 (S)	92	%	65-147		1	11/26/19 05:21	11/26/19 18:09	1718-51-0	
Phenol-d6 (S)	25	%	18-120		1	11/26/19 05:21	11/26/19 18:09	13127-88-3	
2-Fluorophenol (S)	45	%	32-120		1	11/26/19 05:21	11/26/19 18:09	367-12-4	
2,4,6-Tribromophenol (S)	119	%	57-131		1	11/26/19 05:21	11/26/19 18:09	118-79-6	
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/26/19 00:29	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/26/19 00:29	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/26/19 00:29	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/26/19 00:29	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/26/19 00:29	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/26/19 00:29	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/26/19 00:29	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/26/19 00:29	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/26/19 00:29	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/26/19 00:29	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/26/19 00:29	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/26/19 00:29	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/26/19 00:29	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/26/19 00:29	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/26/19 00:29	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/26/19 00:29	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/26/19 00:29	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/26/19 00:29	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/26/19 00:29	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/26/19 00:29	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/26/19 00:29	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/26/19 00:29	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/26/19 00:29	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/26/19 00:29	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/26/19 00:29	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/26/19 00:29	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/26/19 00:29	75-27-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: AMS-MW1 **Lab ID: 40199755012** Collected: 11/19/19 14:45 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/26/19 00:29	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/26/19 00:29	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/26/19 00:29	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/26/19 00:29	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/26/19 00:29	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/26/19 00:29	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/26/19 00:29	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/26/19 00:29	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/26/19 00:29	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/26/19 00:29	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/26/19 00:29	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/26/19 00:29	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/26/19 00:29	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/26/19 00:29	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/26/19 00:29	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/26/19 00:29	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/26/19 00:29	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/26/19 00:29	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/26/19 00:29	127-18-4	
Toluene	**0.19J**	ug/L	5.0	0.17	1		11/26/19 00:29	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/26/19 00:29	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/26/19 00:29	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/26/19 00:29	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/26/19 00:29	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/26/19 00:29	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/26/19 00:29	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/26/19 00:29	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/26/19 00:29	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/26/19 00:29	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/26/19 00:29	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/26/19 00:29	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/26/19 00:29	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/26/19 00:29	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/26/19 00:29	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	94	%	70-130		1		11/26/19 00:29	460-00-4	HS
Dibromofluoromethane (S)	104	%	70-130		1		11/26/19 00:29	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/26/19 00:29	2037-26-5	
2540D Total Suspended Solids	Analytical Method: SM 2540D								
Total Suspended Solids	**1660**	mg/L	28.6	13.6	1		11/26/19 12:17		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: TB **Lab ID: 40199755013** Collected: 11/19/19 00:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
1,1,1,2-Tetrachloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 20:00	630-20-6	
1,1,1-Trichloroethane	**<0.24**	ug/L	1.0	0.24	1		11/25/19 20:00	71-55-6	
1,1,2,2-Tetrachloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 20:00	79-34-5	
1,1,2-Trichloroethane	**<0.55**	ug/L	5.0	0.55	1		11/25/19 20:00	79-00-5	
1,1-Dichloroethane	**<0.27**	ug/L	1.0	0.27	1		11/25/19 20:00	75-34-3	
1,1-Dichloroethene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 20:00	75-35-4	
1,1-Dichloropropene	**<0.54**	ug/L	1.8	0.54	1		11/25/19 20:00	563-58-6	
1,2,3-Trichlorobenzene	**<0.63**	ug/L	5.0	0.63	1		11/25/19 20:00	87-61-6	
1,2,3-Trichloropropane	**<0.59**	ug/L	5.0	0.59	1		11/25/19 20:00	96-18-4	
1,2,4-Trichlorobenzene	**<0.95**	ug/L	5.0	0.95	1		11/25/19 20:00	120-82-1	
1,2,4-Trimethylbenzene	**<0.84**	ug/L	2.8	0.84	1		11/25/19 20:00	95-63-6	
1,2-Dibromo-3-chloropropane	**<1.8**	ug/L	5.9	1.8	1		11/25/19 20:00	96-12-8	
1,2-Dibromoethane (EDB)	**<0.83**	ug/L	2.8	0.83	1		11/25/19 20:00	106-93-4	
1,2-Dichlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 20:00	95-50-1	
1,2-Dichloroethane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 20:00	107-06-2	
1,2-Dichloropropane	**<0.28**	ug/L	1.0	0.28	1		11/25/19 20:00	78-87-5	
1,3,5-Trimethylbenzene	**<0.87**	ug/L	2.9	0.87	1		11/25/19 20:00	108-67-8	
1,3-Dichlorobenzene	**<0.63**	ug/L	2.1	0.63	1		11/25/19 20:00	541-73-1	
1,3-Dichloropropane	**<0.83**	ug/L	2.8	0.83	1		11/25/19 20:00	142-28-9	
1,4-Dichlorobenzene	**<0.94**	ug/L	3.1	0.94	1		11/25/19 20:00	106-46-7	
2,2-Dichloropropane	**<2.3**	ug/L	7.6	2.3	1		11/25/19 20:00	594-20-7	
2-Chlorotoluene	**<0.93**	ug/L	5.0	0.93	1		11/25/19 20:00	95-49-8	
4-Chlorotoluene	**<0.76**	ug/L	2.5	0.76	1		11/25/19 20:00	106-43-4	
Benzene	**<0.25**	ug/L	1.0	0.25	1		11/25/19 20:00	71-43-2	
Bromobenzene	**<0.24**	ug/L	1.0	0.24	1		11/25/19 20:00	108-86-1	
Bromochloromethane	**<0.36**	ug/L	5.0	0.36	1		11/25/19 20:00	74-97-5	
Bromodichloromethane	**<0.36**	ug/L	1.2	0.36	1		11/25/19 20:00	75-27-4	
Bromoform	**<4.0**	ug/L	13.2	4.0	1		11/25/19 20:00	75-25-2	
Bromomethane	**<0.97**	ug/L	5.0	0.97	1		11/25/19 20:00	74-83-9	
Carbon tetrachloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 20:00	56-23-5	
Chlorobenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 20:00	108-90-7	
Chloroethane	**<1.3**	ug/L	5.0	1.3	1		11/25/19 20:00	75-00-3	
Chloroform	**<1.3**	ug/L	5.0	1.3	1		11/25/19 20:00	67-66-3	
Chloromethane	**<2.2**	ug/L	7.3	2.2	1		11/25/19 20:00	74-87-3	
Dibromochloromethane	**<2.6**	ug/L	8.7	2.6	1		11/25/19 20:00	124-48-1	
Dibromomethane	**<0.94**	ug/L	3.1	0.94	1		11/25/19 20:00	74-95-3	
Dichlorodifluoromethane	**<0.50**	ug/L	5.0	0.50	1		11/25/19 20:00	75-71-8	
Diisopropyl ether	**<1.9**	ug/L	6.3	1.9	1		11/25/19 20:00	108-20-3	
Ethylbenzene	**<0.22**	ug/L	1.0	0.22	1		11/25/19 20:00	100-41-4	
Hexachloro-1,3-butadiene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 20:00	87-68-3	
Isopropylbenzene (Cumene)	**<0.39**	ug/L	5.0	0.39	1		11/25/19 20:00	98-82-8	
Methyl-tert-butyl ether	**<1.2**	ug/L	4.2	1.2	1		11/25/19 20:00	1634-04-4	
Methylene Chloride	**<0.58**	ug/L	5.0	0.58	1		11/25/19 20:00	75-09-2	
Naphthalene	**<1.2**	ug/L	5.0	1.2	1		11/25/19 20:00	91-20-3	
Styrene	**<0.47**	ug/L	1.6	0.47	1		11/25/19 20:00	100-42-5	
Tetrachloroethene	**<0.33**	ug/L	1.1	0.33	1		11/25/19 20:00	127-18-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

