



10515 Research Drive
Knoxville, TN 37932
Phone: (865) 573-8188
Fax: (865) 573-8133

Client: Joseph Hinkle
GES
301 Commerce Park Drive
Cranberry Township, PA 16066

Phone: 800-267-2549

Fax:

Identifier: 035NE

Date Rec: 05/12/2016

Report Date: 05/17/2016

Client Project #: 0704733

Client Project Name: UPA M-061 Bradford

Purchase Order #:

Analysis Requested: CENSUS

Reviewed By:

A handwritten signature in black ink, appearing to read 'Joan Spence', written over a light gray rectangular background.

NOTICE: This report is intended only for the addressee shown above and may contain confidential or privileged information. If the recipient of this material is not the intended recipient or if you have received this in error, please notify Microbial Insights, Inc. immediately. The data and other information in this report represent only the sample(s) analyzed and are rendered upon condition that it is not to be reproduced without approval from Microbial Insights, Inc. Thank you for your cooperation.

MICROBIAL INSIGHTS, INC.

10515 Research Dr., Knoxville, TN 37932
Tel. (865) 573-8188 Fax. (865) 573-8133

CENSUS

Client: **GES**
Project: UPA M-061 Bradford

MI Project Number: **035NE**
Date Received: 05/12/2016

Sample Information

Client Sample ID:	MW-13	MW-11
Sample Date:	05/11/2016	05/11/2016
Units:	cells/mL	cells/mL
Analyst:	JS	JS

Functional Genes

Phenol Hydroxylase	PHE	4.16E+04	2.20E+02
Toluene Monooxygenase 2	RDEG	4.66E+02	4.90E+02
Toluene Monooxygenase	RMO	2.70E+04	6.50E+00
Methylibium petroleiphilum	PM1	9.16E+03	8.73E+01

Legend:

NA = Not Analyzed NS = Not Sampled J = Estimated gene copies below PQL but above LQL I = Inhibited
< = Result not detected

Quality Assurance/Quality Control Data

Samples Received 5/12/2016

Component	Date Prepared	Date Analyzed	Arrival Temperature	Positive Control	Extraction Blank	Negative Control
PM1	05/12/2016	05/17/2016	0 °C	101%	non-detect	non-detect
PHE	05/12/2016	05/17/2016	0 °C	102%	non-detect	non-detect
RDEG	05/12/2016	05/17/2016	0 °C	101%	non-detect	non-detect
RMO	05/12/2016	05/17/2016	0 °C	109%	non-detect	non-detect

May 27, 2016

Mr. Joe Hinkle
Groundwater & Environmental Services
301 Commerce Park Drive
Cranberry Twp, PA 16066

RE: Project: UPA Bradford M-061
Pace Project No.: 30183011

Dear Mr. Hinkle:

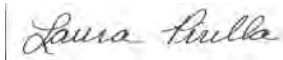
Enclosed are the analytical results for sample(s) received by the laboratory on May 12, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Some analyses have been subcontracted outside of the Pace Network. The subcontracted laboratory report has been attached.

The samples were subcontracted to PAES (Microseeps) 220 William Pitt Way, Pittsburgh, PA 15238 for Methane analysis. Results of the analysis are reported on the PAES (Microseeps) data tables.

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

Sincerely,



Laura M. Pirilla for
Rachel Christner
rachel.christner@pacelabs.com
Project Manager

Enclosures

cc: Ms. Joan Amodeo, Groundwater and Environmental
Services, Inc.

Lauren Bidwell, Groundwater & Environmental Services,
Inc.



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

May 27, 2016
Page 2

cc: Mr. Justin Paul, Groundwater & Environmental Services,
Inc.



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

CERTIFICATIONS

Project: UPA Bradford M-061

Pace Project No.: 30183011

New Orleans Certification IDs

California Env. Lab Accreditation Program Branch:
11277CA

Florida Department of Health (NELAC): E87595

Illinois Environmental Protection Agency: 0025721

Kansas Department of Health and Environment (NELAC):

E-10266

Louisiana Dept. of Environmental Quality (NELAC/LELAP):
02006

Pennsylvania Dept. of Env Protection (NELAC): 68-04202

Texas Commission on Env. Quality (NELAC):

T104704405-09-TX

U.S. Dept. of Agriculture Foreign Soil Import: P330-10-

00119

Commonwealth of Virginia (TNI): 480246

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601

L-A-B DOD-ELAP Accreditation #: L2417

Alabama Certification #: 41590

Arizona Certification #: AZ0734

Arkansas Certification

California Certification #: 04222CA

Colorado Certification

Connecticut Certification #: PH-0694

Delaware Certification

Florida/TNI Certification #: E87683

Georgia Certification #: C040

Guam Certification

Hawaii Certification

Idaho Certification

Illinois Certification

Indiana Certification

Iowa Certification #: 391

Kansas/TNI Certification #: E-10358

Kentucky Certification #: 90133

Louisiana DHH/TNI Certification #: LA140008

Louisiana DEQ/TNI Certification #: 4086

Maine Certification #: PA00091

Maryland Certification #: 308

Massachusetts Certification #: M-PA1457

Michigan/PADEP Certification

Missouri Certification #: 235

Montana Certification #: Cert 0082

Nebraska Certification #: NE-05-29-14

Nevada Certification #: PA014572015-1

New Hampshire/TNI Certification #: 2976

New Jersey/TNI Certification #: PA 051

New Mexico Certification #: PA01457

New York/TNI Certification #: 10888

North Carolina Certification #: 42706

North Dakota Certification #: R-190

Oregon/TNI Certification #: PA200002

Pennsylvania/TNI Certification #: 65-00282

Puerto Rico Certification #: PA01457

Rhode Island Certification #: 65-00282

South Dakota Certification

Tennessee Certification #: TN2867

Texas/TNI Certification #: T104704188-14-8

Utah/TNI Certification #: PA014572015-5

USDA Soil Permit #: P330-14-00213

Vermont Dept. of Health: ID# VT-0282

Virgin Island/PADEP Certification

Virginia/VELAP Certification #: 460198

Washington Certification #: C868

West Virginia DEP Certification #: 143

West Virginia DHHR Certification #: 9964C

Wisconsin Certification

Wyoming Certification #: 8TMS-L

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

SAMPLE ANALYTE COUNT

Project: UPA Bradford M-061

Pace Project No.: 30183011

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30183011001	MW-1R	EPA 5030B/8260	MLS	12	PASI-N
30183011002	MW-3R	EPA 5030B/8260	MLS	12	PASI-N
30183011003	MW-4	EPA 200.7	CTS	2	PASI-PA
		EPA 5030B/8260	MLS	12	PASI-N
		SM2540D-97	DEH	1	PASI-PA
30183011004	MW-5	EPA 5030B/8260	MLS	12	PASI-N
30183011005	MW-6	EPA 200.7	CTS	2	PASI-PA
		EPA 5030B/8260	MLS	12	PASI-N
		SM2540D-97	DEH	1	PASI-PA
30183011006	MW-7	EPA 200.7	CTS	2	PASI-PA
		EPA 5030B/8260	MLS	12	PASI-N
		SM2540D-97	DEH	1	PASI-PA
30183011007	MW-8	EPA 5030B/8260	MLS	12	PASI-N
		SM2320B-97	LEP	1	PASI-PA
		SM3500-FeD-00	PAS	1	PASI-PA
		ASTM D516-90,02	MM1	1	PASI-PA
		SM4500NO2B-00	PAS	1	PASI-PA
		SM4500NO3F-00	EHW	1	PASI-PA
30183011008	MW-9	EPA 5030B/8260	MLS	12	PASI-N
		SM2320B-97	LEP	1	PASI-PA
		SM3500-FeD-00	PAS	1	PASI-PA
		ASTM D516-90,02	MM1	1	PASI-PA
		SM4500NO2B-00	PAS	1	PASI-PA
		SM4500NO3F-00	EHW	1	PASI-PA
30183011009	MW-10	EPA 5030B/8260	MLS	12	PASI-N
		SM2320B-97	LEP	1	PASI-PA
		SM3500-FeD-00	PAS	1	PASI-PA
		ASTM D516-90,02	MM1	1	PASI-PA
		SM4500NO2B-00	PAS	1	PASI-PA
		SM4500NO3F-00	EHW	1	PASI-PA
30183011010	MW-11	EPA 5030B/8260	MLS	12	PASI-N
		SM2320B-97	LEP	1	PASI-PA
		SM3500-FeD-00	PAS	1	PASI-PA
		ASTM D516-90,02	MM1	1	PASI-PA
		SM4500NO2B-00	PAS	1	PASI-PA
		SM4500NO3F-00	EHW	1	PASI-PA
30183011011	MW-12	EPA 5030B/8260	MLS	12	PASI-N

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

SAMPLE ANALYTE COUNT

Project: UPA Bradford M-061

Pace Project No.: 30183011

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
30183011012	MW-13	EPA 5030B/8260	MLS	12	PASI-N
		SM2320B-97	LEP	1	PASI-PA
		SM3500-FeD-00	PAS	1	PASI-PA
		ASTM D516-90,02	MM1	1	PASI-PA
		SM4500NO2B-00	PAS	1	PASI-PA
		SM4500NO3F-00	EHW	1	PASI-PA
30183011013	MW-14	EPA 5030B/8260	MLS	12	PASI-N
30183011014	MW-15	EPA 5030B/8260	MLS	12	PASI-N
30183011015	MW-16	EPA 5030B/8260	MLS	12	PASI-N
30183011016	MW-17	EPA 5030B/8260	MLS	12	PASI-N
30183011017	MW-18	EPA 5030B/8260	MLS	12	PASI-N
30183011018	MW-19	EPA 5030B/8260	MLS	12	PASI-N
30183011019	MW-20	EPA 5030B/8260	MLS	12	PASI-N
30183011020	MW-21	EPA 5030B/8260	MLS	12	PASI-N
		SM2320B-97	LEP	1	PASI-PA
		SM3500-FeD-00	PAS	1	PASI-PA
		ASTM D516-90,02	MM1	1	PASI-PA
		SM4500NO2B-00	PAS	1	PASI-PA
		SM4500NO3F-00	EHW	1	PASI-PA
30183011021	MW-22	EPA 5030B/8260	RMP	12	PASI-N
		SM2320B-97	LEP	1	PASI-PA
		SM3500-FeD-00	PAS	1	PASI-PA
		ASTM D516-90,02	MM1	1	PASI-PA
		SM4500NO2B-00	PAS	1	PASI-PA
		SM4500NO3F-00	EHW	1	PASI-PA
30183011022	MW-23	EPA 5030B/8260	RMP	12	PASI-N
30183011023	Duplicate	EPA 5030B/8260	RMP	12	PASI-N

