

June 28, 2017

Project #34283.000  
NPI Q2 GW  
Reviewed by CCW  
6/28/17

Clifford Wright  
Gannett Fleming  
8025 Excelsior Drive  
Madison, WI 53717

RE: Project: 34283.000 NPI  
Pace Project No.: 40151726

Dear Clifford Wright:

Enclosed are the analytical results for sample(s) received by the laboratory on June 15, 2017. 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,



Dan Milewsky  
dan.milewsky@pacelabs.com  
(920)469-2436  
Project Manager

Enclosures

cc: Mary C. Wehbe, MCW Scientific Solutions



## REPORT OF LABORATORY ANALYSIS

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## CERTIFICATIONS

Project: 34283.000 NPI

Pace Project No.: 40151726

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### Minnesota Certification IDs

1700 Elm Street SE, Suite 200, Minneapolis, MN 55414

A2LA Certification #: 2926.01

Alabama Certification #: 40770

Alaska Contaminated Sites Certification #: UST-078

Alaska DW Certification #: MN00064

Arizona Certification #: AZ0014

Arkansas Certification #: 88-0680

California Certification #: MN00064

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8 Certification #: 8TMS-L

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Mississippi Certification #: MN00064

Montana Certification #: CERT0092

Nebraska Certification #: NE-OS-18-06

Nevada Certification #: MN00064

New Hampshire Certification #: 2081

New Jersey Certification #: MN002

New York Certification #: 11647

North Carolina DW Certification #: 27700

North Carolina WW Certification #: 530

North Dakota Certification #: R-036

Ohio DW Certification #: 41244

Ohio VAP Certification #: CL101

Oklahoma Certification #: 9507

Oregon NwTPH Certification #: MN300001

Oregon Secondary Certification #: MN200001

Pennsylvania Certification #: 68-00563

Puerto Rico Certification #: MN00064

South Carolina Certification #: 74003001

Tennessee Certification #: TN02818

Texas Certification #: T104704192

Utah Certification #: MN00064

Virginia Certification #: 460163

Washington Certification #: C486

West Virginia DW Certification #: 9952 C

West Virginia WW Certification #: 382

Wisconsin Certification #: 999407970

Wyoming via EPA Region 8 Certification #: 8TMS-L

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## REPORT OF LABORATORY ANALYSIS

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## SAMPLE SUMMARY

Project: 34283.000 NPI

Pace Project No.: 40151726

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151726001	CW-11	Water	06/14/17 09:09	06/15/17 09:55
40151726002	CW-15	Water	06/14/17 09:12	06/15/17 09:55
40151726003	CW-16	Water	06/14/17 09:02	06/15/17 09:55
40151726004	CW-19	Water	06/14/17 09:15	06/15/17 09:55
40151726005	CW-22	Water	06/14/17 09:24	06/15/17 09:55
40151726006	CW-23	Water	06/14/17 09:20	06/15/17 09:55
40151726007	RAW	Water	06/14/17 09:30	06/15/17 09:55
40151726008	TOWER A	Water	06/14/17 09:32	06/15/17 09:55
40151726009	TOWER B	Water	06/14/17 09:35	06/15/17 09:55
40151726010	FINISHED PRODUCT	Water	06/14/17 08:55	06/15/17 09:55
40151726011	CW-17	Water	06/14/17 09:06	06/15/17 09:55
40151726012	TRIP BLANK	Water	06/14/17 00:00	06/15/17 09:55

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### SAMPLE ANALYTE COUNT

Project: 34283.000 NPI  
Pace Project No.: 40151726

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40151726001	CW-11	EPA 524.2	DJB	8	PASI-M
40151726002	CW-15	EPA 524.2	DJB	8	PASI-M
40151726003	CW-16	EPA 524.2	DJB	8	PASI-M
40151726004	CW-19	EPA 524.2	DJB	8	PASI-M
40151726005	CW-22	EPA 524.2	DJB	8	PASI-M
40151726006	CW-23	EPA 524.2	DJB	8	PASI-M
40151726007	RAW	EPA 524.2	DJB	8	PASI-M
40151726008	TOWER A	EPA 524.2	DJB	8	PASI-M
40151726009	TOWER B	EPA 524.2	DJB	8	PASI-M
40151726010	FINISHED PRODUCT	EPA 524.2	DJB	8	PASI-M
40151726011	CW-17	EPA 524.2	DJB	8	PASI-M
40151726012	TRIP BLANK	EPA 524.2	DJB	8	PASI-M