ANALYTICAL RESULTS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Sample: TB **Lab ID: 40199755013** Collected: 11/19/19 00:00 Received: 11/22/19 08:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV	Analytical Method: EPA 8260								
Toluene	**<0.17**	ug/L	5.0	0.17	1		11/25/19 20:00	108-88-3	
Trichloroethene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 20:00	79-01-6	
Trichlorofluoromethane	**<0.21**	ug/L	1.0	0.21	1		11/25/19 20:00	75-69-4	
Vinyl chloride	**<0.17**	ug/L	1.0	0.17	1		11/25/19 20:00	75-01-4	
cis-1,2-Dichloroethene	**<0.27**	ug/L	1.0	0.27	1		11/25/19 20:00	156-59-2	
cis-1,3-Dichloropropene	**<3.6**	ug/L	12.1	3.6	1		11/25/19 20:00	10061-01-5	
m&p-Xylene	**<0.47**	ug/L	2.0	0.47	1		11/25/19 20:00	179601-23-1	
n-Butylbenzene	**<0.71**	ug/L	2.4	0.71	1		11/25/19 20:00	104-51-8	
n-Propylbenzene	**<0.81**	ug/L	5.0	0.81	1		11/25/19 20:00	103-65-1	
o-Xylene	**<0.26**	ug/L	1.0	0.26	1		11/25/19 20:00	95-47-6	
p-Isopropyltoluene	**<0.80**	ug/L	2.7	0.80	1		11/25/19 20:00	99-87-6	
sec-Butylbenzene	**<0.85**	ug/L	5.0	0.85	1		11/25/19 20:00	135-98-8	
tert-Butylbenzene	**<0.30**	ug/L	1.0	0.30	1		11/25/19 20:00	98-06-6	
trans-1,2-Dichloroethene	**<1.1**	ug/L	3.6	1.1	1		11/25/19 20:00	156-60-5	
trans-1,3-Dichloropropene	**<4.4**	ug/L	14.6	4.4	1		11/25/19 20:00	10061-02-6	
Surrogates									
4-Bromofluorobenzene (S)	95	%	70-130		1		11/25/19 20:00	460-00-4	HS
Dibromofluoromethane (S)	105	%	70-130		1		11/25/19 20:00	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		11/25/19 20:00	2037-26-5	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

QC Batch: 342252 Analysis Method: EPA 6010
QC Batch Method: EPA 6010 Analysis Description: ICP Metals, Trace, Dissolved
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

METHOD BLANK: 1987542 Matrix: Water
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<13.2	44.0	12/02/19 18:06	
Barium, Dissolved	ug/L	<1.5	5.0	12/02/19 18:06	
Cadmium, Dissolved	ug/L	<1.3	5.0	12/02/19 18:06	
Chromium, Dissolved	ug/L	<2.5	10.0	12/02/19 18:06	
Lead, Dissolved	ug/L	<6.4	21.4	12/02/19 18:06	
Selenium, Dissolved	ug/L	<12.3	41.1	12/02/19 18:06	
Silver, Dissolved	ug/L	<3.2	10.0	12/02/19 18:06	

LABORATORY CONTROL SAMPLE: 1987543

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	466	93	80-120	
Barium, Dissolved	ug/L	500	472	94	80-120	
Cadmium, Dissolved	ug/L	500	465	93	80-120	
Chromium, Dissolved	ug/L	500	460	92	80-120	
Lead, Dissolved	ug/L	500	465	93	80-120	
Selenium, Dissolved	ug/L	500	459	92	80-120	
Silver, Dissolved	ug/L	250	240	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1987544 1987545

Parameter	Units	40199730001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic, Dissolved	ug/L	<13.2	500	500	478	471	95	94	75-125	1	20	
Barium, Dissolved	ug/L	214	500	500	667	667	91	91	75-125	0	20	
Cadmium, Dissolved	ug/L	<1.3	500	500	469	470	94	94	75-125	0	20	
Chromium, Dissolved	ug/L	<2.5	500	500	458	458	92	92	75-125	0	20	
Lead, Dissolved	ug/L	<6.4	500	500	468	468	93	93	75-125	0	20	
Selenium, Dissolved	ug/L	<12.3	500	500	477	495	94	98	75-125	4	20	
Silver, Dissolved	ug/L	<3.2	250	250	208	194	83	78	75-125	7	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

QC Batch: 342716 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

METHOD BLANK: 1990143 Matrix: Water
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.084	0.28	12/09/19 08:42	

LABORATORY CONTROL SAMPLE: 1990144

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.2	105	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1990145 1990146

Parameter	Units	40199755001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.084	5	5	5.1	5.1	102	101	85-115	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

QC Batch: 342717 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury Dissolved
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

METHOD BLANK: 1990148 Matrix: Water
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury, Dissolved	ug/L	<0.084	0.28	12/09/19 09:40	

LABORATORY CONTROL SAMPLE: 1990149

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury, Dissolved	ug/L	5	5.0	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1990150 1990151

Parameter	Units	40199562015 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/L	<0.40	5	5	5.0	5.3	100	105	85-115	5	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

QC Batch: 341791 Analysis Method: EPA 6010
QC Batch Method: EPA 3010 Analysis Description: 6010 MET
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

METHOD BLANK: 1985401 Matrix: Water
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Arsenic	ug/L	<8.3	25.0	11/26/19 14:36	
Barium	ug/L	<1.5	5.0	11/26/19 14:36	
Cadmium	ug/L	<1.3	5.0	11/26/19 14:36	
Chromium	ug/L	<2.5	10.0	11/26/19 14:36	
Lead	ug/L	<5.9	19.7	11/26/19 14:36	
Selenium	ug/L	<12.2	40.8	11/26/19 14:36	
Silver	ug/L	<3.2	10.7	11/26/19 14:36	

LABORATORY CONTROL SAMPLE: 1985402

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Arsenic	ug/L	500	497	99	80-120	
Barium	ug/L	500	489	98	80-120	
Cadmium	ug/L	500	497	99	80-120	
Chromium	ug/L	500	496	99	80-120	
Lead	ug/L	500	498	100	80-120	
Selenium	ug/L	500	494	99	80-120	
Silver	ug/L	250	250	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985403 1985404