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-1R		Lab ID: 30183011001	Collected: 05/11/16 14:55	Received: 05/12/16 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 5030B/8260						
Benzene	343	ug/L	25.0	5		05/19/16 11:16	71-43-2	M1
Ethylbenzene	12.1	ug/L	5.0	1		05/18/16 15:28	100-41-4	
Isopropylbenzene (Cumene)	13.0	ug/L	5.0	1		05/18/16 15:28	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 15:28	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		05/18/16 15:28	91-20-3	
Toluene	16.2	ug/L	5.0	1		05/18/16 15:28	108-88-3	
1,2,4-Trimethylbenzene	21.9	ug/L	5.0	1		05/18/16 15:28	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 15:28	108-67-8	
Xylene (Total)	30.5	ug/L	3.0	1		05/18/16 15:28	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%.	72-126	5		05/19/16 11:16	1868-53-7	
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 15:28	1868-53-7	
4-Bromofluorobenzene (S)	104	%.	68-124	1		05/18/16 15:28	460-00-4	
4-Bromofluorobenzene (S)	106	%.	68-124	5		05/19/16 11:16	460-00-4	
Toluene-d8 (S)	96	%.	79-119	5		05/19/16 11:16	2037-26-5	
Toluene-d8 (S)	95	%.	79-119	1		05/18/16 15:28	2037-26-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-3R		Lab ID: 30183011002		Collected: 05/11/16 14:20		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 15:46	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 15:46	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 15:46	98-82-8		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 15:46	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 15:46	91-20-3		
Toluene	6.1	ug/L	5.0	1		05/18/16 15:46	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 15:46	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 15:46	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 15:46	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	95	%.	72-126	1		05/18/16 15:46	1868-53-7		
4-Bromofluorobenzene (S)	105	%.	68-124	1		05/18/16 15:46	460-00-4		
Toluene-d8 (S)	95	%.	79-119	1		05/18/16 15:46	2037-26-5		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-4		Lab ID: 30183011003	Collected: 05/11/16 15:25		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7						
Iron	33800	ug/L	70.0	1	05/18/16 16:20	05/19/16 09:25	7439-89-6	
Manganese	5780	ug/L	5.0	1	05/18/16 16:20	05/19/16 09:25	7439-96-5	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260						
Benzene	302	ug/L	25.0	5		05/19/16 12:10	71-43-2	
Ethylbenzene	8.5	ug/L	5.0	1		05/18/16 16:04	100-41-4	
Isopropylbenzene (Cumene)	10.1	ug/L	5.0	1		05/18/16 16:04	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 16:04	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		05/18/16 16:04	91-20-3	
Toluene	21.9	ug/L	5.0	1		05/18/16 16:04	108-88-3	
1,2,4-Trimethylbenzene	26.2	ug/L	5.0	1		05/18/16 16:04	95-63-6	
1,3,5-Trimethylbenzene	6.2	ug/L	5.0	1		05/18/16 16:04	108-67-8	
Xylene (Total)	37.6	ug/L	3.0	1		05/18/16 16:04	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	97	%.	72-126	5		05/19/16 12:10	1868-53-7	
Dibromofluoromethane (S)	96	%.	72-126	1		05/18/16 16:04	1868-53-7	
4-Bromofluorobenzene (S)	106	%.	68-124	5		05/19/16 12:10	460-00-4	
4-Bromofluorobenzene (S)	105	%.	68-124	1		05/18/16 16:04	460-00-4	
Toluene-d8 (S)	97	%.	79-119	5		05/19/16 12:10	2037-26-5	
Toluene-d8 (S)	96	%.	79-119	1		05/18/16 16:04	2037-26-5	
2540D Total Suspended Solids		Analytical Method: SM2540D-97						
Total Suspended Solids	107	mg/L	4.0	1		05/16/16 15:45		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-5		Lab ID: 30183011004		Collected: 05/11/16 14:45		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 16:21	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 16:21	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 16:21	98-82-8		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 16:21	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 16:21	91-20-3		
Toluene	7.7	ug/L	5.0	1		05/18/16 16:21	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 16:21	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 16:21	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 16:21	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 16:21	1868-53-7		
4-Bromofluorobenzene (S)	107	%.	68-124	1		05/18/16 16:21	460-00-4		
Toluene-d8 (S)	96	%.	79-119	1		05/18/16 16:21	2037-26-5		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-6		Lab ID: 30183011005		Collected: 05/11/16 14:10		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
200.7 Metals, Total		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Iron	33600	ug/L	70.0	1	05/18/16 16:20	05/19/16 09:27	7439-89-6		
Manganese	5250	ug/L	5.0	1	05/18/16 16:20	05/19/16 09:27	7439-96-5		
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	313	ug/L	25.0	5		05/19/16 12:27	71-43-2		
Ethylbenzene	11.2	ug/L	5.0	1		05/18/16 16:39	100-41-4		
Isopropylbenzene (Cumene)	11.4	ug/L	5.0	1		05/18/16 16:39	98-82-8		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 16:39	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 16:39	91-20-3		
Toluene	15.8	ug/L	5.0	1		05/18/16 16:39	108-88-3		
1,2,4-Trimethylbenzene	10	ug/L	5.0	1		05/18/16 16:39	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 16:39	108-67-8		
Xylene (Total)	36.5	ug/L	3.0	1		05/18/16 16:39	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 16:39	1868-53-7		
Dibromofluoromethane (S)	98	%.	72-126	5		05/19/16 12:27	1868-53-7		
4-Bromofluorobenzene (S)	105	%.	68-124	5		05/19/16 12:27	460-00-4		
4-Bromofluorobenzene (S)	106	%.	68-124	1		05/18/16 16:39	460-00-4		
Toluene-d8 (S)	97	%.	79-119	1		05/18/16 16:39	2037-26-5		
Toluene-d8 (S)	95	%.	79-119	5		05/19/16 12:27	2037-26-5		
2540D Total Suspended Solids		Analytical Method: SM2540D-97							
Total Suspended Solids	239	mg/L	4.0	1		05/16/16 15:45			

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-7		Lab ID: 30183011006		Collected: 05/11/16 13:45		Received: 05/12/16 09:15		Matrix: Water	
Parameters		Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
200.7 Metals, Total		Analytical Method: EPA 200.7 Preparation Method: EPA 200.7							
Iron	26200	ug/L	70.0	1	05/18/16 16:20	05/19/16 09:30	7439-89-6		
Manganese	5260	ug/L	5.0	1	05/18/16 16:20	05/19/16 09:30	7439-96-5		
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	56.7	ug/L	5.0	1		05/19/16 11:34	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/19/16 11:34	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/19/16 11:34	98-82-8		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/19/16 11:34	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/19/16 11:34	91-20-3		
Toluene	ND	ug/L	5.0	1		05/19/16 11:34	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/19/16 11:34	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/19/16 11:34	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/19/16 11:34	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/19/16 11:34	1868-53-7		
4-Bromofluorobenzene (S)	106	%.	68-124	1		05/19/16 11:34	460-00-4		
Toluene-d8 (S)	96	%.	79-119	1		05/19/16 11:34	2037-26-5		
2540D Total Suspended Solids		Analytical Method: SM2540D-97							
Total Suspended Solids	108	mg/L	4.0	1		05/16/16 15:45			