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### SUMMARY OF DETECTION

Project: 34283.000 NPI

Pace Project No.: 40151726

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
<b>40151726002</b>	<b>CW-15</b>					
EPA 524.2	Trichloroethene	0.28J	ug/L	0.40	06/26/17 11:44	
<b>40151726004</b>	<b>CW-19</b>					
EPA 524.2	Trichloroethene	1.8	ug/L	0.40	06/26/17 12:49	
<b>40151726005</b>	<b>CW-22</b>					
EPA 524.2	1,1,1-Trichloroethane	0.27J	ug/L	0.50	06/26/17 13:11	
EPA 524.2	Trichloroethene	2.3	ug/L	0.40	06/26/17 13:11	
<b>40151726007</b>	<b>RAW</b>					
EPA 524.2	Trichloroethene	1.1	ug/L	0.40	06/26/17 13:54	

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## PROJECT NARRATIVE

Project: 34283.000 NPI  
Pace Project No.: 40151726

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**Method:** EPA 524.2  
**Description:** 524.2 MSV  
**Client:** Gannett Fleming Inc.  
**Date:** June 28, 2017

### General Information:

12 samples were analyzed for EPA 524.2. 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.

QC Batch: 481564

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

### 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.

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

**Sample: CW-11**      **Lab ID: 40151726001**      Collected: 06/14/17 09:09      Received: 06/15/17 09:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 11:22	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 11:22	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 11:22	127-18-4	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		06/26/17 11:22	71-55-6	
Trichloroethene	<0.044	ug/L	0.40	0.044	1		06/26/17 11:22	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102	%	75-125		1		06/26/17 11:22	460-00-4	
Toluene-d8 (S)	102	%	75-125		1		06/26/17 11:22	2037-26-5	
1,2-Dichloroethane-d4 (S)	107	%	75-125		1		06/26/17 11:22	17060-07-0	

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

**Sample: CW-15**      **Lab ID: 40151726002**      Collected: 06/14/17 09:12      Received: 06/15/17 09:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 11:44	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 11:44	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 11:44	127-18-4	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		06/26/17 11:44	71-55-6	
Trichloroethene	0.28J	ug/L	0.40	0.044	1		06/26/17 11:44	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	75-125		1		06/26/17 11:44	460-00-4	
Toluene-d8 (S)	100	%	75-125		1		06/26/17 11:44	2037-26-5	
1,2-Dichloroethane-d4 (S)	109	%	75-125		1		06/26/17 11:44	17060-07-0	

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

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**Sample: CW-16**      **Lab ID: 40151726003**    Collected: 06/14/17 09:02    Received: 06/15/17 09:55    Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 12:27	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 12:27	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 12:27	127-18-4	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		06/26/17 12:27	71-55-6	
Trichloroethene	<0.044	ug/L	0.40	0.044	1		06/26/17 12:27	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102	%	75-125		1		06/26/17 12:27	460-00-4	
Toluene-d8 (S)	101	%	75-125		1		06/26/17 12:27	2037-26-5	
1,2-Dichloroethane-d4 (S)	110	%	75-125		1		06/26/17 12:27	17060-07-0	

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

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**Sample: CW-19**      **Lab ID: 40151726004**      Collected: 06/14/17 09:15      Received: 06/15/17 09:55      Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 12:49	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 12:49	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 12:49	127-18-4	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		06/26/17 12:49	71-55-6	
Trichloroethene	1.8	ug/L	0.40	0.044	1		06/26/17 12:49	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103	%	75-125		1		06/26/17 12:49	460-00-4	
Toluene-d8 (S)	100	%	75-125		1		06/26/17 12:49	2037-26-5	
1,2-Dichloroethane-d4 (S)	110	%	75-125		1		06/26/17 12:49	17060-07-0	