Parameter	Units	40199755001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	<8.3	500	500	488	499	96	98	75-125	2	20	
Barium	ug/L	133	500	500	605	627	94	99	75-125	3	20	
Cadmium	ug/L	<1.3	500	500	485	496	97	99	75-125	2	20	
Chromium	ug/L	5.0J	500	500	476	482	94	95	75-125	1	20	
Lead	ug/L	<5.9	500	500	478	486	95	96	75-125	2	20	
Selenium	ug/L	<12.2	500	500	467	477	93	95	75-125	2	20	
Silver	ug/L	<3.2	250	250	246	252	98	101	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

QC Batch: 341712 Analysis Method: EPA 8260
QC Batch Method: EPA 8260 Analysis Description: 8260 MSV
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012, 40199755013

METHOD BLANK: 1985143 Matrix: Water
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012, 40199755013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1,2-Tetrachloroethane	ug/L	<0.27	1.0	11/25/19 16:15	
1,1,1-Trichloroethane	ug/L	<0.24	1.0	11/25/19 16:15	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	1.0	11/25/19 16:15	
1,1,2-Trichloroethane	ug/L	<0.55	5.0	11/25/19 16:15	
1,1-Dichloroethane	ug/L	<0.27	1.0	11/25/19 16:15	
1,1-Dichloroethene	ug/L	<0.24	1.0	11/25/19 16:15	
1,1-Dichloropropene	ug/L	<0.54	1.8	11/25/19 16:15	
1,2,3-Trichlorobenzene	ug/L	<0.63	5.0	11/25/19 16:15	
1,2,3-Trichloropropane	ug/L	<0.59	5.0	11/25/19 16:15	
1,2,4-Trichlorobenzene	ug/L	<0.95	5.0	11/25/19 16:15	
1,2,4-Trimethylbenzene	ug/L	<0.84	2.8	11/25/19 16:15	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	5.9	11/25/19 16:15	
1,2-Dibromoethane (EDB)	ug/L	<0.83	2.8	11/25/19 16:15	
1,2-Dichlorobenzene	ug/L	<0.71	2.4	11/25/19 16:15	
1,2-Dichloroethane	ug/L	<0.28	1.0	11/25/19 16:15	
1,2-Dichloropropane	ug/L	<0.28	1.0	11/25/19 16:15	
1,3,5-Trimethylbenzene	ug/L	<0.87	2.9	11/25/19 16:15	
1,3-Dichlorobenzene	ug/L	<0.63	2.1	11/25/19 16:15	
1,3-Dichloropropane	ug/L	<0.83	2.8	11/25/19 16:15	
1,4-Dichlorobenzene	ug/L	<0.94	3.1	11/25/19 16:15	
2,2-Dichloropropane	ug/L	<2.3	7.6	11/25/19 16:15	
2-Chlorotoluene	ug/L	<0.93	5.0	11/25/19 16:15	
4-Chlorotoluene	ug/L	<0.76	2.5	11/25/19 16:15	
Benzene	ug/L	<0.25	1.0	11/25/19 16:15	
Bromobenzene	ug/L	<0.24	1.0	11/25/19 16:15	
Bromochloromethane	ug/L	<0.36	5.0	11/25/19 16:15	
Bromodichloromethane	ug/L	<0.36	1.2	11/25/19 16:15	
Bromoform	ug/L	<4.0	13.2	11/25/19 16:15	
Bromomethane	ug/L	<0.97	5.0	11/25/19 16:15	
Carbon tetrachloride	ug/L	<0.17	1.0	11/25/19 16:15	
Chlorobenzene	ug/L	<0.71	2.4	11/25/19 16:15	
Chloroethane	ug/L	<1.3	5.0	11/25/19 16:15	
Chloroform	ug/L	<1.3	5.0	11/25/19 16:15	
Chloromethane	ug/L	<2.2	7.3	11/25/19 16:15	
cis-1,2-Dichloroethene	ug/L	<0.27	1.0	11/25/19 16:15	
cis-1,3-Dichloropropene	ug/L	<3.6	12.1	11/25/19 16:15	
Dibromochloromethane	ug/L	<2.6	8.7	11/25/19 16:15	
Dibromomethane	ug/L	<0.94	3.1	11/25/19 16:15	
Dichlorodifluoromethane	ug/L	<0.50	5.0	11/25/19 16:15	
Diisopropyl ether	ug/L	<1.9	6.3	11/25/19 16:15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

METHOD BLANK: 1985143 Matrix: Water

Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012, 40199755013

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Ethylbenzene	ug/L	<0.22	1.0	11/25/19 16:15	
Hexachloro-1,3-butadiene	ug/L	<1.2	5.0	11/25/19 16:15	
Isopropylbenzene (Cumene)	ug/L	<0.39	5.0	11/25/19 16:15	
m&p-Xylene	ug/L	<0.47	2.0	11/25/19 16:15	
Methyl-tert-butyl ether	ug/L	<1.2	4.2	11/25/19 16:15	
Methylene Chloride	ug/L	<0.58	5.0	11/25/19 16:15	
n-Butylbenzene	ug/L	<0.71	2.4	11/25/19 16:15	
n-Propylbenzene	ug/L	<0.81	5.0	11/25/19 16:15	
Naphthalene	ug/L	<1.2	5.0	11/25/19 16:15	
o-Xylene	ug/L	<0.26	1.0	11/25/19 16:15	
p-Isopropyltoluene	ug/L	<0.80	2.7	11/25/19 16:15	
sec-Butylbenzene	ug/L	<0.85	5.0	11/25/19 16:15	
Styrene	ug/L	<0.47	1.6	11/25/19 16:15	
tert-Butylbenzene	ug/L	<0.30	1.0	11/25/19 16:15	
Tetrachloroethene	ug/L	<0.33	1.1	11/25/19 16:15	
Toluene	ug/L	<0.17	5.0	11/25/19 16:15	
trans-1,2-Dichloroethene	ug/L	<1.1	3.6	11/25/19 16:15	
trans-1,3-Dichloropropene	ug/L	<4.4	14.6	11/25/19 16:15	
Trichloroethene	ug/L	<0.26	1.0	11/25/19 16:15	
Trichlorofluoromethane	ug/L	<0.21	1.0	11/25/19 16:15	
Vinyl chloride	ug/L	<0.17	1.0	11/25/19 16:15	
4-Bromofluorobenzene (S)	%	96	70-130	11/25/19 16:15	
Dibromofluoromethane (S)	%	104	70-130	11/25/19 16:15	
Toluene-d8 (S)	%	100	70-130	11/25/19 16:15	

LABORATORY CONTROL SAMPLE: 1985144

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	50	50.0	100	70-130	
1,1,2,2-Tetrachloroethane	ug/L	50	45.6	91	70-130	
1,1,2-Trichloroethane	ug/L	50	49.1	98	70-130	
1,1-Dichloroethane	ug/L	50	48.9	98	73-150	
1,1-Dichloroethene	ug/L	50	43.4	87	73-138	
1,2,4-Trichlorobenzene	ug/L	50	39.7	79	70-130	
1,2-Dibromo-3-chloropropane	ug/L	50	37.9	76	64-129	
1,2-Dibromoethane (EDB)	ug/L	50	45.7	91	70-130	
1,2-Dichlorobenzene	ug/L	50	46.5	93	70-130	
1,2-Dichloroethane	ug/L	50	50.7	101	75-140	
1,2-Dichloropropane	ug/L	50	49.4	99	73-135	
1,3-Dichlorobenzene	ug/L	50	45.5	91	70-130	
1,4-Dichlorobenzene	ug/L	50	46.6	93	70-130	
Benzene	ug/L	50	49.6	99	70-130	
Bromodichloromethane	ug/L	50	48.3	97	70-130	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