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-8		Lab ID: 30183011007		Collected: 05/11/16 12:00		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 17:15	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 17:15	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 17:15	98-82-8		
Methyl-tert-butyl ether	41.8	ug/L	5.0	1		05/18/16 17:15	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 17:15	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 17:15	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 17:15	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 17:15	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 17:15	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 17:15	1868-53-7		
4-Bromofluorobenzene (S)	107	%.	68-124	1		05/18/16 17:15	460-00-4		
Toluene-d8 (S)	96	%.	79-119	1		05/18/16 17:15	2037-26-5		
2320B Alkalinity		Analytical Method: SM2320B-97							
Alkalinity, Total as CaCO3	90.0	mg/L	10.0	1		05/16/16 16:30			
Iron, Ferrous		Analytical Method: SM3500-FeD-00							
Iron, Ferrous	ND	mg/L	0.10	1		05/12/16 16:40		H1,H6	
ASTM D516-90, 02 Sulfate Water		Analytical Method: ASTM D516-90,02							
Sulfate	11.2	mg/L	10.0	1		05/16/16 16:20	14808-79-8		
SM4500NO2-B, Nitrite, unpres		Analytical Method: SM4500NO2B-00							
Nitrite as N	ND	mg/L	0.010	1		05/13/16 18:40	14797-65-0	H1	
SM4500NO3-F, Nitrate, Presrvd		Analytical Method: SM4500NO3F-00							
Nitrate as N	0.12	mg/L	0.10	1		05/17/16 09:59	14797-55-8		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-9		Lab ID: 30183011008		Collected: 05/11/16 12:15		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	8.9	ug/L	5.0	1		05/18/16 17:33	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 17:33	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 17:33	98-82-8		
Methyl-tert-butyl ether	253	ug/L	25.0	5		05/19/16 12:45	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 17:33	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 17:33	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 17:33	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 17:33	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 17:33	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 17:33	1868-53-7		
Dibromofluoromethane (S)	98	%.	72-126	5		05/19/16 12:45	1868-53-7		
4-Bromofluorobenzene (S)	107	%.	68-124	5		05/19/16 12:45	460-00-4		
4-Bromofluorobenzene (S)	106	%.	68-124	1		05/18/16 17:33	460-00-4		
Toluene-d8 (S)	97	%.	79-119	1		05/18/16 17:33	2037-26-5		
Toluene-d8 (S)	96	%.	79-119	5		05/19/16 12:45	2037-26-5		
2320B Alkalinity		Analytical Method: SM2320B-97							
Alkalinity, Total as CaCO3	186	mg/L	10.0	1		05/16/16 16:30			
Iron, Ferrous		Analytical Method: SM3500-FeD-00							
Iron, Ferrous	ND	mg/L	0.10	1		05/12/16 16:40		H1,H6	
ASTM D516-90, 02 Sulfate Water		Analytical Method: ASTM D516-90,02							
Sulfate	ND	mg/L	10.0	1		05/16/16 16:20	14808-79-8		
SM4500NO2-B, Nitrite, unpres		Analytical Method: SM4500NO2B-00							
Nitrite as N	ND	mg/L	0.010	1		05/13/16 18:40	14797-65-0	H1	
SM4500NO3-F, Nitrate, Presrvd		Analytical Method: SM4500NO3F-00							
Nitrate as N	ND	mg/L	0.10	1		05/17/16 09:59	14797-55-8		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-10		Lab ID: 30183011009	Collected: 05/11/16 12:30	Received: 05/12/16 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 5030B/8260						
Benzene	16.9	ug/L	5.0	1		05/19/16 11:52	71-43-2	
Ethylbenzene	ND	ug/L	5.0	1		05/19/16 11:52	100-41-4	
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/19/16 11:52	98-82-8	
Methyl-tert-butyl ether	108	ug/L	5.0	1		05/19/16 11:52	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		05/19/16 11:52	91-20-3	
Toluene	ND	ug/L	5.0	1		05/19/16 11:52	108-88-3	
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/19/16 11:52	95-63-6	
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/19/16 11:52	108-67-8	
Xylene (Total)	ND	ug/L	3.0	1		05/19/16 11:52	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	98	%.	72-126	1		05/19/16 11:52	1868-53-7	
4-Bromofluorobenzene (S)	105	%.	68-124	1		05/19/16 11:52	460-00-4	
Toluene-d8 (S)	97	%.	79-119	1		05/19/16 11:52	2037-26-5	
2320B Alkalinity		Analytical Method: SM2320B-97						
Alkalinity, Total as CaCO3	156	mg/L	10.0	1		05/16/16 16:30		
Iron, Ferrous		Analytical Method: SM3500-FeD-00						
Iron, Ferrous	0.44	mg/L	0.10	1		05/12/16 16:40		H1,H6
ASTM D516-90, 02 Sulfate Water		Analytical Method: ASTM D516-90,02						
Sulfate	ND	mg/L	10.0	1		05/16/16 16:21	14808-79-8	
SM4500NO2-B, Nitrite, unpres		Analytical Method: SM4500NO2B-00						
Nitrite as N	ND	mg/L	0.010	1		05/13/16 18:40	14797-65-0	H1
SM4500NO3-F, Nitrate, Presrvd		Analytical Method: SM4500NO3F-00						
Nitrate as N	ND	mg/L	0.10	1		05/17/16 09:59	14797-55-8	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-11		Lab ID: 30183011010		Collected: 05/11/16 11:40		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 18:09	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 18:09	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 18:09	98-82-8		
Methyl-tert-butyl ether	455	ug/L	50.0	10		05/19/16 13:03	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 18:09	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 18:09	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 18:09	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 18:09	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 18:09	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	98	%.	72-126	1		05/18/16 18:09	1868-53-7		
Dibromofluoromethane (S)	98	%.	72-126	10		05/19/16 13:03	1868-53-7		
4-Bromofluorobenzene (S)	103	%.	68-124	1		05/18/16 18:09	460-00-4		
4-Bromofluorobenzene (S)	105	%.	68-124	10		05/19/16 13:03	460-00-4		
Toluene-d8 (S)	97	%.	79-119	10		05/19/16 13:03	2037-26-5		
Toluene-d8 (S)	97	%.	79-119	1		05/18/16 18:09	2037-26-5		
2320B Alkalinity		Analytical Method: SM2320B-97							
Alkalinity, Total as CaCO3	72.0	mg/L	10.0	1		05/16/16 16:30			
Iron, Ferrous		Analytical Method: SM3500-FeD-00							
Iron, Ferrous	1.5	mg/L	0.10	1		05/12/16 16:40		H1,H6	
ASTM D516-90, 02 Sulfate Water		Analytical Method: ASTM D516-90,02							
Sulfate	24.7	mg/L	10.0	1		05/16/16 16:22	14808-79-8		
SM4500NO2-B, Nitrite, unpres		Analytical Method: SM4500NO2B-00							
Nitrite as N	ND	mg/L	0.010	1		05/13/16 18:40	14797-65-0	H1	
SM4500NO3-F, Nitrate, Presrvd		Analytical Method: SM4500NO3F-00							
Nitrate as N	ND	mg/L	0.10	1		05/17/16 09:59	14797-55-8		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-12		Lab ID: 30183011011		Collected: 05/11/16 13:15		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 18:27	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 18:27	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 18:27	98-82-8		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 18:27	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 18:27	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 18:27	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 18:27	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 18:27	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 18:27	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	98	%.	72-126	1		05/18/16 18:27	1868-53-7		
4-Bromofluorobenzene (S)	105	%.	68-124	1		05/18/16 18:27	460-00-4		
Toluene-d8 (S)	95	%.	79-119	1		05/18/16 18:27	2037-26-5		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-13		Lab ID: 30183011012		Collected: 05/11/16 15:10		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 18:45	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 18:45	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 18:45	98-82-8		
Methyl-tert-butyl ether	1490	ug/L	100	20		05/19/16 13:21	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 18:45	91-20-3		
Toluene	6.4	ug/L	5.0	1		05/18/16 18:45	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 18:45	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 18:45	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 18:45	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 18:45	1868-53-7		
Dibromofluoromethane (S)	101	%.	72-126	20		05/19/16 13:21	1868-53-7		
4-Bromofluorobenzene (S)	105	%.	68-124	1		05/18/16 18:45	460-00-4		
4-Bromofluorobenzene (S)	106	%.	68-124	20		05/19/16 13:21	460-00-4		
Toluene-d8 (S)	97	%.	79-119	20		05/19/16 13:21	2037-26-5		
Toluene-d8 (S)	96	%.	79-119	1		05/18/16 18:45	2037-26-5		
2320B Alkalinity		Analytical Method: SM2320B-97							
Alkalinity, Total as CaCO3	188	mg/L	10.0	1		05/16/16 16:30			
Iron, Ferrous		Analytical Method: SM3500-FeD-00							
Iron, Ferrous	183	mg/L	5.0	50		05/12/16 16:40		H1,H6	
ASTM D516-90, 02 Sulfate Water		Analytical Method: ASTM D516-90,02							
Sulfate	ND	mg/L	10.0	1		05/16/16 16:23	14808-79-8		
SM4500NO2-B, Nitrite, unpres		Analytical Method: SM4500NO2B-00							
Nitrite as N	0.015	mg/L	0.010	1		05/13/16 18:40	14797-65-0	H1	
SM4500NO3-F, Nitrate, Presrvd		Analytical Method: SM4500NO3F-00							
Nitrate as N	ND	mg/L	0.10	1		05/17/16 09:59	14797-55-8		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-14		Lab ID: 30183011013	Collected: 05/11/16 13:55	Received: 05/12/16 09:15	Matrix: Water			
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV Low Level		Analytical Method: EPA 5030B/8260						
Benzene	311	ug/L	10.0	2		05/19/16 13:39	71-43-2	
Ethylbenzene	17.6	ug/L	5.0	1		05/18/16 19:02	100-41-4	
Isopropylbenzene (Cumene)	8.6	ug/L	5.0	1		05/18/16 19:02	98-82-8	
Methyl-tert-butyl ether	ND	ug/L	10.0	2		05/19/16 13:39	1634-04-4	
Naphthalene	ND	ug/L	5.0	1		05/18/16 19:02	91-20-3	
Toluene	14.6	ug/L	5.0	1		05/18/16 19:02	108-88-3	
1,2,4-Trimethylbenzene	26.1	ug/L	5.0	1		05/18/16 19:02	95-63-6	
1,3,5-Trimethylbenzene	5.8	ug/L	5.0	1		05/18/16 19:02	108-67-8	
Xylene (Total)	55.5	ug/L	3.0	1		05/18/16 19:02	1330-20-7	
Surrogates								
Dibromofluoromethane (S)	96	%.	72-126	1		05/18/16 19:02	1868-53-7	
Dibromofluoromethane (S)	98	%.	72-126	2		05/19/16 13:39	1868-53-7	
4-Bromofluorobenzene (S)	106	%.	68-124	1		05/18/16 19:02	460-00-4	
4-Bromofluorobenzene (S)	105	%.	68-124	2		05/19/16 13:39	460-00-4	
Toluene-d8 (S)	96	%.	79-119	1		05/18/16 19:02	2037-26-5	
Toluene-d8 (S)	98	%.	79-119	2		05/19/16 13:39	2037-26-5	