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

**Sample: CW-22**      **Lab ID: 40151726005**      Collected: 06/14/17 09:24      Received: 06/15/17 09:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 13:11	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 13:11	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 13:11	127-18-4	
1,1,1-Trichloroethane	0.27J	ug/L	0.50	0.10	1		06/26/17 13:11	71-55-6	
Trichloroethene	2.3	ug/L	0.40	0.044	1		06/26/17 13:11	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	75-125		1		06/26/17 13:11	460-00-4	
Toluene-d8 (S)	100	%	75-125		1		06/26/17 13:11	2037-26-5	
1,2-Dichloroethane-d4 (S)	108	%	75-125		1		06/26/17 13:11	17060-07-0	

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

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**Sample: CW-23**      **Lab ID: 40151726006**      Collected: 06/14/17 09:20      Received: 06/15/17 09:55      Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 13:32	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 13:32	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 13:32	127-18-4	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		06/26/17 13:32	71-55-6	
Trichloroethene	<0.044	ug/L	0.40	0.044	1		06/26/17 13:32	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	102	%	75-125		1		06/26/17 13:32	460-00-4	
Toluene-d8 (S)	102	%	75-125		1		06/26/17 13:32	2037-26-5	
1,2-Dichloroethane-d4 (S)	110	%	75-125		1		06/26/17 13:32	17060-07-0	

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

**Sample: RAW**      **Lab ID: 40151726007**      Collected: 06/14/17 09:30      Received: 06/15/17 09:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 13:54	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 13:54	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 13:54	127-18-4	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		06/26/17 13:54	71-55-6	
Trichloroethene	1.1	ug/L	0.40	0.044	1		06/26/17 13:54	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	103	%	75-125		1		06/26/17 13:54	460-00-4	
Toluene-d8 (S)	100	%	75-125		1		06/26/17 13:54	2037-26-5	
1,2-Dichloroethane-d4 (S)	110	%	75-125		1		06/26/17 13:54	17060-07-0	

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

**Sample: TOWER A**      **Lab ID: 40151726008**      Collected: 06/14/17 09:32      Received: 06/15/17 09:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 14:16	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 14:16	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 14:16	127-18-4	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		06/26/17 14:16	71-55-6	
Trichloroethene	<0.044	ug/L	0.40	0.044	1		06/26/17 14:16	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	99	%	75-125		1		06/26/17 14:16	460-00-4	
Toluene-d8 (S)	100	%	75-125		1		06/26/17 14:16	2037-26-5	
1,2-Dichloroethane-d4 (S)	112	%	75-125		1		06/26/17 14:16	17060-07-0	

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

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**Sample: TOWER B**      **Lab ID: 40151726009**    Collected: 06/14/17 09:35    Received: 06/15/17 09:55    Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 14:38	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 14:38	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 14:38	127-18-4	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		06/26/17 14:38	71-55-6	
Trichloroethene	<0.044	ug/L	0.40	0.044	1		06/26/17 14:38	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	100	%	75-125		1		06/26/17 14:38	460-00-4	
Toluene-d8 (S)	100	%	75-125		1		06/26/17 14:38	2037-26-5	
1,2-Dichloroethane-d4 (S)	110	%	75-125		1		06/26/17 14:38	17060-07-0	

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

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**Sample: FINISHED PRODUCT**      **Lab ID: 40151726010**      Collected: 06/14/17 08:55      Received: 06/15/17 09:55      Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 15:00	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 15:00	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 15:00	127-18-4	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		06/26/17 15:00	71-55-6	
Trichloroethene	<0.044	ug/L	0.40	0.044	1		06/26/17 15:00	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	75-125		1		06/26/17 15:00	460-00-4	
Toluene-d8 (S)	101	%	75-125		1		06/26/17 15:00	2037-26-5	
1,2-Dichloroethane-d4 (S)	112	%	75-125		1		06/26/17 15:00	17060-07-0	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

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**Sample: CW-17**      **Lab ID: 40151726011**      Collected: 06/14/17 09:06      Received: 06/15/17 09:55      Matrix: Water

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Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 15:21	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 15:21	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 15:21	127-18-4	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		06/26/17 15:21	71-55-6	
Trichloroethene	<0.044	ug/L	0.40	0.044	1		06/26/17 15:21	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	75-125		1		06/26/17 15:21	460-00-4	
Toluene-d8 (S)	100	%	75-125		1		06/26/17 15:21	2037-26-5	
1,2-Dichloroethane-d4 (S)	109	%	75-125		1		06/26/17 15:21	17060-07-0	