LABORATORY CONTROL SAMPLE: 1985144

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromoform	ug/L	50	42.6	85	68-129	
Bromomethane	ug/L	50	31.5	63	18-159	
Carbon tetrachloride	ug/L	50	47.8	96	70-130	
Chlorobenzene	ug/L	50	48.9	98	70-130	
Chloroethane	ug/L	50	44.6	89	53-147	
Chloroform	ug/L	50	49.9	100	74-136	
Chloromethane	ug/L	50	30.0	60	29-115	
cis-1,2-Dichloroethene	ug/L	50	47.6	95	70-130	
cis-1,3-Dichloropropene	ug/L	50	44.3	89	70-130	
Dibromochloromethane	ug/L	50	46.4	93	70-130	
Dichlorodifluoromethane	ug/L	50	35.0	70	10-130	
Ethylbenzene	ug/L	50	47.1	94	80-124	
Isopropylbenzene (Cumene)	ug/L	50	45.2	90	70-130	
m&p-Xylene	ug/L	100	95.7	96	70-130	
Methyl-tert-butyl ether	ug/L	50	39.1	78	54-137	
Methylene Chloride	ug/L	50	44.6	89	73-138	
o-Xylene	ug/L	50	46.8	94	70-130	
Styrene	ug/L	50	48.9	98	70-130	
Tetrachloroethene	ug/L	50	47.4	95	70-130	
Toluene	ug/L	50	49.2	98	80-126	
trans-1,2-Dichloroethene	ug/L	50	46.7	93	73-145	
trans-1,3-Dichloropropene	ug/L	50	40.8	82	70-130	
Trichloroethene	ug/L	50	51.8	104	70-130	
Trichlorofluoromethane	ug/L	50	50.2	100	76-147	
Vinyl chloride	ug/L	50	39.9	80	51-120	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			104	70-130	
Toluene-d8 (S)	%			98	70-130	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985379 1985380

Parameter	Units	40199755005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,1,1-Trichloroethane	ug/L	<0.24	50	50	53.6	52.4	107	105	70-130	2	20	
1,1,2,2-Tetrachloroethane	ug/L	<0.28	50	50	49.9	48.4	100	97	70-130	3	20	
1,1,2-Trichloroethane	ug/L	<0.55	50	50	52.8	51.4	106	103	70-137	3	20	
1,1-Dichloroethane	ug/L	<0.27	50	50	52.5	50.6	105	101	73-153	4	20	
1,1-Dichloroethene	ug/L	<0.24	50	50	47.1	45.5	94	91	73-138	3	20	
1,2,4-Trichlorobenzene	ug/L	<0.95	50	50	45.2	43.7	90	87	70-130	3	20	
1,2-Dibromo-3-chloropropane	ug/L	<1.8	50	50	43.4	40.9	87	82	58-129	6	20	
1,2-Dibromoethane (EDB)	ug/L	<0.83	50	50	50.5	48.9	101	98	70-130	3	20	
1,2-Dichlorobenzene	ug/L	<0.71	50	50	50.6	49.2	101	98	70-130	3	20	
1,2-Dichloroethane	ug/L	<0.28	50	50	55.1	53.1	110	106	75-140	4	20	
1,2-Dichloropropane	ug/L	<0.28	50	50	54.0	51.5	108	103	71-138	5	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1985379 1985380

Parameter	Units	40199755005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
1,3-Dichlorobenzene	ug/L	<0.63	50	50	50.1	48.8	100	98	70-130	3	20	
1,4-Dichlorobenzene	ug/L	<0.94	50	50	51.1	49.4	102	99	70-130	3	20	
Benzene	ug/L	<0.25	50	50	53.3	51.5	107	103	70-130	3	20	
Bromodichloromethane	ug/L	<0.36	50	50	53.0	50.6	106	101	70-130	5	20	
Bromoform	ug/L	<4.0	50	50	46.8	44.7	94	89	68-129	5	20	
Bromomethane	ug/L	<0.97	50	50	38.7	38.4	77	77	15-170	1	20	
Carbon tetrachloride	ug/L	<0.17	50	50	51.7	51.1	103	102	70-130	1	20	
Chlorobenzene	ug/L	<0.71	50	50	52.6	50.2	105	100	70-130	5	20	
Chloroethane	ug/L	<1.3	50	50	47.2	46.4	94	93	51-148	2	20	
Chloroform	ug/L	<1.3	50	50	52.7	51.0	105	102	74-136	3	20	
Chloromethane	ug/L	<2.2	50	50	32.2	31.0	64	62	23-115	4	20	
cis-1,2-Dichloroethene	ug/L	<0.27	50	50	51.5	50.7	103	101	70-131	2	20	
cis-1,3-Dichloropropene	ug/L	<3.6	50	50	49.2	47.1	98	94	70-130	4	20	
Dibromochloromethane	ug/L	<2.6	50	50	50.7	48.8	101	98	70-130	4	20	
Dichlorodifluoromethane	ug/L	<0.50	50	50	35.7	35.4	71	71	10-132	1	20	
Ethylbenzene	ug/L	<0.22	50	50	51.1	49.3	102	99	80-125	4	20	
Isopropylbenzene (Cumene)	ug/L	<0.39	50	50	48.5	47.2	97	94	70-130	3	20	
m&p-Xylene	ug/L	<0.47	100	100	103	99.9	103	100	70-130	3	20	
Methyl-tert-butyl ether	ug/L	<1.2	50	50	42.7	41.7	85	83	51-145	3	20	
Methylene Chloride	ug/L	<0.58	50	50	48.6	46.7	97	93	73-140	4	20	
o-Xylene	ug/L	<0.26	50	50	50.4	48.8	101	98	70-130	3	20	
Styrene	ug/L	<0.47	50	50	53.1	50.9	106	102	70-130	4	20	
Tetrachloroethene	ug/L	<0.33	50	50	51.9	50.4	104	101	70-130	3	20	
Toluene	ug/L	<0.17	50	50	53.0	51.0	106	102	80-131	4	20	
trans-1,2-Dichloroethene	ug/L	<1.1	50	50	50.7	49.2	101	98	73-148	3	20	
trans-1,3-Dichloropropene	ug/L	<4.4	50	50	45.5	44.2	91	88	70-130	3	20	
Trichloroethene	ug/L	<0.26	50	50	55.7	53.4	111	107	70-130	4	20	
Trichlorofluoromethane	ug/L	<0.21	50	50	52.8	52.0	106	104	74-147	2	20	
Vinyl chloride	ug/L	<0.17	50	50	42.9	41.5	86	83	41-129	3	20	
4-Bromofluorobenzene (S)	%						99	99	70-130			HS
Dibromofluoromethane (S)	%						104	104	70-130			
Toluene-d8 (S)	%						98	97	70-130			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