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-15		Lab ID: 30183011014		Collected: 05/11/16 13:25		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 19:20	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 19:20	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 19:20	98-82-8		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 19:20	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 19:20	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 19:20	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 19:20	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 19:20	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 19:20	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 19:20	1868-53-7		
4-Bromofluorobenzene (S)	107	%.	68-124	1		05/18/16 19:20	460-00-4		
Toluene-d8 (S)	96	%.	79-119	1		05/18/16 19:20	2037-26-5		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-16		Lab ID: 30183011015		Collected: 05/11/16 09:00		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 19:38	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 19:38	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 19:38	98-82-8		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 19:38	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 19:38	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 19:38	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 19:38	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 19:38	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 19:38	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	96	%.	72-126	1		05/18/16 19:38	1868-53-7		
4-Bromofluorobenzene (S)	104	%.	68-124	1		05/18/16 19:38	460-00-4		
Toluene-d8 (S)	97	%.	79-119	1		05/18/16 19:38	2037-26-5		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-17		Lab ID: 30183011016		Collected: 05/11/16 09:30		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 19:56	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 19:56	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 19:56	98-82-8		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 19:56	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 19:56	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 19:56	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 19:56	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 19:56	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 19:56	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 19:56	1868-53-7		
4-Bromofluorobenzene (S)	106	%.	68-124	1		05/18/16 19:56	460-00-4		
Toluene-d8 (S)	96	%.	79-119	1		05/18/16 19:56	2037-26-5		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-18		Lab ID: 30183011017		Collected: 05/11/16 09:40		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 20:14	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 20:14	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 20:14	98-82-8		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 20:14	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 20:14	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 20:14	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 20:14	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 20:14	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 20:14	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	96	%.	72-126	1		05/18/16 20:14	1868-53-7		
4-Bromofluorobenzene (S)	105	%.	68-124	1		05/18/16 20:14	460-00-4		
Toluene-d8 (S)	97	%.	79-119	1		05/18/16 20:14	2037-26-5		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-19		Lab ID: 30183011018		Collected: 05/11/16 09:50		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 20:32	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 20:32	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 20:32	98-82-8		
Methyl-tert-butyl ether	105	ug/L	5.0	1		05/18/16 20:32	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 20:32	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 20:32	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 20:32	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 20:32	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 20:32	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 20:32	1868-53-7		
4-Bromofluorobenzene (S)	105	%.	68-124	1		05/18/16 20:32	460-00-4		
Toluene-d8 (S)	95	%.	79-119	1		05/18/16 20:32	2037-26-5		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-20		Lab ID: 30183011019		Collected: 05/11/16 09:20		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 20:50	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 20:50	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 20:50	98-82-8		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 20:50	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 20:50	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 20:50	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 20:50	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 20:50	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 20:50	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	95	%.	72-126	1		05/18/16 20:50	1868-53-7		
4-Bromofluorobenzene (S)	107	%.	68-124	1		05/18/16 20:50	460-00-4		
Toluene-d8 (S)	96	%.	79-119	1		05/18/16 20:50	2037-26-5		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-21		Lab ID: 30183011020		Collected: 05/11/16 12:45		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 21:08	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 21:08	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 21:08	98-82-8		
Methyl-tert-butyl ether	19.8	ug/L	5.0	1		05/18/16 21:08	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 21:08	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 21:08	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 21:08	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 21:08	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 21:08	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	98	%.	72-126	1		05/18/16 21:08	1868-53-7		
4-Bromofluorobenzene (S)	105	%.	68-124	1		05/18/16 21:08	460-00-4		
Toluene-d8 (S)	97	%.	79-119	1		05/18/16 21:08	2037-26-5		
2320B Alkalinity		Analytical Method: SM2320B-97							
Alkalinity, Total as CaCO3	156	mg/L	10.0	1		05/16/16 16:30			
Iron, Ferrous		Analytical Method: SM3500-FeD-00							
Iron, Ferrous	0.22	mg/L	0.10	1		05/12/16 16:40		H1,H6	
ASTM D516-90, 02 Sulfate Water		Analytical Method: ASTM D516-90,02							
Sulfate	26.7	mg/L	10.0	1		05/16/16 16:23	14808-79-8		
SM4500NO2-B, Nitrite, unpres		Analytical Method: SM4500NO2B-00							
Nitrite as N	ND	mg/L	0.010	1		05/13/16 18:40	14797-65-0	H1	
SM4500NO3-F, Nitrate, Presrvd		Analytical Method: SM4500NO3F-00							
Nitrate as N	ND	mg/L	0.10	1		05/17/16 09:59	14797-55-8		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-22		Lab ID: 30183011021		Collected: 05/11/16 14:35		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 17:13	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 17:13	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 17:13	98-82-8		
Methyl-tert-butyl ether	9.2	ug/L	5.0	1		05/18/16 17:13	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 17:13	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 17:13	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 17:13	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 17:13	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 17:13	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 17:13	1868-53-7		
4-Bromofluorobenzene (S)	104	%.	68-124	1		05/18/16 17:13	460-00-4		
Toluene-d8 (S)	101	%.	79-119	1		05/18/16 17:13	2037-26-5		
2320B Alkalinity		Analytical Method: SM2320B-97							
Alkalinity, Total as CaCO3	154	mg/L	10.0	1		05/16/16 16:30			
Iron, Ferrous		Analytical Method: SM3500-FeD-00							
Iron, Ferrous	28.3	mg/L	1.0	10		05/12/16 16:40		H1,H6	
ASTM D516-90, 02 Sulfate Water		Analytical Method: ASTM D516-90,02							
Sulfate	34.5	mg/L	10.0	1		05/16/16 16:27	14808-79-8		
SM4500NO2-B, Nitrite, unpres		Analytical Method: SM4500NO2B-00							
Nitrite as N	ND	mg/L	0.010	1		05/13/16 18:40	14797-65-0	H1	
SM4500NO3-F, Nitrate, Presrvd		Analytical Method: SM4500NO3F-00							
Nitrate as N	ND	mg/L	0.10	1		05/17/16 09:59	14797-55-8		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: MW-23		Lab ID: 30183011022		Collected: 05/11/16 13:00		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 17:32	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 17:32	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 17:32	98-82-8		
Methyl-tert-butyl ether	19.1	ug/L	5.0	1		05/18/16 17:32	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 17:32	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 17:32	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 17:32	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 17:32	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 17:32	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 17:32	1868-53-7		
4-Bromofluorobenzene (S)	104	%.	68-124	1		05/18/16 17:32	460-00-4		
Toluene-d8 (S)	102	%.	79-119	1		05/18/16 17:32	2037-26-5		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

ANALYTICAL RESULTS

Project: UPA Bradford M-061

Pace Project No.: 30183011

Sample: Duplicate		Lab ID: 30183011023		Collected: 05/11/16 00:01		Received: 05/12/16 09:15		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
8260 MSV Low Level		Analytical Method: EPA 5030B/8260							
Benzene	ND	ug/L	5.0	1		05/18/16 17:50	71-43-2		
Ethylbenzene	ND	ug/L	5.0	1		05/18/16 17:50	100-41-4		
Isopropylbenzene (Cumene)	ND	ug/L	5.0	1		05/18/16 17:50	98-82-8		
Methyl-tert-butyl ether	ND	ug/L	5.0	1		05/18/16 17:50	1634-04-4		
Naphthalene	ND	ug/L	5.0	1		05/18/16 17:50	91-20-3		
Toluene	ND	ug/L	5.0	1		05/18/16 17:50	108-88-3		
1,2,4-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 17:50	95-63-6		
1,3,5-Trimethylbenzene	ND	ug/L	5.0	1		05/18/16 17:50	108-67-8		
Xylene (Total)	ND	ug/L	3.0	1		05/18/16 17:50	1330-20-7		
Surrogates									
Dibromofluoromethane (S)	97	%.	72-126	1		05/18/16 17:50	1868-53-7		
4-Bromofluorobenzene (S)	104	%.	68-124	1		05/18/16 17:50	460-00-4		
Toluene-d8 (S)	101	%.	79-119	1		05/18/16 17:50	2037-26-5		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: UPA Bradford M-061

Pace Project No.: 30183011

QC Batch: MPRP/18280 Analysis Method: EPA 200.7
QC Batch Method: EPA 200.7 Analysis Description: 200.7 Metals, Total
Associated Lab Samples: 30183011003, 30183011005, 30183011006

METHOD BLANK: 1077138 Matrix: Water

Associated Lab Samples: 30183011003, 30183011005, 30183011006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron	ug/L	ND	70.0	05/19/16 09:03	
Manganese	ug/L	ND	5.0	05/19/16 09:03	

LABORATORY CONTROL SAMPLE: 1077139

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron	ug/L	5000	4980	100	85-115	
Manganese	ug/L	500	492	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1077141 1077142

Parameter	Units	30183054001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Iron	ug/L	91.2	5000	5000	5200	5190	102	102	70-130	0	
Manganese	ug/L	7.9	500	500	513	506	101	100	70-130	1	

SAMPLE DUPLICATE: 1077140

Parameter	Units	30183054001 Result	Dup Result	RPD	Qualifiers
Iron	ug/L	91.2	90.9	0	
Manganese	ug/L	7.9	8.1	3	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: UPA Bradford M-061
Pace Project No.: 30183011

QC Batch:	MSV/4941	Analysis Method:	EPA 5030B/8260
QC Batch Method:	EPA 5030B/8260	Analysis Description:	8260 MSV Low Level
Associated Lab Samples:	30183011001, 30183011002, 30183011003, 30183011004, 30183011005, 30183011006, 30183011007, 30183011008, 30183011009, 30183011010, 30183011011, 30183011012, 30183011013, 30183011014, 30183011015, 30183011016, 30183011017, 30183011018, 30183011019, 30183011020		

METHOD BLANK: 226375 Matrix: Water

Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	ND	5.0	05/18/16 14:00	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	05/18/16 14:00	
Benzene	ug/L	ND	5.0	05/18/16 14:00	
Ethylbenzene	ug/L	ND	5.0	05/18/16 14:00	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	05/18/16 14:00	
Methyl-tert-butyl ether	ug/L	ND	5.0	05/18/16 14:00	
Naphthalene	ug/L	ND	5.0	05/18/16 14:00	
Toluene	ug/L	ND	5.0	05/18/16 14:00	
Xylene (Total)	ug/L	ND	3.0	05/18/16 14:00	
4-Bromofluorobenzene (S)	%	106	68-124	05/18/16 14:00	
Dibromofluoromethane (S)	%	97	72-126	05/18/16 14:00	
Toluene-d8 (S)	%	98	79-119	05/18/16 14:00	

METHOD BLANK: 226932 Matrix: Water

Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	ND	5.0	05/19/16 10:41	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	05/19/16 10:41	
Benzene	ug/L	ND	5.0	05/19/16 10:41	
Ethylbenzene	ug/L	ND	5.0	05/19/16 10:41	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	05/19/16 10:41	
Methyl-tert-butyl ether	ug/L	ND	5.0	05/19/16 10:41	
Naphthalene	ug/L	ND	5.0	05/19/16 10:41	
Toluene	ug/L	ND	5.0	05/19/16 10:41	
Xylene (Total)	ug/L	ND	3.0	05/19/16 10:41	
4-Bromofluorobenzene (S)	%	106	68-124	05/19/16 10:41	
Dibromofluoromethane (S)	%	97	72-126	05/19/16 10:41	
Toluene-d8 (S)	%	96	79-119	05/19/16 10:41	