## REPORT OF LABORATORY ANALYSIS

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## ANALYTICAL RESULTS

Project: 34283.000 NPI

Pace Project No.: 40151726

**Sample: TRIP BLANK**      **Lab ID: 40151726012**      Collected: 06/14/17 00:00      Received: 06/15/17 09:55      Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
<b>524.2 MSV</b>		Analytical Method: EPA 524.2							
1,1-Dichloroethane	<0.088	ug/L	0.50	0.088	1		06/26/17 10:39	75-34-3	
1,1-Dichloroethene	<0.089	ug/L	0.50	0.089	1		06/26/17 10:39	75-35-4	
Tetrachloroethene	<0.12	ug/L	0.50	0.12	1		06/26/17 10:39	127-18-4	
1,1,1-Trichloroethane	<0.10	ug/L	0.50	0.10	1		06/26/17 10:39	71-55-6	
Trichloroethene	<0.044	ug/L	0.40	0.044	1		06/26/17 10:39	79-01-6	
<b>Surrogates</b>									
4-Bromofluorobenzene (S)	101	%	75-125		1		06/26/17 10:39	460-00-4	
Toluene-d8 (S)	99	%	75-125		1		06/26/17 10:39	2037-26-5	
1,2-Dichloroethane-d4 (S)	110	%	75-125		1		06/26/17 10:39	17060-07-0	

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA

Project: 34283.000 NPI  
Pace Project No.: 40151726

QC Batch: 481564 Analysis Method: EPA 524.2  
QC Batch Method: EPA 524.2 Analysis Description: 524.2 MSV  
Associated Lab Samples: 40151726001, 40151726002, 40151726003, 40151726004, 40151726005, 40151726006, 40151726007, 40151726008, 40151726009, 40151726010, 40151726011, 40151726012

METHOD BLANK: 2623276 Matrix: Water  
Associated Lab Samples: 40151726001, 40151726002, 40151726003, 40151726004, 40151726005, 40151726006, 40151726007, 40151726008, 40151726009, 40151726010, 40151726011, 40151726012

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.10	0.50	06/26/17 10:17	
1,1-Dichloroethane	ug/L	<0.088	0.50	06/26/17 10:17	
1,1-Dichloroethene	ug/L	<0.089	0.50	06/26/17 10:17	
Tetrachloroethene	ug/L	<0.12	0.50	06/26/17 10:17	
Trichloroethene	ug/L	<0.044	0.40	06/26/17 10:17	
1,2-Dichloroethane-d4 (S)	%	106	75-125	06/26/17 10:17	
4-Bromofluorobenzene (S)	%	100	75-125	06/26/17 10:17	
Toluene-d8 (S)	%	101	75-125	06/26/17 10:17	

LABORATORY CONTROL SAMPLE & LCSD: 2623277 2623278

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	20	18.9	18.2	95	91	70-130	4	20	
1,1-Dichloroethane	ug/L	20	18.7	18.7	93	94	70-130	0	20	
1,1-Dichloroethene	ug/L	20	17.5	17.0	87	85	70-130	2	20	
Tetrachloroethene	ug/L	20	18.3	17.6	92	88	70-130	4	20	
Trichloroethene	ug/L	20	18.7	17.9	93	89	70-130	4	20	
1,2-Dichloroethane-d4 (S)	%				100	103	75-125			
4-Bromofluorobenzene (S)	%				98	98	75-125			
Toluene-d8 (S)	%				101	101	75-125			

MATRIX SPIKE SAMPLE: 2623279

Parameter	Units	40151726001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.10	20	18.8	94	70-130	
1,1-Dichloroethane	ug/L	<0.088	20	18.0	90	70-130	
1,1-Dichloroethene	ug/L	<0.089	20	17.5	88	70-130	
Tetrachloroethene	ug/L	<0.12	20	17.1	85	70-130	
Trichloroethene	ug/L	<0.044	20	18.1	90	70-130	
1,2-Dichloroethane-d4 (S)	%				97	75-125	
4-Bromofluorobenzene (S)	%				97	75-125	
Toluene-d8 (S)	%				101	75-125	

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.