QC Batch: 342009 Analysis Method: EPA 8082
QC Batch Method: EPA 3510 Analysis Description: 8082 GCS PCB
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

METHOD BLANK: 1986365 Matrix: Water
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L	<0.11	0.50	12/02/19 21:17	
PCB-1221 (Aroclor 1221)	ug/L	<0.11	0.50	12/02/19 21:17	
PCB-1232 (Aroclor 1232)	ug/L	<0.11	0.50	12/02/19 21:17	
PCB-1242 (Aroclor 1242)	ug/L	<0.11	0.50	12/02/19 21:17	
PCB-1248 (Aroclor 1248)	ug/L	<0.11	0.50	12/02/19 21:17	
PCB-1254 (Aroclor 1254)	ug/L	<0.11	0.50	12/02/19 21:17	
PCB-1260 (Aroclor 1260)	ug/L	<0.11	0.50	12/02/19 21:17	
Decachlorobiphenyl (S)	%	58	10-103	12/02/19 21:17	
Tetrachloro-m-xylene (S)	%	85	43-112	12/02/19 21:17	

LABORATORY CONTROL SAMPLE & LCSD: 1986366 1986367

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
PCB-1016 (Aroclor 1016)	ug/L		<0.11	<0.11					20	
PCB-1221 (Aroclor 1221)	ug/L		<0.11	<0.11					20	
PCB-1232 (Aroclor 1232)	ug/L		<0.11	<0.11					20	
PCB-1242 (Aroclor 1242)	ug/L		<0.11	<0.11					20	
PCB-1248 (Aroclor 1248)	ug/L		<0.11	<0.11					20	
PCB-1254 (Aroclor 1254)	ug/L		<0.11	<0.11					20	
PCB-1260 (Aroclor 1260)	ug/L	5	4.1	4.3	82	86	62-101	5	20	
Decachlorobiphenyl (S)	%				62	61	10-103			
Tetrachloro-m-xylene (S)	%				86	90	43-112			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

QC Batch: 341844 Analysis Method: EPA 8270
QC Batch Method: EPA 3510 Analysis Description: 8270 Water MSSV
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

METHOD BLANK: 1985575 Matrix: Water
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trichlorobenzene	ug/L	<1.6	5.2	11/26/19 12:28	
1,2-Dichlorobenzene	ug/L	<1.4	5.0	11/26/19 12:28	
1,3-Dichlorobenzene	ug/L	<1.5	5.2	11/26/19 12:28	
1,4-Dichlorobenzene	ug/L	<1.4	5.0	11/26/19 12:28	
2,2'-Oxybis(1-chloropropane)	ug/L	<1.2	5.0	11/26/19 12:28	
2,4,5-Trichlorophenol	ug/L	<0.64	5.0	11/26/19 12:28	
2,4,6-Trichlorophenol	ug/L	<0.80	5.0	11/26/19 12:28	
2,4-Dichlorophenol	ug/L	<0.90	5.0	11/26/19 12:28	
2,4-Dimethylphenol	ug/L	<1.2	5.0	11/26/19 12:28	
2,4-Dinitrophenol	ug/L	<2.5	8.2	11/26/19 12:28	
2,4-Dinitrotoluene	ug/L	<1.1	5.0	11/26/19 12:28	
2,6-Dinitrotoluene	ug/L	<0.77	5.0	11/26/19 12:28	
2-Chloronaphthalene	ug/L	<0.83	5.0	11/26/19 12:28	
2-Chlorophenol	ug/L	<0.83	5.0	11/26/19 12:28	
2-Methylnaphthalene	ug/L	<1.2	5.0	11/26/19 12:28	
2-Methylphenol(o-Cresol)	ug/L	<0.93	5.0	11/26/19 12:28	
2-Nitroaniline	ug/L	<0.95	5.0	11/26/19 12:28	
2-Nitrophenol	ug/L	<0.83	5.0	11/26/19 12:28	
3&4-Methylphenol(m&p Cresol)	ug/L	<0.61	5.0	11/26/19 12:28	
3,3'-Dichlorobenzidine	ug/L	<1.3	5.0	11/26/19 12:28	
3-Nitroaniline	ug/L	<1.4	5.0	11/26/19 12:28	
4,6-Dinitro-2-methylphenol	ug/L	<3.1	10.4	11/26/19 12:28	
4-Bromophenylphenyl ether	ug/L	<0.96	5.0	11/26/19 12:28	
4-Chloro-3-methylphenol	ug/L	<0.68	5.0	11/26/19 12:28	
4-Chloroaniline	ug/L	<1.8	6.0	11/26/19 12:28	
4-Chlorophenylphenyl ether	ug/L	<0.83	5.0	11/26/19 12:28	
4-Nitroaniline	ug/L	<3.0	10	11/26/19 12:28	
4-Nitrophenol	ug/L	<3.1	10.2	11/26/19 12:28	
Acenaphthene	ug/L	<0.76	5.0	11/26/19 12:28	
Acenaphthylene	ug/L	<0.73	5.0	11/26/19 12:28	
Anthracene	ug/L	<0.81	5.0	11/26/19 12:28	
Benzo(a)anthracene	ug/L	<0.85	5.0	11/26/19 12:28	
Benzo(a)pyrene	ug/L	<1.3	5.0	11/26/19 12:28	
Benzo(b)fluoranthene	ug/L	<1.0	5.0	11/26/19 12:28	
Benzo(g,h,i)perylene	ug/L	<1.4	5.0	11/26/19 12:28	
Benzo(k)fluoranthene	ug/L	<1.1	5.0	11/26/19 12:28	
bis(2-Chloroethoxy)methane	ug/L	<1.3	5.0	11/26/19 12:28	
bis(2-Chloroethyl) ether	ug/L	<1.2	5.0	11/26/19 12:28	
bis(2-Ethylhexyl)phthalate	ug/L	<2.9	9.6	11/26/19 12:28	
Butylbenzylphthalate	ug/L	<1.3	5.0	11/26/19 12:28	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