LABORATORY CONTROL SAMPLE: 226376

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	49.0	98	58-134	
1,3,5-Trimethylbenzene	ug/L	50	49.5	99	56-134	
Benzene	ug/L	50	45.2	90	62-131	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: UPA Bradford M-061

Pace Project No.: 30183011

LABORATORY CONTROL SAMPLE: 226376

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Ethylbenzene	ug/L	50	49.3	99	66-126	
Isopropylbenzene (Cumene)	ug/L	50	50.5	101	51-138	
Methyl-tert-butyl ether	ug/L	50	41.9	84	37-166	
Naphthalene	ug/L	50	49.4	99	31-152	
Toluene	ug/L	50	46.8	94	69-126	
Xylene (Total)	ug/L	150	150	100	50-150	
4-Bromofluorobenzene (S)	%			104	68-124	
Dibromofluoromethane (S)	%			96	72-126	
Toluene-d8 (S)	%			96	79-119	

LABORATORY CONTROL SAMPLE: 226933

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	51.5	103	58-134	
1,3,5-Trimethylbenzene	ug/L	50	51.6	103	56-134	
Benzene	ug/L	50	47.1	94	62-131	
Ethylbenzene	ug/L	50	53.2	106	66-126	
Isopropylbenzene (Cumene)	ug/L	50	53.2	106	51-138	
Methyl-tert-butyl ether	ug/L	50	43.0	86	37-166	
Naphthalene	ug/L	50	50.0	100	31-152	
Toluene	ug/L	50	49.3	99	69-126	
Xylene (Total)	ug/L	150	159	106	50-150	
4-Bromofluorobenzene (S)	%			104	68-124	
Dibromofluoromethane (S)	%			98	72-126	
Toluene-d8 (S)	%			97	79-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 226377

226378

Parameter	Units	30183011001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2,4-Trimethylbenzene	ug/L	21.9	50	50	67.6	64.6	91	85	49-140	5	
1,3,5-Trimethylbenzene	ug/L	ND	50	50	49.4	47.9	91	88	40-147	3	
Benzene	ug/L	343	50	50	445	402	204	117	52-141	10	M1
Ethylbenzene	ug/L	12.1	50	50	64.0	58.5	104	93	57-135	9	
Isopropylbenzene (Cumene)	ug/L	13.0	50	50	62.1	59.2	98	92	40-146	5	
Methyl-tert-butyl ether	ug/L	ND	50	50	50.6	45.7	93	83	35-176	10	
Naphthalene	ug/L	ND	50	50	50.2	48.8	95	92	33-165	3	
Toluene	ug/L	16.2	50	50	66.6	60.4	101	88	59-136	10	
Xylene (Total)	ug/L	30.5	150	150	190	172	106	94	50-150	10	
4-Bromofluorobenzene (S)	%						103	104	68-124		
Dibromofluoromethane (S)	%						98	98	72-126		
Toluene-d8 (S)	%						95	96	79-119		

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: UPA Bradford M-061
Pace Project No.: 30183011

QC Batch: MSV/4943 Analysis Method: EPA 5030B/8260
QC Batch Method: EPA 5030B/8260 Analysis Description: 8260 MSV Low Level
Associated Lab Samples: 30183011021, 30183011022, 30183011023

METHOD BLANK: 226522 Matrix: Water
Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	ND	5.0	05/18/16 11:58	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	05/18/16 11:58	
Benzene	ug/L	ND	5.0	05/18/16 11:58	
Ethylbenzene	ug/L	ND	5.0	05/18/16 11:58	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	05/18/16 11:58	
Methyl-tert-butyl ether	ug/L	ND	5.0	05/18/16 11:58	
Naphthalene	ug/L	ND	5.0	05/18/16 11:58	
Toluene	ug/L	ND	5.0	05/18/16 11:58	
Xylene (Total)	ug/L	ND	3.0	05/18/16 11:58	
4-Bromofluorobenzene (S)	%	105	68-124	05/18/16 11:58	
Dibromofluoromethane (S)	%	96	72-126	05/18/16 11:58	
Toluene-d8 (S)	%	101	79-119	05/18/16 11:58	

METHOD BLANK: 226988 Matrix: Water
Associated Lab Samples:

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	ND	5.0	05/19/16 10:10	
1,3,5-Trimethylbenzene	ug/L	ND	5.0	05/19/16 10:10	
Benzene	ug/L	ND	5.0	05/19/16 10:10	
Ethylbenzene	ug/L	ND	5.0	05/19/16 10:10	
Isopropylbenzene (Cumene)	ug/L	ND	5.0	05/19/16 10:10	
Methyl-tert-butyl ether	ug/L	ND	5.0	05/19/16 10:10	
Naphthalene	ug/L	ND	5.0	05/19/16 10:10	
Toluene	ug/L	ND	5.0	05/19/16 10:10	
4-Bromofluorobenzene (S)	%	98	68-124	05/19/16 10:10	
Dibromofluoromethane (S)	%	103	72-126	05/19/16 10:10	
Toluene-d8 (S)	%	104	79-119	05/19/16 10:10	

LABORATORY CONTROL SAMPLE: 226523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	53.4	107	58-134	
1,3,5-Trimethylbenzene	ug/L	50	54.6	109	56-134	
Benzene	ug/L	50	54.3	109	62-131	
Ethylbenzene	ug/L	50	50.1	100	66-126	
Isopropylbenzene (Cumene)	ug/L	50	55.0	110	51-138	
Methyl-tert-butyl ether	ug/L	50	49.8	100	37-166	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: UPA Bradford M-061

Pace Project No.: 30183011

LABORATORY CONTROL SAMPLE: 226523

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Naphthalene	ug/L	50	47.1	94	31-152	
Toluene	ug/L	50	49.8	100	69-126	
Xylene (Total)	ug/L	150	148	99	50-150	
4-Bromofluorobenzene (S)	%			101	68-124	
Dibromofluoromethane (S)	%			99	72-126	
Toluene-d8 (S)	%			99	79-119	

LABORATORY CONTROL SAMPLE: 226989

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,2,4-Trimethylbenzene	ug/L	50	47.4	95	58-134	
1,3,5-Trimethylbenzene	ug/L	50	48.2	96	56-134	
Benzene	ug/L	50	45.5	91	62-131	
Ethylbenzene	ug/L	50	52.3	105	66-126	
Isopropylbenzene (Cumene)	ug/L	50	48.7	97	51-138	
Methyl-tert-butyl ether	ug/L	50	44.8	90	37-166	
Naphthalene	ug/L	50	51.9	104	31-152	
Toluene	ug/L	50	51.3	103	69-126	
4-Bromofluorobenzene (S)	%			103	68-124	
Dibromofluoromethane (S)	%			100	72-126	
Toluene-d8 (S)	%			108	79-119	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 226524 226525

Parameter	Units	30182870001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
1,2,4-Trimethylbenzene	ug/L	ND	50	50	57.7	56.4	115	113	49-140	2	
1,3,5-Trimethylbenzene	ug/L	ND	50	50	59.3	58.0	119	116	40-147	2	
Benzene	ug/L	ND	50	50	58.7	56.8	116	112	52-141	3	
Ethylbenzene	ug/L	ND	50	50	54.4	52.8	109	106	57-135	3	
Isopropylbenzene (Cumene)	ug/L	1.5	50	50	62.0	59.8	121	117	40-146	4	
Methyl-tert-butyl ether	ug/L	ND	50	50	52.1	53.2	104	106	35-176	2	
Naphthalene	ug/L	ND	50	50	58.5	52.0	117	104	33-165	12	
Toluene	ug/L	ND	50	50	54.2	52.3	108	104	59-136	4	
4-Bromofluorobenzene (S)	%						100	100	68-124		
Dibromofluoromethane (S)	%						99	99	72-126		
Toluene-d8 (S)	%						98	98	79-119		

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: UPA Bradford M-061

Pace Project No.: 30183011

QC Batch:	WET/33339	Analysis Method:	SM2320B-97
QC Batch Method:	SM2320B-97	Analysis Description:	2320B Alkalinity
Associated Lab Samples:	30183011007, 30183011008, 30183011009, 30183011010, 30183011012, 30183011020, 30183011021		

METHOD BLANK:	1075846	Matrix:	Water
Associated Lab Samples:	30183011007, 30183011008, 30183011009, 30183011010, 30183011012, 30183011020, 30183011021		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	10.0	05/16/16 16:30	

LABORATORY CONTROL SAMPLE:	1075847
----------------------------	---------

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	20	22.0	110	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:	1075848	1075849
--	---------	---------

Parameter	Units	30183065006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	196	100	100	290	288	94	92	85-115	1	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: UPA Bradford M-061

Pace Project No.: 30183011

QC Batch:	WET/33337	Analysis Method:	SM2540D-97
QC Batch Method:	SM2540D-97	Analysis Description:	2540D Total Suspended Solids
Associated Lab Samples:	30183011003, 30183011005, 30183011006		

METHOD BLANK: 1075767 Matrix: Water

Associated Lab Samples: 30183011003, 30183011005, 30183011006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Suspended Solids	mg/L	ND	4.0	05/16/16 15:45	

LABORATORY CONTROL SAMPLE: 1075768

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Suspended Solids	mg/L	100	103	103	80-120	

SAMPLE DUPLICATE: 1075769

Parameter	Units	30183069004 Result	Dup Result	RPD	Qualifiers
Total Suspended Solids	mg/L	9.0	9.0	0	

SAMPLE DUPLICATE: 1075770

Parameter	Units	30183202003 Result	Dup Result	RPD	Qualifiers
Total Suspended Solids	mg/L	8.0	8.0	0	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: UPA Bradford M-061

Pace Project No.: 30183011

QC Batch:	WET/33303	Analysis Method:	SM3500-FeD-00
QC Batch Method:	SM3500-FeD-00	Analysis Description:	Iron, Ferrous
Associated Lab Samples: 30183011007, 30183011008, 30183011009, 30183011010, 30183011012, 30183011020, 30183011021			

METHOD BLANK:	1074110	Matrix:	Water
Associated Lab Samples: 30183011007, 30183011008, 30183011009, 30183011010, 30183011012, 30183011020, 30183011021			

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Iron, Ferrous	mg/L	ND	0.10	05/12/16 16:40	H6

LABORATORY CONTROL SAMPLE: 1074111						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L	1	1.0	103	85-115	H6

MATRIX SPIKE SAMPLE: 1074113							
Parameter	Units	30183011022 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Iron, Ferrous	mg/L			5.6			H1,H6,M6

SAMPLE DUPLICATE: 1074112					
Parameter	Units	30183011022 Result	Dup Result	RPD	Qualifiers
Iron, Ferrous	mg/L		1.8		H1,H6

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: UPA Bradford M-061

Pace Project No.: 30183011

QC Batch:	WETA/23589	Analysis Method:	ASTM D516-90,02
QC Batch Method:	ASTM D516-90,02	Analysis Description:	ASTM D516-90, 02 Sulfate Water
Associated Lab Samples:	30183011007, 30183011008, 30183011009, 30183011010, 30183011012, 30183011020, 30183011021		

METHOD BLANK:	1075878	Matrix:	Water
Associated Lab Samples:	30183011007, 30183011008, 30183011009, 30183011010, 30183011012, 30183011020, 30183011021		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Sulfate	mg/L	ND	10.0	05/16/16 16:18	

LABORATORY CONTROL SAMPLE: 1075879

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	30	28.9	96	85-115	

MATRIX SPIKE SAMPLE: 1075882

Parameter	Units	30183011020 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	26.7	20	47.6	105	85-115	

SAMPLE DUPLICATE: 1075883

Parameter	Units	30183011020 Result	Dup Result	RPD	Qualifiers
Sulfate	mg/L	26.7	27.2	2	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: UPA Bradford M-061

Pace Project No.: 30183011

QC Batch:	WETA/23573	Analysis Method:	SM4500NO2B-00
QC Batch Method:	SM4500NO2B-00	Analysis Description:	SM4500NO2-B, Nitrite, unpres
Associated Lab Samples:	30183011007, 30183011008, 30183011009, 30183011010, 30183011012, 30183011020, 30183011021		

METHOD BLANK:	1074923	Matrix:	Water
Associated Lab Samples:	30183011007, 30183011008, 30183011009, 30183011010, 30183011012, 30183011020, 30183011021		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	ND	0.010	05/13/16 18:40	

LABORATORY CONTROL SAMPLE:	1074924
----------------------------	---------

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	.1	0.098	98	90-110	

MATRIX SPIKE SAMPLE:	1074926
----------------------	---------

Parameter	Units	30183083005 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	0.0030J	.1	0.087	84	85-115	M1

SAMPLE DUPLICATE:	1074925
-------------------	---------

Parameter	Units	30183083005 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	0.0030J	ND		

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA

Project: UPA Bradford M-061

Pace Project No.: 30183011

QC Batch:	WETA/23592	Analysis Method:	SM4500NO3F-00
QC Batch Method:	SM4500NO3F-00	Analysis Description:	SM4500NO3-F, Nitrate, Preserved
Associated Lab Samples:	30183011007, 30183011008, 30183011009, 30183011010, 30183011012, 30183011020, 30183011021		

METHOD BLANK:	1076161	Matrix:	Water
Associated Lab Samples:	30183011007, 30183011008, 30183011009, 30183011010, 30183011012, 30183011020, 30183011021		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate as N	mg/L	ND	0.10	05/17/16 09:59	

LABORATORY CONTROL SAMPLE:	1076162
----------------------------	---------

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate as N	mg/L	4	4.0	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:	1076163	1076164
--	---------	---------

Parameter	Units	30182918001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Qual
Nitrate as N	mg/L	ND	5	5	4.8	4.8	97	96	90-110	0	

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

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALIFIERS

Project: UPA Bradford M-061

Pace Project No.: 30183011

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit.

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

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

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-N Pace Analytical Services - New Orleans

PASI-PA Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

H1 Analysis conducted outside the EPA method holding time.

H6 Analysis initiated outside of the 15 minute EPA required holding time.

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

M6 Matrix spike and Matrix spike duplicate recovery not evaluated against control limits due to sample dilution.

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UPA Bradford M-061

Pace Project No.: 30183011

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30183011003	MW-4	EPA 200.7	MPRP/18280	EPA 200.7	ICP/17399
30183011005	MW-6	EPA 200.7	MPRP/18280	EPA 200.7	ICP/17399
30183011006	MW-7	EPA 200.7	MPRP/18280	EPA 200.7	ICP/17399
30183011001	MW-1R	EPA 5030B/8260	MSV/4941		
30183011002	MW-3R	EPA 5030B/8260	MSV/4941		
30183011003	MW-4	EPA 5030B/8260	MSV/4941		
30183011004	MW-5	EPA 5030B/8260	MSV/4941		
30183011005	MW-6	EPA 5030B/8260	MSV/4941		
30183011006	MW-7	EPA 5030B/8260	MSV/4941		
30183011007	MW-8	EPA 5030B/8260	MSV/4941		
30183011008	MW-9	EPA 5030B/8260	MSV/4941		
30183011009	MW-10	EPA 5030B/8260	MSV/4941		
30183011010	MW-11	EPA 5030B/8260	MSV/4941		
30183011011	MW-12	EPA 5030B/8260	MSV/4941		
30183011012	MW-13	EPA 5030B/8260	MSV/4941		
30183011013	MW-14	EPA 5030B/8260	MSV/4941		
30183011014	MW-15	EPA 5030B/8260	MSV/4941		
30183011015	MW-16	EPA 5030B/8260	MSV/4941		
30183011016	MW-17	EPA 5030B/8260	MSV/4941		
30183011017	MW-18	EPA 5030B/8260	MSV/4941		
30183011018	MW-19	EPA 5030B/8260	MSV/4941		
30183011019	MW-20	EPA 5030B/8260	MSV/4941		
30183011020	MW-21	EPA 5030B/8260	MSV/4941		
30183011021	MW-22	EPA 5030B/8260	MSV/4943		
30183011022	MW-23	EPA 5030B/8260	MSV/4943		
30183011023	Duplicate	EPA 5030B/8260	MSV/4943		
30183011007	MW-8	SM2320B-97	WET/33339		
30183011008	MW-9	SM2320B-97	WET/33339		
30183011009	MW-10	SM2320B-97	WET/33339		
30183011010	MW-11	SM2320B-97	WET/33339		
30183011012	MW-13	SM2320B-97	WET/33339		
30183011020	MW-21	SM2320B-97	WET/33339		
30183011021	MW-22	SM2320B-97	WET/33339		
30183011003	MW-4	SM2540D-97	WET/33337		
30183011005	MW-6	SM2540D-97	WET/33337		
30183011006	MW-7	SM2540D-97	WET/33337		
30183011007	MW-8	SM3500-FeD-00	WET/33303		
30183011008	MW-9	SM3500-FeD-00	WET/33303		
30183011009	MW-10	SM3500-FeD-00	WET/33303		
30183011010	MW-11	SM3500-FeD-00	WET/33303		
30183011012	MW-13	SM3500-FeD-00	WET/33303		
30183011020	MW-21	SM3500-FeD-00	WET/33303		
30183011021	MW-22	SM3500-FeD-00	WET/33303		
30183011007	MW-8	ASTM D516-90,02	WETA/23589		
30183011008	MW-9	ASTM D516-90,02	WETA/23589		
30183011009	MW-10	ASTM D516-90,02	WETA/23589		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: UPA Bradford M-061

Pace Project No.: 30183011

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
30183011010	MW-11	ASTM D516-90,02	WETA/23589		
30183011012	MW-13	ASTM D516-90,02	WETA/23589		
30183011020	MW-21	ASTM D516-90,02	WETA/23589		
30183011021	MW-22	ASTM D516-90,02	WETA/23589		
30183011007	MW-8	SM4500NO2B-00	WETA/23573		
30183011008	MW-9	SM4500NO2B-00	WETA/23573		
30183011009	MW-10	SM4500NO2B-00	WETA/23573		
30183011010	MW-11	SM4500NO2B-00	WETA/23573		
30183011012	MW-13	SM4500NO2B-00	WETA/23573		
30183011020	MW-21	SM4500NO2B-00	WETA/23573		
30183011021	MW-22	SM4500NO2B-00	WETA/23573		
30183011007	MW-8	SM4500NO3F-00	WETA/23592		
30183011008	MW-9	SM4500NO3F-00	WETA/23592		
30183011009	MW-10	SM4500NO3F-00	WETA/23592		
30183011010	MW-11	SM4500NO3F-00	WETA/23592		
30183011012	MW-13	SM4500NO3F-00	WETA/23592		
30183011020	MW-21	SM4500NO3F-00	WETA/23592		
30183011021	MW-22	SM4500NO3F-00	WETA/23592		

REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Services, Inc..

30183011

CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

Section A		Section B		Section C	
Required Client Information:		Required Project Information:		Invoice Information:	
Company:	Groundwater & Environmental Services	Report To:	Joe Hinkle	Attention:	Joe Hinkle
Address:	301 Commerce Park Drive Cranberry Twp, PA 16066	Copy To:	Joan Amodeo	Company Name:	Groundwater & Environmental Services
Email To:		Purchase Order No.:	UPA Bradford M-061	Address:	301 Commerce Park Drive, Cranberry Twp, PA 16066
Phone:	800-267-2549 Fax: 724-779-4617	Client Project ID:	UPA Bradford M-061	Pace Quote Reference:	
Requested Due Date/TAT:	10 Day (Default)	Container Order Number:		Pace Project Manager:	Christner, Rachel
				Pace Profile #:	
				Regulatory Agency	UST - Underground Storage Tank
				State / Location	Pennsylvania

ITEM#	MATRIX	CODE	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	DATE		TIME	# OF CONTAINERS	Requested Analysis Filtered (Y/N)									
			START	END			DATE	TIME			Analyses Test	Y/N	Preservatives	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other
1	MW-14	WT G	5/1/16	13:55	G	WT G				3	8290B (NEW Unleaded Shortlist)	X	Total Suspended Solids							
2	MW-15	WT G		13:25	G	WT G				3		X								
3	MW-16	WT G		09:00	G	WT G				3		X								
4	MW-17	WT G		01:30	G	WT G				3		X								
5	MW-18	WT G		09:40	G	WT G				3		X								
6	MW-19	WT G		09:50	G	WT G				3		X								
7	MW-20	WT G		09:20	G	WT G				3		X								
8	MW-21	WT G		12:15	G	WT G				8		X	X	X	X	X	X	X	X	X
9	MW-22	WT G		14:35	G	WT G				8		X	X	X	X	X	X	X	X	X
10	MW-23	WT G		13:00	G	WT G				3		X								
11	MW-24	WT G			G	WT G				3		X								
12	Duplicate	WT G			G	WT G				3		X								
13	Trip Blank	WT G			G	WT G				2		X								

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	TEMP in C	Received on Ice (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)
Hold trip blank analysis pending results.	Joe Hinkle	5/1/16	1700	Karen E. Hall	5/1/16	0915	0.2	Y	Y	Y
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: <i>Joe Hinkle</i> SIGNATURE of SAMPLER: <i>Joe Hinkle</i> DATE Signed: <i>5-11-16</i>										

Sample Condition Upon Receipt Pittsburgh



Client Name: Groundwater & Environmental Project #
services

30183011

Courier: ☒ Fed Ex ☐ UPS ☐ USPS ☐ Client ☐ Commercial ☐ Pace Other _____

Tracking #: 81086 5791 8342

Custody Seal on Cooler/Box Present: ☐ yes ☒ no Seals intact: ☐ yes ☐ no

Thermometer Used 4 Type of Ice: Wet Blue None

Cooler Temperature Observed Temp 0.1 °C Correction Factor: +0.1 °C Final Temp: 0.2 °C

Temp should be above freezing to 6°C

Date and Initials of person examining contents: KA 5/12/14

Comments:

	Yes	No	N/A	
Chain of Custody Present:	☒	☐	☐	1.
Chain of Custody Filled Out:	☒	☐	☐	2.
Chain of Custody Relinquished:	☒	☐	☐	3.
Sampler Name & Signature on COC:	☒	☐	☐	4.
Sample Labels match COC:	☒	☐	☐	5.
-Includes date/time/ID/Analysis Matrix: <u>WT</u>				
Samples Arrived within Hold Time:	☒	☐	☐	6.
Short Hold Time Analysis (<72hr remaining):	☐	☒	☐	7.
Rush Turn Around Time Requested:	☐	☒	☐	8.
Sufficient Volume:	☒	☐	☐	9.
Correct Containers Used:	☒	☐	☐	10. MW-23 came with extra
-Pace Containers Used:	☒	☐	☐	
Containers Intact:	☒	☐	☐	11.
Filtered volume received for Dissolved tests	☐	☐	☒	12.
All containers needing preservation have been checked.	☐	☐	☒	13.
All containers needing preservation are found to be in compliance with EPA recommendation.	☐	☐	☒	
exceptions: VOA, coliform, TOC, O&G, Phenolics				Initial when completed <u>KA</u> Date/time of preservation
				Lot # of added preservative
Headspace in VOA Vials (>6mm):	☐	☒	☒	14.
Trip Blank Present:	☐	☒	☐	15.
Trip Blank Custody Seals Present	☐	☒	☐	

Client Notification/ Resolution:

Person Contacted: _____ Date/Time: _____ Contacted By: _____

Comments/ Resolution: _____

Note: Whenever there is a discrepancy affecting North Carolina compliance samples, a copy of this form will be sent to the North Carolina DEHNR Certification Office (i.e. out of hold, incorrect preservative, out of temp, incorrect containers)

Chain of Custody



Workorder: 30183011 Workorder Name: UPA Bradford M-061 Owner Received Date: 5/12/2016 Results Requested By: 5/17/2016

Report To		Subcontract To		Requested Analysis										Comments					
Rachel Christner Pace Analytical Pittsburgh 1638 Roseytown Road Suites 2,3,4 Greensburg, PA 15601 Phone (724)850-5600		Pace Analytical New Orleans 1000 Riverbend Blvd Suite F St. Rose, LA 70087 Phone 1(504)469-0333		8260 BTEX, MTBE, Cumene, Naphthalene, TMBs															
Item	Sample ID	Sample Type	Collect Date/Time	Lab ID	Matrix	HC	Preserved Containers										LAB USE ONLY		
20	MW-21	PS	5/11/2016 12:45	30183011020	Water	1													
21	MW-22	PS	5/11/2016 14:35	30183011021	Water	1													
22	MW-23	PS	5/11/2016 13:00	30183011022	Water	1													
23	Duplicate	PS	5/11/2016 00:01	30183011023	Water	1													
24																			

Transfers	Released By	Date/Time	Received By	Date/Time
1	<i>RLG Pace</i>	5/13/16 1715	<i>FedEx</i>	
2	<i>FedEx</i>	5/14/16 929	<i>J-L2 Pace</i>	5/14/16 920
3				

Cooler Temperature on Receipt	1.0 °C	Custody Seal	Y or N	Received on Ice	Y or N	Samples Intact	Y or N
-------------------------------	--------	--------------	--------	-----------------	--------	----------------	--------

***In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

WO#: 2036673



Sample Condition Upon

PM: ADC

Due Date: 05/17/16

CLIENT: PASI-PITT

1000 Riverbend Blvd., Suite F
St. Rose, LA 70087

Pr

 Courier: ☐ Pace Courier ☐ Hired Courier ☒ Fed X ☐ UPS ☐ DHL ☐ USPS ☐ Customer ☐ Other

Custody Seal on Cooler/Box Present: [see COC]

Custody Seals intact: ☒ Yes ☐ NoThermometer
Used:

- ☐
- Therm Fisher IR 5
-
- ☐
- Therm Fisher IR 6
-
- ☒
- Therm Fisher IR 7

Type of Ice:

Wet Blue None

Samples on ice: [see COC]

Cooler Temperature: [see COC]

Temp should be above freezing to 6°C

Date and Initials of person examining
contents: S-16-16-16MB

Temp must be measured from Temperature blank when present

Comments:

Temperature Blank Present?	☐ Yes ☐ No ☒ N/A	1
Chain of Custody Present:	☒ Yes ☐ No ☐ N/A	2
Chain of Custody Complete:	☒ Yes ☐ No ☐ N/A	3
Chain of Custody Relinquished:	☒ Yes ☐ No ☐ N/A	4
Sampler Name & Signature on COC:	☐ Yes ☒ No ☐ N/A	5
Samples Arrived within Hold Time:	☒ Yes ☐ No ☐ N/A	6
Sufficient Volume:	☒ Yes ☐ No ☐ N/A	7
Correct Containers Used:	☒ Yes ☐ No ☐ N/A	8
Filtered vol. Rec. for Diss. tests	☐ Yes ☐ No ☒ N/A	9
Sample Labels match COC:	☒ Yes ☐ No ☐ N/A	10
All containers received within manufacture's precautionary and/or expiration dates.	☒ Yes ☐ No ☐ N/A	11
All containers needing chemical preservation have been checked (except VOA, coliform, & O&G).	☐ Yes ☐ No ☒ N/A	12
All containers preservation checked found to be in compliance with EPA recommendation.	☐ Yes ☐ No ☒ N/A	13
Headspace in VOA Vials (>6mm):	☒ Yes ☐ No ☐ N/A	14
Trip Blank Present:	☐ Yes ☒ No	15

Client Notification/ Resolution:

Person Contacted: _____

Date/Time: _____

Comments/ Resolution:

mw-8 30183011007 1 voa vial > 6 mm

mw-13 012 1 voa vial > 6 mm



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

May 26, 2016

Rachel Christner
Pace Analytical Services, Inc.
1638 Roseytown Road
Suites 2,3,4
Greensburg, PA 15601
USA

RE: **30183011**

Pace Workorder: 19202

Dear Rachel Christner:

Enclosed are the analytical results for sample(s) received by the laboratory on Tuesday, May 24, 2016. Results reported herein conform to the most current NELAC standards, where applicable, unless otherwise narrated in the body of the report.

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

Sincerely,

Ruth Welsh 05/26/2016
Ruth.Welsh@pacelabs.com

Customer Service Representative

Enclosures

As a valued client we would appreciate your comments on our service.
Please email info@microseeps.com.

Total Number of Pages 16

Report ID: 19202 - 800231

Page 1 of 14



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

LABORATORY ACCREDITATIONS & CERTIFICATIONS

Accreditor:	Pennsylvania Department of Environmental Protection, Bureau of Laboratories
Accreditation ID:	02-00538
Scope:	NELAP Non-Potable Water and Solid & Hazardous Waste
Accreditor:	South Carolina Department of Health and Environmental Control, Office of Environmental Laboratory Certification
Accreditation ID:	89009003
Scope:	Clean Water Act (CWA); Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: New Jersey, Department of Environmental Protection
Accreditation ID:	PA026
Scope:	Non-Potable Water; Solid and Chemical Materials
Accreditor:	NELAP: New York, Department of Health Wadsworth Center
Accreditation ID:	11815
Scope:	Non-Potable Water; Solid and Hazardous Waste
Accreditor:	State of Connecticut, Department of Public Health, Division of Environmental Health
Accreditation ID:	PH-0263
Scope:	Clean Water Act (CWA) Resource Conservation and Recovery Act (RCRA)
Accreditor:	NELAP: Texas, Commission on Environmental Quality
Accreditation ID:	T104704453-09-TX
Scope:	Non-Potable Water
Accreditor:	State of New Hampshire
Accreditation ID:	299409
Scope:	Non-potable water
Accreditor:	State of Georgia
Accreditation ID:	Chapter 391-3-26
Scope:	As per the Georgia EPD Rules and Regulations for Commercial Laboratories, PAES is accredited by the Pennsylvania Department of Environmental Protection Bureau of Laboratories under the National Environmental Laboratory Approval Program (NELAC).



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

SAMPLE SUMMARY

Workorder: 19202 30183011

Lab ID	Sample ID	Matrix	Date Collected	Date Received
192020001	30183011 007	Water	5/11/2016 12:00	5/24/2016 15:36
192020002	30183011 008	Water	5/11/2016 12:15	5/24/2016 15:36
192020003	30183011 009	Water	5/11/2016 12:30	5/24/2016 15:36
192020004	30183011 010	Water	5/11/2016 11:40	5/24/2016 15:36
192020005	30183011 012	Water	5/11/2016 15:10	5/24/2016 15:36
192020006	30183011 020	Water	5/11/2016 12:45	5/24/2016 15:36
192020007	30183011 021	Water	5/11/2016 14:35	5/24/2016 15:36



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

PROJECT SUMMARY

Workorder: 19202 30183011

Batch Comments

Batch: DISG/5400 - RSK175 QC

The relative percent difference between the sample and sample duplicate exceeded laboratory control limits; reference sample 192020001 and 192020004. Analyte Ethane and/or Propane. Results for original and duplicate samples were below reporting limits.



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 19202 30183011

Lab ID: 192020001
Sample ID: 30183011 007

Date Received: 5/24/2016 15:36 Matrix: Water
Date Collected: 5/11/2016 12:00

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
------------	---------	-------	-----	-----	----	----------	----	------------

RISK - MICR

Analysis Desc: EPA RSK175

Analytical Method: EPA RSK175

Methane	2.8	ug/l	0.50	0.019	1	5/25/2016 09:16	AK	B
---------	-----	------	------	-------	---	-----------------	----	---



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 19202 30183011

Lab ID: 192020002
Sample ID: 30183011 008

Date Received: 5/24/2016 15:36 Matrix: Water
Date Collected: 5/11/2016 12:15

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175					
Methane	710	ug/l	2.0	0.076	4	5/25/2016 12:50	AK	d,B





Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 19202 30183011

Lab ID: 192020003
Sample ID: 30183011 009

Date Received: 5/24/2016 15:36 Matrix: Water
Date Collected: 5/11/2016 12:30

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175					
Methane	1000	ug/l	2.5	0.095	5	5/25/2016 13:00	AK	d,B

Report ID: 19202 - 800231

Page 7 of 14



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.

Page 55 of 64



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 19202 30183011

Lab ID: 192020004
Sample ID: 30183011 010

Date Received: 5/24/2016 15:36 Matrix: Water
Date Collected: 5/11/2016 11:40

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175					
Methane	29	ug/l	0.50	0.019	1	5/25/2016 09:47	AK	B

Report ID: 19202 - 800231

Page 8 of 14



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.

Page 56 of 64



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 19202 30183011

Lab ID: 192020005
Sample ID: 30183011 012

Date Received: 5/24/2016 15:36 Matrix: Water
Date Collected: 5/11/2016 15:10

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175					
Methane	3400	ug/l	50	1.9	100	5/25/2016 13:10	AK	d,B

Report ID: 19202 - 800231

Page 9 of 14



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.

Page 57 of 64



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 19202 30183011

Lab ID: 192020006
Sample ID: 30183011 020

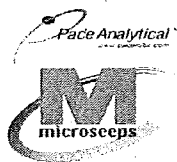
Date Received: 5/24/2016 15:36 Matrix: Water
Date Collected: 5/11/2016 12:45

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175					
Methane	8.1	ug/l	0.50	0.019	1	5/25/2016 10:09	AK	B



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS

Workorder: 19202 30183011

Lab ID: 192020007
Sample ID: 30183011 021

Date Received: 5/24/2016 15:36 Matrix: Water
Date Collected: 5/11/2016 14:35

Parameters	Results	Units	PQL	MDL	DF	Analyzed	By	Qualifiers
RISK - MICR								
Analysis Desc: EPA RSK175			Analytical Method: EPA RSK175					
Methane	750	ug/l	2.5	0.095	5	5/25/2016 13:20	AK	d,B





Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

ANALYTICAL RESULTS QUALIFIERS

Workorder: 19202 30183011

DEFINITIONS/QUALIFIERS

Disclaimer : The Pennsylvania Department of Environmental Protection (PADEP) has decided to no longer recognize analyses that do not produce data for primary compliance, for NELAP accreditation. The methods affected by this decision are AM20GAX, AM21G, SW846 7199 and AM4.02. The laboratory shall continue to administer the NELAP/TNI standard requirements in the performance of these methods.

MDL Method Detection Limit. Can be used synonymously with LOD; Limit Of Detection.

PQL Practical Quantitation Limit. Can be used synonymously with LOQ; Limit Of Quantitation.

ND Not detected at or above reporting limit.

DF Dilution Factor.

S Surrogate.

RPD Relative Percent Difference.

% Rec Percent Recovery.

U Indicates the compound was analyzed for, but not detected at or above the noted concentration.

J Estimated concentration greater than the set method detection limit (MDL) and less than the set reporting limit (PQL).

B The analyte was detected in the associated blank.

d The analyte concentration was determined from a dilution.



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA

Workorder: 19202 30183011

QC Batch: DISG/5400 Analysis Method: EPA RSK175
QC Batch Method: EPA RSK175
Associated Lab Samples: 192020001, 192020002, 192020003, 192020004, 192020005, 192020006, 192020007

METHOD BLANK: 42165

Parameter	Units	Blank Result	Reporting Limit	Qualifiers
RISK Methane	ug/l	0.022J	0.019 B	

LABORATORY CONTROL SAMPLE & LCSD: 42166 42167

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limit	RPD	Max RPD	Qualifiers
RISK Methane	ug/l	44	45	45	101	101	85-115	0	20	B

SAMPLE DUPLICATE: 42168 Original: 192020001

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
RISK Methane	ug/l	2.8	2.7	3.6	20	B

SAMPLE DUPLICATE: 42169 Original: 192020004

Parameter	Units	Original Result	DUP Result	RPD	Max RPD	Qualifiers
RISK Methane	ug/l	29	25	14	20	B

Report ID: 19202 - 800231

Page 13 of 14



CERTIFICATE OF ANALYSIS
This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.

Page 61 of 64



Pace Analytical Energy Services LLC
220 William Pitt Way
Pittsburgh, PA 15238
Phone: (412) 826-5245
Fax: (412) 826-3433

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Workorder: 19202 30183011

Lab ID	Sample ID	Prep Method	Prep Batch	Analysis Method	Analysis Batch
192020001	30183011 007			EPA RSK175	DISG/5400
192020002	30183011 008			EPA RSK175	DISG/5400
192020003	30183011 009			EPA RSK175	DISG/5400
192020004	30183011 010			EPA RSK175	DISG/5400
192020005	30183011 012			EPA RSK175	DISG/5400
192020006	30183011 020			EPA RSK175	DISG/5400
192020007	30183011 021			EPA RSK175	DISG/5400



CERTIFICATE OF ANALYSIS

This report shall not be reproduced, except in full,
without the written consent of Pace Analytical Energy Services LLC.

Chain of Custody



Pace Analytical Services, Inc.
1638 Roseytown Road
Suites 2,3, & 4
Greensburg, PA 15601
Phone: (724) 850-5600
FAX: (724) 850-5601

Sample Condition upon Receipt:	
(Please record the following information)	
Temp in C	Yes/No
Received on Ice	Yes/No
Sealed Cooler	Yes/No
Samples Intact	Yes/No

Page 1 of 1

Subcontractor Project No.: 19202
P.O. No: ASR-30183011
Request Date: 5/20/16 Analysis Due Date: 5/26/2016
Shipped By: Courier
Certification Required: PA
Pace Project No.: 30183011
Report/Invoice to: Rachel Christner

Pace Sample ID:	Matrix:	Collection Date:	Time:	Analysis Requested:	Analytical Method:	Preservative Type:
1	30183011 007	WT	5/11/16	12:00	Methane	RSK-175 TSP
2	30183011 008	WT	5/11/16	12:15	Methane	RSK-175 TSP
3	30183011 009	WT	5/11/16	12:30	Methane	RSK-175 TSP
4	30183011 010	WT	5/11/16	11:40	Methane	RSK-175 TSP
5	30183011 012	WT	5/11/16	15:10	Methane	RSK-175 TSP
6	30183011 020	WT	5/11/16	12:45	Methane	RSK-175 TSP
7	30183011 021	WT	5/11/16	14:35	Methane	RSK-175 TSP
8						
9						
10						
11						
12						

Special Requirements:

****Please supply a method blank and LCS QC information on the final report****

Subcontract Lab:
Address:

Phone:

Pace Analytical Energy Services PA (Microsee
220 William Pitt Way
Pittsburgh, PA 15238
412-826-5245

Analysis Authorized By:
Acceptance of Terms By:

Subcontract Lab Agent
Title

Relinquished By:
Reinquished By:

Signature & Affiliation
(Date) (Time)
(Signature & Affiliation) (Date) (Time)

Received By:
Received By:
(Signature & Affiliation) (Date) (Time)
(Signature & Affiliation) (Date) (Time)

In order to maintain client confidentiality, location/name of the sampling site, sampler's name and signature may not be provided on this COC document.
This chain of custody is considered complete as is since this information is available in the owner laboratory.

Cooler Receipt Form

Client Name: Pro-G Project: 30183011 Lab Work Order: 19202

A. Shipping/Container Information (circle appropriate response)

Courier: FedEx UPS USPS Client Other: _____ Air bill Present: Yes No

Tracking Number: _____

Custody Seal on Cooler/Box Present: Yes No Seals Intact: Yes No

Cooler/Box Packing Material: Bubble Wrap Absorbent Foam Other: _____

Type of Ice: Wet Blue None Ice Intact: Yes Melted

Cooler Temperature: 2.2°C Radiation Screened: Yes No Chain of Custody Present: Yes No

Comments: _____

B. Laboratory Assignment/Log-in (check appropriate response)

	YES	NO	N/A	Comment Reference non-Conformance
Chain of Custody properly filled out	☒			
Chain of Custody relinquished	☒			
Sampler Name & Signature on COC		☒		
Containers intact	☒			
Were samples in separate bags.	☒			
Sample container labels match COC	☒			
Sample name/date and time collected	☒			
Sufficient volume provided	☒			
PAES containers used	☒			
Are containers properly preserved for the requested testing? (as labeled)	☒			
If an unknown preservation state, were containers checked? Exception: VOA's coliform			☒	If yes, see pH form.
Was volume for dissolved testing field filtered, as noted on the COC? Was volume received in a preserved container?			☒	

Comments: _____

Cooler contents examined/received by: LY Date: 5-24-16

Project Manager Review: AW Date: 5-24-16