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### QUALITY CONTROL DATA

Project: 34283.000 NPI

Pace Project No.: 40151726

SAMPLE DUPLICATE: 2623280

Parameter	Units	40151726002 Result	Dup Result	RPD	Max RPD	Qualifiers
1,1,1-Trichloroethane	ug/L	<0.10	<0.10		20	
1,1-Dichloroethane	ug/L	<0.088	<0.088		20	
1,1-Dichloroethene	ug/L	<0.089	<0.089		20	
Tetrachloroethene	ug/L	<0.12	<0.12		20	
Trichloroethene	ug/L	0.28J	0.22J		20	
1,2-Dichloroethane-d4 (S)	%.	109	109	0		
4-Bromofluorobenzene (S)	%.	100	99	1		
Toluene-d8 (S)	%.	100	100	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.

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## QUALIFIERS

Project: 34283.000 NPI

Pace Project No.: 40151726

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### 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 and percent moisture.

LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.

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-M Pace Analytical Services - Minneapolis

### BATCH QUALIFIERS

Batch: 481564

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

## REPORT OF LABORATORY ANALYSIS

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### QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 34283.000 NPI

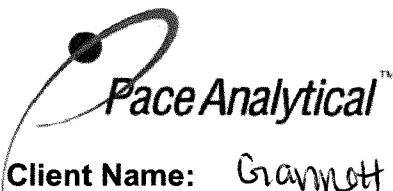
Pace Project No.: 40151726

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151726001	CW-11	EPA 524.2	481564		
40151726002	CW-15	EPA 524.2	481564		
40151726003	CW-16	EPA 524.2	481564		
40151726004	CW-19	EPA 524.2	481564		
40151726005	CW-22	EPA 524.2	481564		
40151726006	CW-23	EPA 524.2	481564		
40151726007	RAW	EPA 524.2	481564		
40151726008	TOWER A	EPA 524.2	481564		
40151726009	TOWER B	EPA 524.2	481564		
40151726010	FINISHED PRODUCT	EPA 524.2	481564		
40151726011	CW-17	EPA 524.2	481564		
40151726012	TRIP BLANK	EPA 524.2	481564		

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**Sample Condition Upon Receipt**

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

Project #

**WO# : 40151726**

Client Name: Granott Fleming



Courier:  Fed Ex  UPS  Client  Pace Other: \_\_\_\_\_

Tracking #: 8115 9716 0857

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

Custody Seal on Samples Present:  yes  no Seals intact:  yes  no

Packing Material:  Bubble Wrap  Bubble Bags  None  Other

Thermometer Used N/A Type of Ice: Wet Blue Dry None  Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 120 /Corr: \_\_\_\_\_ Biological Tissue is Frozen:  yes

Temp Blank Present:  yes  no  no

Person examining contents:  
Date: 6/15/17  
Initials: RMW

Temp should be above freezing to 6°C.  
Biota Samples may be received at ≤ 0°C.

**Comments:**

Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
- VOA Samples frozen upon receipt	<input type="checkbox"/> Yes <input type="checkbox"/> No	Date/Time:
Short Hold Time Analysis (<72hr):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	7.
Sufficient Volume:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
-Pace IR Containers Used:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	11.
Sample Labels match COC:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	12. <u>has ID of "product"</u> <u>RMW 6/15/17</u>
-Includes date/time/ID/Analysis Matrix: <u>W</u>		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	13. <input type="checkbox"/> HNO3 <input type="checkbox"/> H2SO4 <input type="checkbox"/> NaOH <input type="checkbox"/> NaOH + ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
exceptions: <u>VOA</u> , coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER: _____	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Initial when completed
		Lab Std #ID of preservative
		Date/Time:
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	14.
Trip Blank Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	15.
Trip Blank Custody Seals Present	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Pace Trip Blank Lot # (if purchased): <u>#381</u>		

**Client Notification/ Resolution:**

If checked, see attached form for additional comments

Person Contacted: \_\_\_\_\_ Date/Time: \_\_\_\_\_

Comments/ Resolution: \_\_\_\_\_

Project Manager Review:

AL for DM

Date: 6/15/17