METHOD BLANK: 1985575 Matrix: Water

Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Carbazole	ug/L	<0.91	5.0	11/26/19 12:28	
Chrysene	ug/L	<1.3	5.0	11/26/19 12:28	
Di-n-butylphthalate	ug/L	<1.2	5.0	11/26/19 12:28	
Di-n-octylphthalate	ug/L	<4.8	15.9	11/26/19 12:28	
Dibenz(a,h)anthracene	ug/L	<1.1	5.0	11/26/19 12:28	
Dibenzofuran	ug/L	<0.85	5.0	11/26/19 12:28	
Diethylphthalate	ug/L	<0.78	5.0	11/26/19 12:28	
Dimethylphthalate	ug/L	<0.72	5.0	11/26/19 12:28	
Fluoranthene	ug/L	<0.99	5.0	11/26/19 12:28	
Fluorene	ug/L	<0.91	5.0	11/26/19 12:28	
Hexachloro-1,3-butadiene	ug/L	<1.1	5.5	11/26/19 12:28	
Hexachlorobenzene	ug/L	<1.7	5.0	11/26/19 12:28	
Hexachlorocyclopentadiene	ug/L	<1.0	5.0	11/26/19 12:28	
Hexachloroethane	ug/L	<1.4	5.0	11/26/19 12:28	
Indeno(1,2,3-cd)pyrene	ug/L	<1.2	5.0	11/26/19 12:28	
Isophorone	ug/L	<0.77	5.0	11/26/19 12:28	
N-Nitroso-di-n-propylamine	ug/L	<1.1	5.0	11/26/19 12:28	
N-Nitrosodiphenylamine	ug/L	<3.4	11.5	11/26/19 12:28	
Naphthalene	ug/L	<1.2	5.0	11/26/19 12:28	
Nitrobenzene	ug/L	<1.1	5.0	11/26/19 12:28	
Pentachlorophenol	ug/L	<4.6	15.2	11/26/19 12:28	
Phenanthrene	ug/L	<0.95	5.0	11/26/19 12:28	
Phenol	ug/L	<0.32	5.0	11/26/19 12:28	
Pyrene	ug/L	<1.2	5.0	11/26/19 12:28	
2,4,6-Tribromophenol (S)	%	105	57-131	11/26/19 12:28	
2-Fluorobiphenyl (S)	%	55	47-105	11/26/19 12:28	
2-Fluorophenol (S)	%	44	32-120	11/26/19 12:28	
Nitrobenzene-d5 (S)	%	65	51-108	11/26/19 12:28	
Phenol-d6 (S)	%	28	18-120	11/26/19 12:28	
Terphenyl-d14 (S)	%	103	65-147	11/26/19 12:28	

LABORATORY CONTROL SAMPLE & LCSD: 1985576 1985577

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,2,4-Trichlorobenzene	ug/L	50	39.8	37.6	80	75	70-130	6	20	
1,2-Dichlorobenzene	ug/L	50	33.3	32.0	67	64	58-130	4	20	
1,3-Dichlorobenzene	ug/L	50	29.4	28.4	59	57	53-130	3	20	
1,4-Dichlorobenzene	ug/L	50	30.2	28.6	60	57	57-120	6	20	
2,2'-Oxybis(1-chloropropane)	ug/L	50	41.6	40.3	83	81	55-130	3	20	
2,4,5-Trichlorophenol	ug/L	50	48.7	48.1	97	96	59-124	1	26	
2,4,6-Trichlorophenol	ug/L	50	49.1	46.6	98	93	64-125	5	23	
2,4-Dichlorophenol	ug/L	50	47.1	46.2	94	92	61-113	2	28	
2,4-Dimethylphenol	ug/L	50	39.3	37.7	79	75	30-112	4	38	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
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(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

LABORATORY CONTROL SAMPLE & LCSD: 1985576 1985577

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
2,4-Dinitrophenol	ug/L	50	26.4	27.2	53	54	33-136	3	34	
2,4-Dinitrotoluene	ug/L	50	55.0	53.3	110	107	70-132	3	20	
2,6-Dinitrotoluene	ug/L	50	55.8	54.8	112	110	70-126	2	20	
2-Chloronaphthalene	ug/L	50	46.3	44.3	93	89	70-130	5	20	
2-Chlorophenol	ug/L	50	39.9	38.9	80	78	55-130	3	26	
2-Methylnaphthalene	ug/L	50	46.9	45.8	94	92	70-130	2	20	
2-Methylphenol(o-Cresol)	ug/L	50	40.3	38.4	81	77	45-107	5	28	
2-Nitroaniline	ug/L	50	53.3	51.6	107	103	57-140	3	20	
2-Nitrophenol	ug/L	50	48.3	47.6	97	95	67-117	2	22	
3&4-Methylphenol(m&p Cresol)	ug/L	50	35.7	34.5	71	69	39-130	4	27	
3,3'-Dichlorobenzidine	ug/L	50	44.8	42.8	90	86	38-91	4	36	
3-Nitroaniline	ug/L	50	50.4	47.2	101	94	60-125	7	20	
4,6-Dinitro-2-methylphenol	ug/L	50	35.3	35.3	71	71	54-139	0	20	
4-Bromophenylphenyl ether	ug/L	50	49.9	48.3	100	97	70-130	3	20	
4-Chloro-3-methylphenol	ug/L	50	48.6	47.1	97	94	54-118	3	27	
4-Chloroaniline	ug/L	50	45.9	37.5	92	75	60-130	20	20	
4-Chlorophenylphenyl ether	ug/L	50	52.3	50.5	105	101	70-130	4	20	
4-Nitroaniline	ug/L	50	54.0	49.7	108	99	53-129	8	23	
4-Nitrophenol	ug/L	50	10.9	11.6	22	23	10-130	6	29	
Acenaphthene	ug/L	50	49.5	47.2	99	94	69-119	5	20	
Acenaphthylene	ug/L	50	50.9	49.2	102	98	70-130	3	20	
Anthracene	ug/L	50	54.8	52.6	110	105	73-134	4	20	
Benzo(a)anthracene	ug/L	50	52.2	50.7	104	101	70-130	3	20	
Benzo(a)pyrene	ug/L	50	52.9	51.5	106	103	74-117	3	20	
Benzo(b)fluoranthene	ug/L	50	51.7	48.4	103	97	70-125	6	20	
Benzo(g,h,i)perylene	ug/L	50	51.3	50.5	103	101	67-130	1	20	
Benzo(k)fluoranthene	ug/L	50	51.8	52.8	104	106	70-130	2	20	
bis(2-Chloroethoxy)methane	ug/L	50	48.8	48.0	98	96	70-130	2	20	
bis(2-Chloroethyl) ether	ug/L	50	43.6	41.5	87	83	63-116	5	20	
bis(2-Ethylhexyl)phthalate	ug/L	50	53.7	51.8	107	104	70-130	4	20	
Butylbenzylphthalate	ug/L	50	55.1	53.1	110	106	73-133	4	20	
Carbazole	ug/L	50	55.1	52.6	110	105	70-130	5	20	
Chrysene	ug/L	50	56.1	53.6	112	107	70-130	5	20	
Di-n-butylphthalate	ug/L	50	52.9	51.8	106	104	71-131	2	20	
Di-n-octylphthalate	ug/L	50	53.9	52.2	108	104	65-118	3	20	
Dibenz(a,h)anthracene	ug/L	50	55.6	55.2	111	110	36-111	1	20	
Dibenzofuran	ug/L	50	50.4	48.9	101	98	70-130	3	20	
Diethylphthalate	ug/L	50	51.9	51.0	104	102	70-130	2	20	
Dimethylphthalate	ug/L	50	52.3	50.5	105	101	70-130	3	20	
Fluoranthene	ug/L	50	57.5	56.0	115	112	86-130	3	20	
Fluorene	ug/L	50	53.6	51.2	107	102	70-130	5	20	
Hexachloro-1,3-butadiene	ug/L	50	34.9	32.9	70	66	63-107	6	20	
Hexachlorobenzene	ug/L	50	49.1	47.8	98	96	70-124	3	20	
Hexachlorocyclopentadiene	ug/L	50	15.5	14.5	31	29	25-73	7	26	
Hexachloroethane	ug/L	50	25.6	25.2	51	50	50-130	2	20	
Indeno(1,2,3-cd)pyrene	ug/L	50	49.6	49.4	99	99	64-130	0	20	
Isophorone	ug/L	50	48.7	47.7	97	95	65-130	2	20	

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

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

LABORATORY CONTROL SAMPLE & LCSD: 1985576 1985577

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
N-Nitroso-di-n-propylamine	ug/L	50	48.2	46.5	96	93	67-130	4	20	
N-Nitrosodiphenylamine	ug/L	50	47.4	46.2	95	92	80-121	3	20	
Naphthalene	ug/L	50	44.8	43.0	90	86	70-130	4	20	
Nitrobenzene	ug/L	50	46.0	44.8	92	90	70-130	3	20	
Pentachlorophenol	ug/L	50	31.6	31.3	63	63	61-113	1	20	
Phenanthrene	ug/L	50	50.1	48.4	100	97	70-130	4	20	
Phenol	ug/L	50	18.8	18.3	38	37	25-120	3	20	
Pyrene	ug/L	50	52.2	49.9	104	100	70-130	5	20	
2,4,6-Tribromophenol (S)	%				128	123	57-131			
2-Fluorobiphenyl (S)	%				78	75	47-105			
2-Fluorophenol (S)	%				57	54	32-120			
Nitrobenzene-d5 (S)	%				95	86	51-108			
Phenol-d6 (S)	%				37	35	18-120			
Terphenyl-d14 (S)	%				109	106	65-147			

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

QC Batch: 341870 Analysis Method: SM 2540D
QC Batch Method: SM 2540D Analysis Description: 2540D Total Suspended Solids
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

METHOD BLANK: 1985683 Matrix: Water
Associated Lab Samples: 40199755001, 40199755002, 40199755003, 40199755004, 40199755005, 40199755006, 40199755007, 40199755008, 40199755009, 40199755010, 40199755011, 40199755012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	<0.48	1.0	11/26/19 12:16	

LABORATORY CONTROL SAMPLE: 1985684

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	102	102	80-120	

SAMPLE DUPLICATE: 1985685

Parameter	Units	35513865001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	11300	10900	3	10	

SAMPLE DUPLICATE: 1985686

Parameter	Units	35513865002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Suspended Solids	mg/L	5050	4920	3	10	

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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QUALIFIERS

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

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 LOD.

J - Estimated concentration at or above the LOD and below the LOQ.

LOD - Limit of Detection adjusted for dilution factor, percent moisture, initial weight and final volume.

LOQ - Limit of Quantitation adjusted for dilution factor, percent moisture, initial weight and final volume.

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 at or above the adjusted LOD.

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.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay

BATCH QUALIFIERS

Batch: 341951

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

Batch: 342069

[M5]	A matrix spike/matrix spike duplicate was not performed for this batch due to insufficient sample volume.

ANALYTE QUALIFIERS

HS	Results are from sample aliquot taken from VOA vial with headspace (air bubble greater than 6 mm diameter).
P4	Sample field preservation does not meet EPA or method recommendations for this analysis.
S0	Surrogate recovery outside laboratory control limits.
S3	Surrogate recovery exceeded laboratory control limits. Analyte presence below reporting limits in associated sample.
S4	Surrogate recovery not evaluated against control limits due to sample dilution.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40199755001	**FVMW-26**	EPA 3510	342009	EPA 8082	342069
40199755002	**FVMW-27**	EPA 3510	342009	EPA 8082	342069
40199755003	**AMN-MW1**	EPA 3510	342009	EPA 8082	342069
40199755004	**GMMW-1**	EPA 3510	342009	EPA 8082	342069
40199755005	**GMMW-2**	EPA 3510	342009	EPA 8082	342069
40199755006	**GMMW-3**	EPA 3510	342009	EPA 8082	342069
40199755007	**GMMW-4**	EPA 3510	342009	EPA 8082	342069
40199755008	**GMMW-5**	EPA 3510	342009	EPA 8082	342069
40199755009	**GMMW-6**	EPA 3510	342009	EPA 8082	342069
40199755010	**GMMW-7**	EPA 3510	342009	EPA 8082	342069
40199755011	**FVMW-20**	EPA 3510	342009	EPA 8082	342069
40199755012	**AMS-MW1**	EPA 3510	342009	EPA 8082	342069
40199755001	**FVMW-26**	EPA 3010	341791	EPA 6010	341889
40199755002	**FVMW-27**	EPA 3010	341791	EPA 6010	341889
40199755003	**AMN-MW1**	EPA 3010	341791	EPA 6010	341889
40199755004	**GMMW-1**	EPA 3010	341791	EPA 6010	341889
40199755005	**GMMW-2**	EPA 3010	341791	EPA 6010	341889
40199755006	**GMMW-3**	EPA 3010	341791	EPA 6010	341889
40199755007	**GMMW-4**	EPA 3010	341791	EPA 6010	341889
40199755008	**GMMW-5**	EPA 3010	341791	EPA 6010	341889
40199755009	**GMMW-6**	EPA 3010	341791	EPA 6010	341889
40199755010	**GMMW-7**	EPA 3010	341791	EPA 6010	341889
40199755011	**FVMW-20**	EPA 3010	341791	EPA 6010	341889
40199755012	**AMS-MW1**	EPA 3010	341791	EPA 6010	341889
40199755001	**FVMW-26**	EPA 6010	342252		
40199755002	**FVMW-27**	EPA 6010	342252		
40199755003	**AMN-MW1**	EPA 6010	342252		
40199755004	**GMMW-1**	EPA 6010	342252		
40199755005	**GMMW-2**	EPA 6010	342252		
40199755006	**GMMW-3**	EPA 6010	342252		
40199755007	**GMMW-4**	EPA 6010	342252		
40199755008	**GMMW-5**	EPA 6010	342252		
40199755009	**GMMW-6**	EPA 6010	342252		
40199755010	**GMMW-7**	EPA 6010	342252		
40199755011	**FVMW-20**	EPA 6010	342252		
40199755012	**AMS-MW1**	EPA 6010	342252		
40199755001	**FVMW-26**	EPA 7470	342716	EPA 7470	342765
40199755002	**FVMW-27**	EPA 7470	342716	EPA 7470	342765
40199755003	**AMN-MW1**	EPA 7470	342716	EPA 7470	342765
40199755004	**GMMW-1**	EPA 7470	342716	EPA 7470	342765
40199755005	**GMMW-2**	EPA 7470	342716	EPA 7470	342765
40199755006	**GMMW-3**	EPA 7470	342716	EPA 7470	342765
40199755007	**GMMW-4**	EPA 7470	342716	EPA 7470	342765
40199755008	**GMMW-5**	EPA 7470	342716	EPA 7470	342765
40199755009	**GMMW-6**	EPA 7470	342716	EPA 7470	342765
40199755010	**GMMW-7**	EPA 7470	342716	EPA 7470	342765
40199755011	**FVMW-20**	EPA 7470	342716	EPA 7470	342765

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40199755012	**AMS-MW1**	EPA 7470	342716	EPA 7470	342765
40199755001	**FVMW-26**	EPA 7470	342717	EPA 7470	342766
40199755002	**FVMW-27**	EPA 7470	342717	EPA 7470	342766
40199755003	**AMN-MW1**	EPA 7470	342717	EPA 7470	342766
40199755004	**GMMW-1**	EPA 7470	342717	EPA 7470	342766
40199755005	**GMMW-2**	EPA 7470	342717	EPA 7470	342766
40199755006	**GMMW-3**	EPA 7470	342717	EPA 7470	342766
40199755007	**GMMW-4**	EPA 7470	342717	EPA 7470	342766
40199755008	**GMMW-5**	EPA 7470	342717	EPA 7470	342766
40199755009	**GMMW-6**	EPA 7470	342717	EPA 7470	342766
40199755010	**GMMW-7**	EPA 7470	342717	EPA 7470	342766
40199755011	**FVMW-20**	EPA 7470	342717	EPA 7470	342766
40199755012	**AMS-MW1**	EPA 7470	342717	EPA 7470	342766
40199755001	**FVMW-26**	EPA 3510	341844	EPA 8270	341951
40199755002	**FVMW-27**	EPA 3510	341844	EPA 8270	341951
40199755003	**AMN-MW1**	EPA 3510	341844	EPA 8270	341951
40199755004	**GMMW-1**	EPA 3510	341844	EPA 8270	341951
40199755005	**GMMW-2**	EPA 3510	341844	EPA 8270	341951
40199755006	**GMMW-3**	EPA 3510	341844	EPA 8270	341951
40199755007	**GMMW-4**	EPA 3510	341844	EPA 8270	341951
40199755008	**GMMW-5**	EPA 3510	341844	EPA 8270	341951
40199755009	**GMMW-6**	EPA 3510	341844	EPA 8270	341951
40199755010	**GMMW-7**	EPA 3510	341844	EPA 8270	341951
40199755011	**FVMW-20**	EPA 3510	341844	EPA 8270	341951
40199755012	**AMS-MW1**	EPA 3510	341844	EPA 8270	341951
40199755001	**FVMW-26**	EPA 8260	341712		
40199755002	**FVMW-27**	EPA 8260	341712		
40199755003	**AMN-MW1**	EPA 8260	341712		
40199755004	**GMMW-1**	EPA 8260	341712		
40199755005	**GMMW-2**	EPA 8260	341712		
40199755006	**GMMW-3**	EPA 8260	341712		
40199755007	**GMMW-4**	EPA 8260	341712		
40199755008	**GMMW-5**	EPA 8260	341712		
40199755009	**GMMW-6**	EPA 8260	341712		
40199755010	**GMMW-7**	EPA 8260	341712		
40199755011	**FVMW-20**	EPA 8260	341712		
40199755012	**AMS-MW1**	EPA 8260	341712		
40199755013	**TB**	EPA 8260	341712		
40199755001	**FVMW-26**	SM 2540D	341870		
40199755002	**FVMW-27**	SM 2540D	341870		
40199755003	**AMN-MW1**	SM 2540D	341870		
40199755004	**GMMW-1**	SM 2540D	341870		
40199755005	**GMMW-2**	SM 2540D	341870		
40199755006	**GMMW-3**	SM 2540D	341870		
40199755007	**GMMW-4**	SM 2540D	341870		
40199755008	**GMMW-5**	SM 2540D	341870		
40199755009	**GMMW-6**	SM 2540D	341870		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
1241 Bellevue Street - Suite 9
Green Bay, WI 54302
(920)469-2436

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: J16001 AMCAST NORTH/SOUTH
Pace Project No.: 40199755

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40199755010	**GMMW-7**	SM 2540D	341870		
40199755011	**FVMW-20**	SM 2540D	341870		
40199755012	**AMS-MW1**	SM 2540D	341870		

UPPER MIDWEST REGION
MN: 612-607-1700 WI: 920-469-2436

Page 1 of

40199755

Pace Analytical
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CHAIN OF CUSTODY

*Preservation Codes
A=None B=HCL C=H2SO4 D=HNO3 E=DI Water F=Methanol G=NaOH
H=Sodium Bisulfate Solution I=Sodium Thiosulfate J=Other

(Please Print Clearly)	
Company Name:	DRAKE CONSULTING GROUP
Branch/Location:	THIENSVILLE, WI
Project Contact:	CHELSEA CORSON
Phone:	262-241-0005
Project Number:	J16001
Project Name:	AMCAST NORTH/SOUTH
Project State:	WI
Sampled By (Print):	TIM GIULIANI
Sampled By (Sign):	
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	
Invoice To Address:	GKW
Invoice To Phone:	

Data Package Options (billable)
☐ EPA Level III
☐ EPA Level IV

MS/MSD
☐ On your sample (billable)
☐ NOT needed on your sample

Matrix Codes
A = Air, W = Water, B = Biota, DW = Drinking Water, C = Charcoal, GW = Ground Water, O = Oil, SW = Surface Water, S = Soil, WW = Waste Water, SI = Sludge, WP = Wipe

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	PCB	VOC	TSS	SVOC 8270	RCRA METALS TOTAL	RCRA METALS DISS.	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	FUMW-26	11/19/19	9:30	GW	N	A	X	X	X	X	X	X	LAB TO FILTER		
002	FUMW-27		9:50		N	B	X	X	X	X	X	X	DISSOLVED SAMPLES		
003	AMN-MW1		10:15		N	A	X	X	X	X	X	X	PLEASE		
004	GMMW-1		12:00		N	A	X	X	X	X	X	X			
005	GMMW-2		12:25		N	A	X	X	X	X	X	X			
006	GMMW-3		15:00		N	A	X	X	X	X	X	X			
007	GMMW-4		13:10		N	A	X	X	X	X	X	X			
008	GMMW-5		14:20		N	A	X	X	X	X	X	X			
009	GMMW-6		14:00		N	A	X	X	X	X	X	X			
010	GMMW-7		13:40		N	A	X	X	X	X	X	X			
011	FUMW-20		12:45		N	A	X	X	X	X	X	X			
012	AMS-MW1		14:45		N	A	X	X	X	X	X	X			
013	TB												received - added to coc by lab		

11/22/19

Rush Turnaround Time Requested - Prelims
(Rush TAT subject to approval/surcharge)
Date Needed:

Transmit Prelim Rush Results by (complete what you want):
Email #1:
Email #2:
Telephone:
Fax:

Samples on HOLD are subject to special pricing and release of liability

Relinquished By:	Date/Time:	Received By:	Date/Time:
	11/21/19 11:10	Mary Fannin	11/21/19 11:10
Mary Fannin	11/21/19 1430		
CS Logistics	11/22/19 0855		11/22/19 0855

PACE Project No.: 40199755
Receipt Temp = 2.4 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL