

### Wisconsin Public Service Corporation

700 North Adams Street P.O. Box 19001 Green Bay, WI 54307-9001

www.wisconsinpublicservice.com

July 30, 2018

Ms. Amy Hazuka Associated Bank 433 Main Street, Mailstop 8227 Green Bay, WI, 54301-5114

### RE: Recent Sampling Results

Wisconsin Public Service Corporation – Former Green Bay Manufactured Gas Plant (MGP) 700 North Adams Street, BRRTS# 0205000254

Dear Ms. Hazuka,

WEC Business Services, LLC (WBS), managing the Wisconsin Public Service Corporation (WPSC) former manufactured gas plant site at 700 North Adams Street is providing results of groundwater samples collected as part of routine monitoring (MW414, MW415A, MW415B, MW416) collected in May of 2018, as part of site characterization. Wisconsin Administrative Code Chapter NR716.14 requires responsible parties (WPSC for the above-mentioned site) to report sampling results to the property owner, and occupant, as applicable.

Results of the sampling are summarized in the attached documents. This includes summary tables of the results compared to State standards. Copies of the relevant portions of the associated laboratory reports and a figure showing the locations of samples collected on your property are also included. The results will be presented in a future Remedial Investigation Report.

We appreciate your cooperation as sampling progresses.

If you need additional information, please contact Tauren Beggs from the WDNR at 920-662-5178 or myself at 414-221-2156.

Sincerely,

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Frank Dombrowski Principal Environmental Consultant WEC Energy Group – Business Services Environmental Dept.

Ms. Hazuka Associated Bank July 30, 2018 Page 2

Enc: Figure 1. Associated Bank

Table 1. Groundwater Analytical Results for Associated Bank (May 2018) Table 2. Sample Key for Associated Bank (May 2018)

Laboratory Reports 40170015\_frc

CC: USEPA RPM – Margaret Gielniewski (via email) WDNR PM – Tauren Beggs (via US Mail and email) WDNR Northeast Region (via email to DNRRRNER@wisconsin.gov) Mr. Brian Hennings, OBG (via email)

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# **Figures**



# **Tables**

### Table 1. Groundwater Analytical Results for Associated Bank

May 2018 Sample Results Notification

Wisconsin Public Service Corporation

Green Bay Former Manufactured Gas Plant Site 700 N Adams St, Green Bay, Wisconsin

BRRTS#: 02-05-000254 USEPA#: WIN000509948

			PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH
9-digit Code	Station Name	Sample Date	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g, h, i) perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,ħ)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
Reporting Units:		Reporting Units:	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
	<u>\</u>	NI Groundwater PAL:	<u>NS</u>	<u>NS</u>	<u>NS</u>	<u>NS</u>	<u>600</u>	<u>NS</u>	<u>0.02</u>	<u>0.02</u>	<u>NS</u>	<u>NS</u>	<u>0.02</u>	<u>NS</u>	<u>80</u>	<u>80</u>	<u>NS</u>	<u>10</u>	<u>NS</u>	<u>50</u>
		WI Groundwater ES:	NS	NS	NS	NS	3,000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	100	NS	250
053018017	MW-414	5/30/2018	<0.0060 U	<0.0050 U	<0.0062 U	<0.0051 U	<0.011 U	<0.0077 U	<0.011 U	0.0072 J	<0.0069 U	<0.0077 U	<0.013 U	<0.010 U	0.011 J	<0.0081 U	<0.018 U	<0.019 U	<0.014 U	0.013 J
053018010	MW-415A	5/30/2018	<0.0059 U	<0.0049 U	<0.0061 U	<0.0050 U	<0.010 U	0.022 J	<u>0.034 J</u>	<u>0.11</u>	0.064	0.057	<u>0.10</u>	<0.010 U	0.18	<0.0080 U	0.053 J	<0.018 U	0.067 J	0.082
053018011	MW-415A-Dup	5/30/2018	<0.0059 U	<0.0049 U	<0.0061 U	<0.0050 U	0.011 J	0.018 J	<u>0.037 J</u>	0.11	0.063	0.058	0.11	0.011 J	0.17	<0.0080 U	0.056 J	<0.018 U	0.065 J	0.12
053018012	MW-415B	5/30/2018	<0.0060 U	<0.0049 U	<0.0061 U	<0.0050 U	<0.011 U	<0.0076 U	<0.011 U	0.012 J	0.0077 J	<0.0076 U	0.014 J	<0.010 U	0.014 J	<0.0081 U	<0.018 U	<0.019 U	0.020 J	0.022 J
053018009	MW-416	5/30/2018	<0.0059 U	<0.0049 U	<0.0061 U	<0.0050 U	<0.010 U	<0.0076 U	<0.011 U	<u>0.021 J</u>	0.0087 J	<0.0076 U	<u>0.020 J</u>	<0.010 U	0.034 J	<0.0080 U	<0.018 U	<0.018 U	0.019 J	0.026 J

Notes

Underline = concentration that attains or exceeds WDNR PAL

BOLD = concentration that attains or exceeds WDNR ES

\* = Level of Detection (LOD) meets or exceeds the PAL and/or the ES Groundwater Criteria

-- = Analysis not performed

< = Concentration is less than reported limit

J = Concentration estimated

U = Not detected

Lab comments, additional data qualifiers and definitions can be found in associated laboratory reports.

Dup = Quality Control Field Duplicate Sample

µg/L = micrograms per liter

BTEX = benzene, toluene, ethylbenzene and xylenes

PAH = polycyclic aromatic hydrocarbons

VOC = Volatile Organic Compound

ES = Enforcement Standard

PAL = Preventive Action Limit

PAL and ES from WI Administrative Code NR 140 groundwater quality standard revised effective February 2017.

NS = A groundwater quality standard has not been established.

NO2 + NO3 = nitrite plus nitrate

1. Total trimethylbenzenes were calculated by NRT, an OBG Company, as follows:

- a. Where no detections were observed, the sum of the reporting limits is presented.
- b. Where detections were observed, the detected results were added together for the total summation.

c. The list of analytes used for the calculation are: 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.

### Table 1. Groundwater Analytical Results for Associated Bank

May 2018 Sample Results Notification

Wisconsin Public Service Corporation

Green Bay Former Manufactured Gas Plant Site 700 N Adams St, Green Bay, Wisconsin

BRRTS#: 02-05-000254 USEPA#: WIN000509948

			BTEX	BTEX	BTEX	BTEX	BTEX	BTEX	VOC	VOC	VOC	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Inorganic	Inorganic	Inorganic
9-digit Code	Station Name	Sample Date	Benzene	Ethylbenzene	Toluene	Xylene, o	Xylenes, m + p	Xylenes, Total	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Trimethylbenzenes, Total <sup>1</sup>	Arsenic, Dissolved	Barium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Iron, Dissolved	Lead, Dissolved	Manganese, Dissolved	Mercury, Dissolved	Selenium, Dissolved	Silver, Dissolved	Chloride, Total	Nitrogen, NO2 + NO3, Total	Sulfate, Total
		Reporting Units:	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
		WI Groundwater PAL:	0.5	<u>140</u>	<u>160</u>	<u>NS</u>	<u>NS</u>	<u>400</u>	<u>NS</u>	<u>NS</u>	<u>96</u>	<u>1</u>	400	<u>0.5</u>	<u>10</u>	<u>150</u>	<u>1.5</u>	<u>25</u>	<u>0.2</u>	<u>10</u>	<u>10</u>	<u>125,000</u>	2,000	<u>125,000</u>
		WI Groundwater ES:	5	700	800	NS	NS	2,000	NS	NS	480	10	2,000	5	100	300	15	50	2	50	50	250,000	10,000	250,000
053018017	MW-414	5/30/2018	<0.50 U*	<0.50 U	<0.50 U	<0.50 U	<1.0 U	<1.5 U	<0.50 U	<0.50 U	<1.00 U	<2.8 U	<u>545</u>	<u>0.92 J</u>	<10.2 U*	<1,110 U*	<2.0 U*	<u>400</u>	<0.25 U*	<3.2 U	<1.0 U	<u>4,860,000</u>	1,500	90,500
053018010	MW-415A	5/30/2018	<0.50 U*	<0.50 U	<0.50 U	<0.50 U	<1.0 U	<1.5 U	<0.50 U	<0.50 U	<1.00 U	<0.56 U	104	<0.16 U	<2.0 U	<221 U*	<0.39 U	<5.4 U	<0.13 U	<0.63 U	<0.20 U		<95 U	<u>282,000</u>
053018011	MW-415A	5/30/2018	<0.50 U*	<0.50 U	<0.50 U	<0.50 U	<1.0 U	<1.5 U	<0.50 U	<0.50 U	<1.00 U	<0.56 U	113	<0.16 U	<2.0 U	<221 U*	<0.39 U	<5.4 U	<0.13 U	<0.63 U	<0.20 U		<95 U	280,000
053018012	MW-415B	5/30/2018	<0.50 U*	<0.50 U	<0.50 U	<0.50 U	<1.0 U	<1.5 U	<0.50 U	<0.50 U	<1.00 U	<0.56 U	20.0	0.27 J	<2.0 U	<221 U*	<0.39 U	<5.4 U	<0.13 U	<0.63 U	<0.20 U		250 J	<u>1,580,000</u>
053018009	MW-416	5/30/2018	<0.50 U*	<0.50 U	<0.50 U	<0.50 U	<1.0 U	<1.5 U	<0.50 U	<0.50 U	<1.00 U	<u>3.2 J</u>	294	<u>1.1 J</u>	<10.2 U*	<u>3,710</u>	<2.0 U*	<u>3,270</u>	<0.50 U*	<3.2 U	<1.0 U		<95 U	<500,000 U*

Notes

Underline = concentration that attains or exceeds WDNR PAL

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\* = Level of Detection (LOD) meets or exceeds the PAL and/or the ES Groundwater Criteria

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NS = A groundwater quality standard has not been established.

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1. Total trimethylbenzenes were calculated by NRT, an OBG Company, as follows:

a. Where no detections were observed, the sum of the reporting limits is presented.

b. Where detections were observed, the detected results were added together for the total summation.

c. The list of analytes used for the calculation are: 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.

[O:ECK 7/26/18, C:SGW 7/27/18, QA: JQW 7/30/18]

### Table 2. Sample Key for Associated Bank

May 2018 Sample Results Notification Wisconsin Public Service Corporation Green Bay Former Manufactured Gas Plant Site 700 N Adams St, Green Bay, Wisconsin BRRTS#: 02-05-000254 USEPA#: WIN000509948

PACE Lab Report	9-digit code	Location ID Name	Duplicate of	Matrix	Date
40170015	053018009	MW-416		Groundwater	05/30/2018
40170015	053018010	MW-415A		Groundwater	05/30/2018
40170015	053018011	MW-415A-Dup	MW-415A	Groundwater	05/30/2018
40170015	053018012	MW-415B		Groundwater	05/30/2018
40170015	053018017	MW-414		Groundwater	05/30/2018

[O:ECK 7/26/18, C:SGW 7/27/18, QA: JQW 7/30/18]

Notes:

Sorted by: Matrix, Lab Report #, 9-digit code, Location Name, and Date Dup = Quality Control Field Duplicate Sample -- = no applicable information



# Laboratory Data Reports



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

June 15, 2018

Eric Hritsuk OBG

,

RE: Project: 1584/22.2 GREEN BAY FORMER MGP Pace Project No.: 40170015

Dear Eric Hritsuk:

Enclosed are the analytical results for sample(s) received by the laboratory on May 31, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

mate

Brian Basten brian.basten@pacelabs.com (920)469-2436 Project Manager

Enclosures

cc: Phil Brochocki, OBG NRT Data, OBG Robert Paulson, We Energies Steve Wiskes, OBG





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

### CERTIFICATIONS

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

#### **Green Bay Certification IDs**

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



### SAMPLE SUMMARY

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 4017

	40170015	
••	10110010	

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40170015001	053018017	Water	05/30/18 16:09	05/31/18 10:32
40170015002	053018009	Water	05/30/18 08:00	05/31/18 10:32
40170015003	053018010	Water	05/30/18 08:36	05/31/18 10:32
40170015004	053018011	Water	05/30/18 08:41	05/31/18 10:32
40170015005	053018012	Water	05/30/18 09:26	05/31/18 10:32



### SAMPLE ANALYTE COUNT

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40170015001	053018017	EPA 6020	 DS1	9
		EPA 7470	AJT	1
		EPA 8270 by HVI	TPO	20
		EPA 8260	HNW	11
		EPA 300.0	HMB	2
		EPA 353.2	DAW	1
40170015002	053018009	EPA 6020	DS1	9
		EPA 7470	AJT	1
		EPA 8270 by HVI	TPO	20
		EPA 8260	LAP	11
		EPA 300.0	HMB	1
		EPA 353.2	DAW	1
40170015003	053018010	EPA 6020	DS1	9
		EPA 7470	AJT	1
		EPA 8270 by HVI	TPO	20
		EPA 8260	LAP	11
		EPA 300.0	HMB	1
		EPA 353.2	DAW	1
40170015004	053018011	EPA 6020	DS1	9
		EPA 7470	AJT	1
		EPA 8270 by HVI	TPO	20
		EPA 8260	LAP	11
		EPA 300.0	HMB	1
		EPA 353.2	DAW	1
40170015005	053018012	EPA 6020	DS1	9
		EPA 7470	AJT	1
		EPA 8270 by HVI	TPO	20
		EPA 8260	LAP	11
		EPA 300.0	HMB	1
		EPA 353.2	DAW	1



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

#### Method: EPA 6020

Description:6020 MET ICPMS, DissolvedClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### General Information:

5 samples were analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

#### Hold Time:

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

#### Sample Preparation:

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

#### Initial Calibrations (including MS Tune as applicable):

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

#### Continuing Calibration:

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

#### Internal Standards:

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

#### Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

#### Additional Comments:

Analyte Comments:

### QC Batch: 291056

- D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
  - 053018009 (Lab ID: 40170015002)
    - Silver, Dissolved
    - Arsenic, Dissolved
    - Cadmium, Dissolved
    - Chromium, Dissolved
    - Lead, Dissolved
    - Selenium, Dissolved
  - 053018010 (Lab ID: 40170015003)
    - Silver, Dissolved
    - Arsenic, Dissolved
    - Cadmium, Dissolved



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

Method:	EPA 6020
Description:	6020 MET ICPMS, Dissolved
Client:	O'Brien & Gere Engineers, Inc Integrys WI
Date:	June 15, 2018

Analyte Comments:

QC Batch: 291056

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

- 053018010 (Lab ID: 40170015003)
  - Chromium, Dissolved
  - Iron, Dissolved
  - Manganese, Dissolved
  - Lead, Dissolved
  - Selenium, Dissolved
- 053018011 (Lab ID: 40170015004)
  - Silver, Dissolved
  - Arsenic, Dissolved
  - Cadmium, Dissolved
  - Chromium, Dissolved
  - Iron, Dissolved
  - Manganese, Dissolved
  - Lead, Dissolved
  - Selenium, Dissolved

• 053018012 (Lab ID: 40170015005)

- Silver, Dissolved
- Arsenic, Dissolved
- Cadmium, Dissolved
- Chromium, Dissolved
- Iron, Dissolved
- Manganese, Dissolved
- Lead, Dissolved
- Selenium, Dissolved
- 053018017 (Lab ID: 40170015001)
  - Silver, Dissolved
  - Arsenic, Dissolved
  - Cadmium, Dissolved
  - Chromium, Dissolved
  - Iron, Dissolved
  - · Lead, Dissolved
  - Selenium, Dissolved



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

#### Method: EPA 7470

Description:7470 Mercury, DissolvedClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### General Information:

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

#### Hold Time:

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

Sample Preparation:

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

#### Initial Calibrations (including MS Tune as applicable):

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

#### **Continuing Calibration:**

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

#### Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

#### Additional Comments:

Analyte Comments:

#### QC Batch: 291213

- D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
  - 053018017 (Lab ID: 40170015001)
    - Mercury, Dissolved

QC Batch: 291591

- D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
  - 053018009 (Lab ID: 40170015002)
    - Mercury, Dissolved



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

#### Method: EPA 8270 by HVI

Description:8270 MSSV PAH by HVIClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### **General Information:**

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

#### Hold Time:

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

Sample Preparation:

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

#### Initial Calibrations (including MS Tune as applicable):

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

#### Continuing Calibration:

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

#### Internal Standards:

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

#### Surrogates:

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

#### 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: 290833

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

#### Additional Comments:



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

#### Method: EPA 8260

Description:8260 MSV USTClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### General Information:

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

#### Hold Time:

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

### Initial Calibrations (including MS Tune as applicable):

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

#### Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

Additional Comments:



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

#### Method: EPA 300.0

Description:300.0 IC Anions 28 DaysClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### General Information:

5 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

#### Hold Time:

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

#### Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

#### QC Batch: 291158

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 40170014001,40170015001

M0: Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

- MS (Lab ID: 1702434)
  - Sulfate
- MSD (Lab ID: 1702435)
  - Chloride
  - Sulfate
- MSD (Lab ID: 1702437)
- Chloride

#### Additional Comments:

Analyte Comments:

#### QC Batch: 291357

- D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
  - 053018009 (Lab ID: 40170015002)
    - Sulfate



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

#### Method: EPA 353.2

Description:353.2 Nitrogen, NO2/NO3 pres.Client:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### **General Information:**

5 samples were analyzed for EPA 353.2. 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.

#### Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

#### **Additional Comments:**

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



### Project: 1584/22.2 GREEN BAY FORMER MGP

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Pace Project No.: 40170015

Sample: 053018017	Lab ID:	40170015001	Collected:	05/30/18	8 16:09	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical	Method: EPA 6	020 Prepara	ation Meth	od: EPA	3010			
Arsenic, Dissolved	<2.8	ug/L	10.0	2.8	10	06/06/18 07:19	06/15/18 06:11	7440-38-2	D3
Barium, Dissolved	545	ug/L	11.4	3.4	10	06/06/18 07:19	06/15/18 06:11	7440-39-3	
Cadmium, Dissolved	0.92J	ug/L	10.0	0.81	10	06/06/18 07:19	06/15/18 06:11	7440-43-9	D3
Chromium, Dissolved	<10.2	ug/L	34.0	10.2	10	06/06/18 07:19	06/15/18 06:11	7440-47-3	D3
Iron, Dissolved	<1110	ug/L	3680	1110	10	06/06/18 07:19	06/15/18 06:11	7439-89-6	D3
Lead, Dissolved	<2.0	ug/L	10.0	2.0	10	06/06/18 07:19	06/15/18 06:11	7439-92-1	D3
Manganese, Dissolved	400	ug/L	90.0	27.0	10	06/06/18 07:19	06/15/18 06:11	7439-96-5	
Selenium, Dissolved	<3.2	ug/L	10.6	3.2	10	06/06/18 07:19	06/15/18 06:11	7782-49-2	D3
Silver, Dissolved	<1.0	ug/L	5.0	1.0	10	06/06/18 07:19	06/15/18 06:11	7440-22-4	D3
7470 Mercury, Dissolved	Analytical	Method: EPA 7	470 Prepara	ation Meth	od: EPA	7470			
Mercury, Dissolved	<0.25	ug/L	0.84	0.25	1	06/07/18 12:10	06/08/18 08:08	7439-97-6	D3
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI	Preparatio	on Metho	od: EPA 3510			
Acenaphthene	<0.0062	ug/L	0.031	0.0062	1	06/01/18 12:48	06/04/18 11:58	83-32-9	
Acenaphthylene	<0.0051	ug/L	0.025	0.0051	1	06/01/18 12:48	06/04/18 11:58	208-96-8	
Anthracene	<0.011	ug/L	0.053	0.011	1	06/01/18 12:48	06/04/18 11:58	120-12-7	
Benzo(a)anthracene	<0.0077	ug/L	0.039	0.0077	1	06/01/18 12:48	06/04/18 11:58	56-55-3	
Benzo(a)pyrene	<0.011	ug/L	0.054	0.011	1	06/01/18 12:48	06/04/18 11:58	50-32-8	
Benzo(b)fluoranthene	0.0072J	ug/L	0.029	0.0059	1	06/01/18 12:48	06/04/18 11:58	205-99-2	
Benzo(g,h,i)perylene	<0.0069	ug/L	0.035	0.0069	1	06/01/18 12:48	06/04/18 11:58	191-24-2	
Benzo(k)fluoranthene	<0.0077	ug/L	0.039	0.0077	1	06/01/18 12:48	06/04/18 11:58	207-08-9	
Chrysene	<0.013	ug/L	0.067	0.013	1	06/01/18 12:48	06/04/18 11:58	218-01-9	
Dibenz(a,h)anthracene	<0.010	ug/L	0.051	0.010	1	06/01/18 12:48	06/04/18 11:58	53-70-3	
Fluoranthene	0.011J	ug/L	0.054	0.011	1	06/01/18 12:48	06/04/18 11:58	206-44-0	
Fluorene	<0.0081	ug/L	0.041	0.0081	1	06/01/18 12:48	06/04/18 11:58	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.018	ug/L	0.090	0.018	1	06/01/18 12:48	06/04/18 11:58	193-39-5	
1-Methylnaphthalene	<0.0060	ug/L	0.030	0.0060	1	06/01/18 12:48	06/04/18 11:58	90-12-0	
2-Methylnaphthalene	<0.0050	ug/L	0.025	0.0050	1	06/01/18 12:48	06/04/18 11:58	91-57-6	
Naphthalene	<0.019	ug/L	0.094	0.019	1	06/01/18 12:48	06/04/18 11:58	91-20-3	
Phenanthrene	<0.014	ug/L	0.070	0.014	1	06/01/18 12:48	06/04/18 11:58	85-01-8	
Pyrene Surrogates	0.013J	ug/L	0.039	0.0078	1	06/01/18 12:48	06/04/18 11:58	129-00-0	
2-Fluorobiphenyl (S)	61	%	29-80		1	06/01/18 12:48	06/04/18 11:58	321-60-8	
Terphenyl-d14 (S)	73	%	10-123		1	06/01/18 12:48	06/04/18 11:58	1718-51-0	
8260 MSV UST	Analytical	Method: EPA 8	260						
Benzene	<0.50	ug/L	1.0	0.50	1		06/01/18 15:19	71-43-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		06/01/18 15:19	100-41-4	
Toluene	<0.50	ug/L	1.0	0.50	1		06/01/18 15:19	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/01/18 15:19	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/01/18 15:19	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		06/01/18 15:19	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		06/01/18 15:19	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		06/01/18 15:19	95-47-6	



#### Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

Sample: 053018017	Lab ID:	40170015001	Collected:	05/30/18	8 16:09	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical	Method: EPA 8	260						
Surrogates	400	0/	07 400		4		00/04/40 45.40	4000 50 7	
Dibromonuoromethane (S)	103	%	07-130 70.420		1		06/01/18 15:19	1868-53-7	
10iuerie-do (S)	105	% 0/	70-130 61 120		1		06/01/18 15:19	2037-20-5	
4-Bromoliuorobenzene (3)	105	70	01-130		I		00/01/18 15.19	400-00-4	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0						
Chloride	4860	mg/L	1000	250	500		06/12/18 14:58	16887-00-6	MO
Sulfate	90.5	mg/L	30.0	10.0	10		06/11/18 18:58	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical	Method: EPA 3	53.2						
Nitrogen, NO2 plus NO3	1.5	mg/L	0.25	0.095	1		06/05/18 09:59		
Sample: 053018009	Lab ID:	40170015002	Collected:	05/30/18	8 08:00	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical	Method: EPA 6	020 Prepara	ation Meth	od: EPA	3010			
Arsenic, Dissolved	3.2J	ug/L	10.0	2.8	10	06/06/18 07:19	06/15/18 06:38	7440-38-2	D3
Barium, Dissolved	294	ug/L	11.4	3.4	10	06/06/18 07:19	06/15/18 06:38	7440-39-3	
Cadmium, Dissolved	1.1J	ug/L	10.0	0.81	10	06/06/18 07:19	06/15/18 06:38	7440-43-9	D3
Chromium, Dissolved	<10.2	ug/L	34.0	10.2	10	06/06/18 07:19	06/15/18 06:38	7440-47-3	D3
Iron, Dissolved	3710	ug/L	3680	1110	10	06/06/18 07:19	06/15/18 06:38	7439-89-6	
Lead, Dissolved	<2.0	ug/L	10.0	2.0	10	06/06/18 07:19	06/15/18 06:38	7439-92-1	D3
Manganese, Dissolved	3270	ug/L	90.0	27.0	10	06/06/18 07:19	06/15/18 06:38	7439-96-5	
Selenium, Dissolved	<3.2	ug/L	10.6	3.2	10	06/06/18 07:19	06/15/18 06:38	7782-49-2	D3
Silver, Dissolved	<1.0	ug/L	5.0	1.0	10	06/06/18 07:19	06/15/18 06:38	7440-22-4	D3
7470 Mercury, Dissolved	Analytical	Method: EPA 7	470 Prepara	ation Meth	od: EPA	7470			
Mercury, Dissolved	<0.50	ug/L	1.7	0.50	1	06/12/18 09:55	06/13/18 09:57	7439-97-6	D3
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI	Preparatio	on Metho	od: EPA 3510			
Acenaphthene	<0.0061	ug/L	0.030	0.0061	1	06/04/18 10:05	06/07/18 16:54	83-32-9	
Acenaphthylene	<0.0050	ug/L	0.025	0.0050	1	06/04/18 10:05	06/07/18 16:54	208-96-8	
Anthracene	<0.010	ug/L	0.052	0.010	1	06/04/18 10:05	06/07/18 16:54	120-12-7	
Benzo(a)anthracene	<0.0076	ug/L	0.038	0.0076	1	06/04/18 10:05	06/07/18 16:54	56-55-3	
Benzo(a)pyrene	<0.011	ug/L	0.053	0.011	1	06/04/18 10:05	06/07/18 16:54	50-32-8	
Benzo(b)fluoranthene	0.021J	ug/L	0.029	0.0057	1	06/04/18 10:05	06/07/18 16:54	205-99-2	
Benzo(g,h,i)perylene	0.0087J	ug/L	0.034	0.0068	1	06/04/18 10:05	06/07/18 16:54	191-24-2	
Benzo(k)fluoranthene	<0.0076	ug/L	0.038	0.0076	1	06/04/18 10:05	06/07/18 16:54	207-08-9	
Chrysene	0.020J	ug/L	0.065	0.013	1	06/04/18 10:05	06/07/18 16:54	218-01-9	
Dibenz(a,h)anthracene	<0.010	ug/L	0.050	0.010	1	06/04/18 10:05	06/07/18 16:54	53-70-3	
Fluoranthene	0.034J	ug/L	0.053	0.011	1	06/04/18 10:05	06/07/18 16:54	206-44-0	
Fluorene	<0.0080	ug/L	0.040	0.0080	1	06/04/18 10:05	06/07/18 16:54	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.018	ug/L	0.088	0.018	1	06/04/18 10:05	06/07/18 16:54	193-39-5	



### Project: 1584/22.2 GREEN BAY FORMER MGP

1 10,000

Pace Project No.: 40170015

Sample: 053018009	Lab ID:	40170015002	Collected:	05/30/18	3 08:00	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI I	Preparatio	n Metho	od: EPA 3510			
1-Methylnaphthalene	<0.0059	ug/L	0.030	0.0059	1	06/04/18 10:05	06/07/18 16:54	90-12-0	
2-Methylnaphthalene	<0.0049	ug/L	0.024	0.0049	1	06/04/18 10:05	06/07/18 16:54	91-57-6	
Naphthalene	<0.018	ug/L	0.092	0.018	1	06/04/18 10:05	06/07/18 16:54	91-20-3	
Phenanthrene	0.019J	ug/L	0.069	0.014	1	06/04/18 10:05	06/07/18 16:54	85-01-8	
Pyrene	0.026J	ug/L	0.038	0.0076	1	06/04/18 10:05	06/07/18 16:54	129-00-0	
Surrogates		-							
2-Fluorobiphenyl (S)	52	%	29-80		1	06/04/18 10:05	06/07/18 16:54	321-60-8	
Terphenyl-d14 (S)	63	%	10-123		1	06/04/18 10:05	06/07/18 16:54	1718-51-0	
8260 MSV UST	Analytical	Method: EPA 8	260						
Benzene	<0.50	ug/L	1.0	0.50	1		06/05/18 10:02	71-43-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 10:02	100-41-4	
Toluene	<0.50	ug/L	1.0	0.50	1		06/05/18 10:02	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 10:02	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 10:02	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		06/05/18 10:02	1330-20-7	
m&p-Xvlene	<1.0	ua/L	2.0	1.0	1		06/05/18 10:02	179601-23-1	
o-Xvlene	<0.50	ua/L	1.0	0.50	1		06/05/18 10:02	95-47-6	
Surrogates		- g, _							
Dibromofluoromethane (S)	95	%	70-130		1		06/05/18 10:02	1868-53-7	
Toluene-d8 (S)	95	%	70-130		1		06/05/18 10:02	2037-26-5	
4-Bromofluorobenzene (S)	85	%	70-130		1		06/05/18 10:02	460-00-4	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0						
Sulfate	<500	mg/L	1500	500	500		06/14/18 10:44	14808-79-8	D3
353.2 Nitrogen, NO2/NO3 pres.	Analytical	Method: EPA 3	53.2						
Nitrogen, NO2 plus NO3	<0.095	mg/L	0.25	0.095	1		06/05/18 10:13		
Sample: 053018010	Lab ID:	40170015003	Collected:	05/30/18	3 08:36	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical	Method: EPA 6	020 Prepara	tion Meth	od: EPA	3010			
Arsenic, Dissolved	<0.56	ug/L	2.0	0.56	2	06/06/18 07:19	06/13/18 06:55	7440-38-2	D3
Barium, Dissolved	104	ug/L	2.3	0.68	2	06/06/18 07:19	06/13/18 06:55	7440-39-3	
Cadmium, Dissolved	<0.16	ug/L	2.0	0.16	2	06/06/18 07:19	06/13/18 06:55	7440-43-9	D3
Chromium, Dissolved	<2.0	ug/L	6.8	2.0	2	06/06/18 07:19	06/13/18 06:55	7440-47-3	D3
Iron, Dissolved	<221	ug/L	737	221	2	06/06/18 07:19	06/13/18 06:55	7439-89-6	D3
Lead, Dissolved	<0.39	ug/L	2.0	0.39	2	06/06/18 07:19	06/13/18 06:55	7439-92-1	D3
Manganese, Dissolved	<5.4	ug/L	18.0	5.4	2	06/06/18 07:19	06/13/18 06:55	7439-96-5	D3

# **REPORT OF LABORATORY ANALYSIS**

2.1

1.0

0.63

0.20

2

2

06/06/18 07:19 06/13/18 06:55 7782-49-2

06/06/18 07:19 06/13/18 06:55 7440-22-4

<0.63

<0.20

ug/L

ug/L

Selenium, Dissolved

Silver, Dissolved

D3

D3



#### Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No .: 40170015

Sample: 053018010	Lab ID:	40170015003	Collecte	d: 05/30/18	8 08:36	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury, Dissolved	Analytical	Method: EPA 7	470 Prepa	ration Meth	od: EPA	7470			
Mercury, Dissolved	<0.13	ug/L	0.42	0.13	1	06/07/18 09:45	06/08/18 08:15	7439-97-6	
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI	Preparatio	on Metho	od: EPA 3510			
Acenaphthene	<0.0061	ug/L	0.030	0.0061	1	06/04/18 10:05	06/07/18 15:05	83-32-9	
Acenaphthylene	<0.0050	ug/L	0.025	0.0050	1	06/04/18 10:05	06/07/18 15:05	208-96-8	
Anthracene	<0.010	ug/L	0.052	0.010	1	06/04/18 10:05	06/07/18 15:05	120-12-7	
Benzo(a)anthracene	0.022J	ug/L	0.038	0.0076	1	06/04/18 10:05	06/07/18 15:05	56-55-3	
Benzo(a)pyrene	0.034J	ug/L	0.053	0.011	1	06/04/18 10:05	06/07/18 15:05	50-32-8	
Benzo(b)fluoranthene	0.11	ug/L	0.029	0.0057	1	06/04/18 10:05	06/07/18 15:05	205-99-2	
Benzo(g,h,i)perylene	0.064	ug/L	0.034	0.0068	1	06/04/18 10:05	06/07/18 15:05	191-24-2	
Benzo(k)fluoranthene	0.057	ug/L	0.038	0.0076	1	06/04/18 10:05	06/07/18 15:05	207-08-9	
Chrysene	0.10	ug/L	0.065	0.013	1	06/04/18 10:05	06/07/18 15:05	218-01-9	
Dibenz(a,h)anthracene	<0.010	ug/L	0.050	0.010	1	06/04/18 10:05	06/07/18 15:05	53-70-3	
Fluoranthene	0.18	ug/L	0.053	0.011	1	06/04/18 10:05	06/07/18 15:05	206-44-0	
Fluorene	<0.0080	ug/L	0.040	0.0080	1	06/04/18 10:05	06/07/18 15:05	86-73-7	
Indeno(1,2,3-cd)pyrene	0.053J	ug/L	0.088	0.018	1	06/04/18 10:05	06/07/18 15:05	193-39-5	
1-Methylnaphthalene	<0.0059	ug/L	0.030	0.0059	1	06/04/18 10:05	06/07/18 15:05	90-12-0	
2-Methylnaphthalene	<0.0049	ug/L	0.024	0.0049	1	06/04/18 10:05	06/07/18 15:05	91-57-6	
Naphthalene	<0.018	ug/L	0.092	0.018	1	06/04/18 10:05	06/07/18 15:05	91-20-3	
Phenanthrene	0.067J	ug/L	0.069	0.014	1	06/04/18 10:05	06/07/18 15:05	85-01-8	
Pyrene	0.082	ug/L	0.038	0.0076	1	06/04/18 10:05	06/07/18 15:05	129-00-0	
Surrogates		0							
2-Fluorobiphenyl (S)	54	%	29-80		1	06/04/18 10:05	06/07/18 15:05	321-60-8	
Terphenyl-d14 (S)	68	%	10-123		1	06/04/18 10:05	06/07/18 15:05	1718-51-0	
8260 MSV UST	Analytical	Method: EPA 8	260						
Benzene	<0.50	ug/L	1.0	0.50	1		06/06/18 03:04	71-43-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		06/06/18 03:04	100-41-4	
Toluene	<0.50	ug/L	1.0	0.50	1		06/06/18 03:04	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/06/18 03:04	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/06/18 03:04	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		06/06/18 03:04	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		06/06/18 03:04	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		06/06/18 03:04	95-47-6	
Surrogates		0							
Dibromofluoromethane (S)	95	%	70-130		1		06/06/18 03:04	1868-53-7	
Toluene-d8 (S)	94	%	70-130		1		06/06/18 03:04	2037-26-5	
4-Bromofluorobenzene (S)	86	%	70-130		1		06/06/18 03:04	460-00-4	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0						
Sulfate	282	mg/L	15.0	5.0	5		06/13/18 15:04	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical	Method: EPA 3	53.2						
Nitrogen, NO2 plus NO3	<0.095	mg/L	0.25	0.095	1		06/05/18 10:14		



### Project: 1584/22.2 GREEN BAY FORMER MGP

Појсси

Pace Project No.: 40170015

Sample: 053018011	Lab ID:	40170015004	Collected:	05/30/1	8 08:41	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical	Method: EPA 6	020 Prepara	tion Meth	od: EPA	3010			
Arsenic, Dissolved	<0.56	ug/L	2.0	0.56	2	06/06/18 07:19	06/13/18 07:02	7440-38-2	D3
Barium, Dissolved	113	ug/L	2.3	0.68	2	06/06/18 07:19	06/13/18 07:02	7440-39-3	
Cadmium, Dissolved	<0.16	ug/L	2.0	0.16	2	06/06/18 07:19	06/13/18 07:02	7440-43-9	D3
Chromium, Dissolved	<2.0	ug/L	6.8	2.0	2	06/06/18 07:19	06/13/18 07:02	7440-47-3	D3
Iron, Dissolved	<221	ug/L	737	221	2	06/06/18 07:19	06/13/18 07:02	7439-89-6	D3
Lead, Dissolved	<0.39	ug/L	2.0	0.39	2	06/06/18 07:19	06/13/18 07:02	7439-92-1	D3
Manganese, Dissolved	<5.4	ug/L	18.0	5.4	2	06/06/18 07:19	06/13/18 07:02	7439-96-5	D3
Selenium, Dissolved	<0.63	ug/L	2.1	0.63	2	06/06/18 07:19	06/13/18 07:02	7782-49-2	D3
Silver, Dissolved	<0.20	ug/L	1.0	0.20	2	06/06/18 07:19	06/13/18 07:02	7440-22-4	D3
7470 Mercury, Dissolved	Analytical	Method: EPA 7	470 Prepara	tion Meth	od: EPA	7470			
Mercury, Dissolved	<0.13	ug/L	0.42	0.13	1	06/07/18 09:45	06/08/18 08:18	7439-97-6	
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI	Preparatio	on Metho	od: EPA 3510			
Acenaphthene	<0.0061	ug/L	0.030	0.0061	1	06/04/18 10:05	06/07/18 12:58	83-32-9	
Acenaphthylene	<0.0050	ug/L	0.025	0.0050	1	06/04/18 10:05	06/07/18 12:58	208-96-8	
Anthracene	0.011J	ug/L	0.052	0.010	1	06/04/18 10:05	06/07/18 12:58	120-12-7	
Benzo(a)anthracene	0.018J	ug/L	0.038	0.0076	1	06/04/18 10:05	06/07/18 12:58	56-55-3	
Benzo(a)pyrene	0.037J	ug/L	0.053	0.011	1	06/04/18 10:05	06/07/18 12:58	50-32-8	
Benzo(b)fluoranthene	0.11	ug/L	0.029	0.0057	1	06/04/18 10:05	06/07/18 12:58	205-99-2	
Benzo(g,h,i)perylene	0.063	ug/L	0.034	0.0068	1	06/04/18 10:05	06/07/18 12:58	191-24-2	
Benzo(k)fluoranthene	0.058	ug/L	0.038	0.0076	1	06/04/18 10:05	06/07/18 12:58	207-08-9	
Chrysene	0.11	ug/L	0.065	0.013	1	06/04/18 10:05	06/07/18 12:58	218-01-9	
Dibenz(a,h)anthracene	0.011J	ug/L	0.050	0.010	1	06/04/18 10:05	06/07/18 12:58	53-70-3	
Fluoranthene	0.17	ug/L	0.053	0.011	1	06/04/18 10:05	06/07/18 12:58	206-44-0	
Fluorene	<0.0080	ug/L	0.040	0.0080	1	06/04/18 10:05	06/07/18 12:58	86-73-7	
Indeno(1,2,3-cd)pyrene	0.056J	ug/L	0.088	0.018	1	06/04/18 10:05	06/07/18 12:58	193-39-5	
1-Methylnaphthalene	<0.0059	ug/L	0.030	0.0059	1	06/04/18 10:05	06/07/18 12:58	90-12-0	
2-Methylnaphthalene	<0.0049	ug/L	0.024	0.0049	1	06/04/18 10:05	06/07/18 12:58	91-57-6	
Naphthalene	<0.018	ug/L	0.092	0.018	1	06/04/18 10:05	06/07/18 12:58	91-20-3	
Phenanthrene	0.065J	ug/L	0.069	0.014	1	06/04/18 10:05	06/07/18 12:58	85-01-8	
Pyrene Surrogates	0.12	ug/L	0.038	0.0076	1	06/04/18 10:05	06/07/18 12:58	129-00-0	
2-Eluorobinhenvl (S)	56	%	29-80		1	06/04/18 10.05	06/07/18 12:58	321-60-8	
Terphenyl-d14 (S)	30 70	%	10-123		1	06/04/18 10:05	06/07/18 12:58	1718-51-0	
8260 MSV UST	Analytical	Method: EPA 8	260						
Benzene	<0.50	ug/L	1.0	0.50	1		06/05/18 11:51	71-43-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 11:51	100-41-4	
Toluene	<0.50	ug/L	1.0	0.50	1		06/05/18 11:51	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 11:51	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 11:51	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		06/05/18 11:51	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		06/05/18 11:51	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		06/05/18 11:51	95-47-6	



### Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No .:

ect No.: 40170015

Sample: 053018011	Lab ID:	40170015004	Collected:	05/30/18	8 08:41	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical	Method: EPA 8	260						
Surrogates									
Dibromofluoromethane (S)	94	%	70-130		1		06/05/18 11:51	1868-53-7	
Ioluene-d8 (S)	98	%	70-130		1		06/05/18 11:51	2037-26-5	
4-Bromofluorobenzene (S)	90	%	70-130		1		06/05/18 11:51	460-00-4	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0						
Sulfate	280	mg/L	15.0	5.0	5		06/13/18 15:15	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical	Method: EPA 3	53.2						
Nitrogen, NO2 plus NO3	<0.095	mg/L	0.25	0.095	1		06/05/18 10:15		
Sample: 053018012	Lab ID:	40170015005	Collected:	: 05/30/18	8 09:26	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS Dissolved	- <u> </u>	Method: EPA 6	020 Prepara	ation Meth	od: FPA	3010	·		
	, indigited				00. El 7.				
Arsenic, Dissolved	<0.56	ug/L	2.0	0.56	2	06/06/18 07:19	06/13/18 07:22	7440-38-2	D3
Barium, Dissolved	20.0	ug/L	2.3	0.68	2	06/06/18 07:19	06/13/18 07:22	7440-39-3	
Cadmium, Dissolved	0.27J	ug/L	2.0	0.16	2	06/06/18 07:19	06/13/18 07:22	7440-43-9	D3
Chromium, Dissolved	<2.0	ug/L	6.8	2.0	2	06/06/18 07:19	06/13/18 07:22	7440-47-3	D3
Iron, Dissolved	<221	ug/L	/3/	221	2	06/06/18 07:19	06/13/18 07:22	7439-89-6	D3
Lead, Dissolved	<0.39	ug/L	2.0	0.39	2	06/06/18 07:19	06/13/18 07:22	7439-92-1	D3
Manganese, Dissolved	<5.4	ug/L	18.0	5.4	2	06/06/18 07:19	06/13/18 07:22	7439-96-5	D3
Selenium, Dissolved	<0.63	ug/L	2.1	0.63	2	06/06/18 07:19	06/13/18 07:22	7782-49-2	D3
Silver, Dissolved	<0.20	ug/L	1.0	0.20	2	06/06/18 07:19	06/13/18 07:22	7440-22-4	D3
7470 Mercury, Dissolved	Analytical	Method: EPA 7	470 Prepara	ation Meth	od: EPA	7470			
Mercury, Dissolved	<0.13	ug/L	0.42	0.13	1	06/07/18 09:45	06/08/18 08:20	7439-97-6	
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI	Preparatic	on Metho	od: EPA 3510			
Acenaphthene	<0.0061	ug/L	0.031	0.0061	1	06/04/18 10:05	06/07/18 13:16	83-32-9	
Acenaphthylene	<0.0050	ug/L	0.025	0.0050	1	06/04/18 10:05	06/07/18 13:16	208-96-8	
Anthracene	<0.011	ug/L	0.053	0.011	1	06/04/18 10:05	06/07/18 13:16	120-12-7	
Benzo(a)anthracene	<0.0076	ug/L	0.038	0.0076	1	06/04/18 10:05	06/07/18 13:16	56-55-3	
Benzo(a)pyrene	<0.011	ug/L	0.053	0.011	1	06/04/18 10:05	06/07/18 13:16	50-32-8	
Benzo(b)fluoranthene	0.012J	ug/L	0.029	0.0058	1	06/04/18 10:05	06/07/18 13:16	205-99-2	
Benzo(g,h,i)perylene	0.0077J	ug/L	0.034	0.0068	1	06/04/18 10:05	06/07/18 13:16	191-24-2	
Benzo(k)fluoranthene	<0.0076	ug/L	0.038	0.0076	1	06/04/18 10:05	06/07/18 13:16	207-08-9	
Chrysene	0.014J	ug/L	0.066	0.013	1	06/04/18 10:05	06/07/18 13:16	218-01-9	
Dibenz(a,h)anthracene	<0.010	ug/L	0.051	0.010	1	06/04/18 10:05	06/07/18 13:16	53-70-3	
Fluoranthene	0.014J	ug/L	0.054	0.011	1	06/04/18 10:05	06/07/18 13:16	206-44-0	
Fluorene	<0.0081	ug/L	0.040	0.0081	1	06/04/18 10:05	06/07/18 13:16	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.018	ug/L	0.089	0.018	1	06/04/18 10:05	06/07/18 13:16	193-39-5	
1-Methylnaphthalene	<0.0060	ug/L	0.030	0.0060	1	06/04/18 10:05	06/07/18 13:16	90-12-0	



#### Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

Sample: 053018012	Lab ID:	40170015005	Collecte	d: 05/30/18	3 09:26	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI	Preparatio	on Meth	nod: EPA 3510			
2-Methylnaphthalene	<0.0049	ug/L	0.025	0.0049	1	06/04/18 10:05	06/07/18 13:16	91-57-6	
Naphthalene	<0.019	ug/L	0.093	0.019	1	06/04/18 10:05	06/07/18 13:16	91-20-3	
Phenanthrene	0.020J	ug/L	0.070	0.014	1	06/04/18 10:05	06/07/18 13:16	85-01-8	
Pyrene <i>Surrogates</i>	0.022J	ug/L	0.039	0.0077	1	06/04/18 10:05	06/07/18 13:16	129-00-0	
2-Fluorobiphenyl (S)	55	%	29-80		1	06/04/18 10:05	06/07/18 13:16	321-60-8	
Terphenyl-d14 (S)	70	%	10-123		1	06/04/18 10:05	06/07/18 13:16	1718-51-0	
8260 MSV UST	Analytical	Method: EPA 8	260						
Benzene	<0.50	ug/L	1.0	0.50	1		06/05/18 12:13	71-43-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 12:13	100-41-4	
Toluene	<0.50	ug/L	1.0	0.50	1		06/05/18 12:13	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 12:13	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 12:13	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		06/05/18 12:13	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		06/05/18 12:13	179601-23-1	
o-Xylene <b>Surrogates</b>	<0.50	ug/L	1.0	0.50	1		06/05/18 12:13	95-47-6	
Dibromofluoromethane (S)	95	%	70-130		1		06/05/18 12:13	1868-53-7	
Toluene-d8 (S)	96	%	70-130		1		06/05/18 12:13	2037-26-5	
4-Bromofluorobenzene (S)	87	%	70-130		1		06/05/18 12:13	460-00-4	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0						
Sulfate	1580	mg/L	300	100	100		06/14/18 11:15	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical	Method: EPA 3	53.2						
Nitrogen, NO2 plus NO3	0.25J	mg/L	0.25	0.095	1		06/05/18 10:16		



Project:	1584/22.2 GREE	N BAY FORMER M	IGP									
Pace Project No.:	40170015											
QC Batch:	291213		Analysis	Method:	E	PA 7470						
QC Batch Method:	EPA 7470		Analysis	Descript	ion: 7	470 Mercury	Dissolved	l				
Associated Lab San	nples: 4017001	5001, 40170015003	3, 401700150	04, 40170	015005							
METHOD BLANK:	1702838		Ma	atrix: Wat	er							
Associated Lab San	nples: 4017001	5001, 40170015003	3, 401700150	04, 40170	015005							
			Blank	Re	eporting							
Paran	neter	Units	Result		Limit	Analyz	ed	Qualifiers				
Mercury, Dissolved		ug/L	<0	).13	0.42	2 06/08/18	08:04					
		1702839										
		1102000	Spike	LCS		LCS	% Red	<b>C</b>				
Paran	neter	Units	Conc.	Resu	lt	% Rec	Limits	a Qi	ualifiers			
Mercury, Dissolved		ug/L	5		4.9	98	85	5-115		-		
MATRIX SPIKE & M	IATRIX SPIKE DU	PLICATE: 17028	340		1702841							
			MS	MSD								
		40170015001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er Ur	nits Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	uį	g/L <0.25	10	10	9.8	9.8	98	98	85-115	1	20	

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



Project: 1	584/22.2 GREEN	BAY FORMER M	GP									
Pace Project No.: 4	0170015											
QC Batch:	291591		Analys	is Method:	E	PA 7470						
QC Batch Method:	EPA 7470		Analys	is Descript	ion: 7	470 Mercury	Dissolved					
Associated Lab Samp	es: 40170015	002										
METHOD BLANK: 1	705073		N	Aatrix: Wat	ter							
Associated Lab Samp	es: 40170015	002										
			Blank	R R	eporting							
Parame	er	Units	Resul	t	Limit	Analyz	ed	Qualifiers				
Mercury, Dissolved		ug/L	<	<0.13	0.42	06/13/18	09:02					
LABORATORY CONT	ROL SAMPLE:	1705074										
			Spike	LCS	i	LCS	% Rec	;				
Parame	er	Units	Conc.	Resu	lt	% Rec	Limits	Qı	alifiers	_		
Mercury, Dissolved		ug/L	5		5.4	107	85	-115				
MATRIX SPIKE & MA	TRIX SPIKE DUP	PLICATE: 17050	75		1705076							
			MS	MSD								
_		40170016003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	<b>.</b> .
Parameter	Uni	ts Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/	L <0.25	10	10	10.5	10.5	105	105	85-115	0	20	

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



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

QC Batch:	29105	56	Analysis Method:
QC Batch Method:	EPA 3	8010	Analysis Descript
Associated Lab Samp	les:	40170015001, 40170015002, 4	0170015003, 40170

Description: 6020 MET Dissolved 40170015001, 40170015002, 40170015003, 40170015004, 40170015005

EPA 6020

METHOD BLANK: 1702029 Matrix: Water Associated Lab Samples: 40170015001, 40170015002, 40170015003, 40170015004, 40170015005

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<0.28	1.0	06/13/18 06:00	
Barium, Dissolved	ug/L	<0.34	1.1	06/13/18 06:00	
Cadmium, Dissolved	ug/L	<0.081	1.0	06/13/18 06:00	
Chromium, Dissolved	ug/L	<1.0	3.4	06/13/18 06:00	
Iron, Dissolved	ug/L	<111	368	06/13/18 06:00	
Lead, Dissolved	ug/L	<0.20	1.0	06/13/18 06:00	
Manganese, Dissolved	ug/L	<2.7	9.0	06/13/18 06:00	
Selenium, Dissolved	ug/L	<0.32	1.1	06/13/18 06:00	
Silver, Dissolved	ug/L	<0.10	0.50	06/13/18 06:00	

#### LABORATORY CONTROL SAMPLE: 1702030

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	495	99	80-120	
Barium, Dissolved	ug/L	500	473	95	80-120	
Cadmium, Dissolved	ug/L	500	508	102	80-120	
Chromium, Dissolved	ug/L	500	456	91	80-120	
Iron, Dissolved	ug/L	5000	5220	104	80-120	
Lead, Dissolved	ug/L	500	453	91	80-120	
Manganese, Dissolved	ug/L	500	462	92	80-120	
Selenium, Dissolved	ug/L	500	511	102	80-120	
Silver, Dissolved	ug/L	250	225	90	80-120	

MATRIX SPIKE & MATRIX S		1702032										
		10170015001	MS	MSD	MC	MOD	MC	MCD	0/ Dee		Max	
Baramatar	Linito	+0170015001 Recult	Spike Сопо	Spike Соро	NIS Recult	NISD Booult	WIS % Rec	MSD % Ree	% Rec	חחם	IVIAX	Qual
Farameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	LIIIIIIS	KFD		Qual
Arsenic, Dissolved	ug/L	<2.8	500	500	496	501	99	100	75-125	1	20	
Barium, Dissolved	ug/L	545	500	500	1000	1020	91	94	75-125	1	20	
Cadmium, Dissolved	ug/L	0.92J	500	500	476	485	95	97	75-125	2	20	
Chromium, Dissolved	ug/L	<10.2	500	500	471	476	94	95	75-125	1	20	
Iron, Dissolved	ug/L	<1110	5000	5000	4820	4840	92	93	75-125	0	20	
Lead, Dissolved	ug/L	<2.0	500	500	464	470	93	94	75-125	1	20	
Manganese, Dissolved	ug/L	400	500	500	850	870	90	94	75-125	2	20	
Selenium, Dissolved	ug/L	<3.2	500	500	516	530	103	106	75-125	3	20	
Silver, Dissolved	ug/L	<1.0	250	250	225	228	90	91	75-125	2	20	

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

### **REPORT OF LABORATORY ANALYSIS**

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Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 401700	15				
QC Batch: 29067	'3	Analysis Met	nod: EF	PA 8260	
QC Batch Method: EPA 8	260	Analysis Des	cription: 82	60 MSV UST-WAT	ER
Associated Lab Samples:	40170015001				
METHOD BLANK: 170022	3	Matrix:	Water		
Associated Lab Samples:	40170015001				
		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	06/01/18 12:31	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	06/01/18 12:31	
Benzene	ug/L	<0.50	1.0	06/01/18 12:31	
Ethylbenzene	ug/L	<0.50	1.0	06/01/18 12:31	
m&p-Xylene	ug/L	<1.0	2.0	06/01/18 12:31	
o-Xylene	ug/L	<0.50	1.0	06/01/18 12:31	
Toluene	ug/L	<0.50	1.0	06/01/18 12:31	
Xylene (Total)	ug/L	<1.5	3.0	06/01/18 12:31	
4-Bromofluorobenzene (S)	%	102	61-130	06/01/18 12:31	

101

105

67-130 06/01/18 12:31

70-130 06/01/18 12:31

#### LABORATORY CONTROL SAMPLE: 1700224

Dibromofluoromethane (S)

Toluene-d8 (S)

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzene	ug/L	50	51.7	103	73-145	
Ethylbenzene	ug/L	50	56.2	112	87-129	
m&p-Xylene	ug/L	100	106	106	70-130	
o-Xylene	ug/L	50	52.9	106	70-130	
Toluene	ug/L	50	55.0	110	82-130	
Xylene (Total)	ug/L	150	159	106	70-130	
4-Bromofluorobenzene (S)	%			110	61-130	
Dibromofluoromethane (S)	%			101	67-130	
Toluene-d8 (S)	%			105	70-130	

%

%

MATRIX SPIKE & MATRIX SPI	KE DUPLICA	TE: 17002	25		1700226							
			MS	MSD								
	4	0170015001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzene	ug/L	<0.50	50	50	50.7	51.5	101	103	73-145	1	20	
Ethylbenzene	ug/L	<0.50	50	50	55.7	56.1	111	112	87-129	1	20	
m&p-Xylene	ug/L	<1.0	100	100	105	105	105	105	70-130	0	20	
o-Xylene	ug/L	<0.50	50	50	52.8	52.7	106	105	70-130	0	20	
Toluene	ug/L	<0.50	50	50	54.7	54.9	109	110	82-131	0	20	
Xylene (Total)	ug/L	<1.5	150	150	158	158	105	105	70-130	0	20	
4-Bromofluorobenzene (S)	%						110	110	61-130			
Dibromofluoromethane (S)	%						101	101	67-130			
Toluene-d8 (S)	%						105	104	70-130			

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### **REPORT OF LABORATORY ANALYSIS**

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Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

QC Batch:	290808	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Samp	bles: 40170015002, 40170015003, 40	0170015004, 40170015005	

METHOD BLANK: 1701072

### 72 Matrix: Water 40170015002, 40170015003, 40170015004, 40170015005

Associated Lab Samples: 40170015002, 40170015003, 40170015004, 40170015005										
		Blank	Reporting							
Parameter	Units	Result	Limit	Analyzed	Qualifiers					
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	06/05/18 07:29						
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	06/05/18 07:29						
Benzene	ug/L	<0.50	1.0	06/05/18 07:29						
Ethylbenzene	ug/L	<0.50	1.0	06/05/18 07:29						
m&p-Xylene	ug/L	<1.0	2.0	06/05/18 07:29						
o-Xylene	ug/L	<0.50	1.0	06/05/18 07:29						
Toluene	ug/L	<0.50	1.0	06/05/18 07:29						
Xylene (Total)	ug/L	<1.5	3.0	06/05/18 07:29						
4-Bromofluorobenzene (S)	%	89	70-130	06/05/18 07:29						
Dibromofluoromethane (S)	%	95	70-130	06/05/18 07:29						
Toluene-d8 (S)	%	98	70-130	06/05/18 07:29						

#### LABORATORY CONTROL SAMPLE: 1701073

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzene	ug/L	50	43.6	87	69-137	
Ethylbenzene	ug/L	50	51.6	103	86-127	
m&p-Xylene	ug/L	100	112	112	70-131	
o-Xylene	ug/L	50	52.7	105	70-130	
Toluene	ug/L	50	50.1	100	84-124	
Xylene (Total)	ug/L	150	164	110	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			96	70-130	

MATRIX SPIKE & MATRIX SPI	KE DUPLIC	ATE: 17014	70		1701471							
			MS	MSD								
	4	0170015002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzene	ug/L	<0.50	50	50	44.4	44.5	89	89	66-143	0	20	
Ethylbenzene	ug/L	<0.50	50	50	49.7	52.0	99	104	81-136	4	20	
m&p-Xylene	ug/L	<1.0	100	100	108	112	108	112	70-135	4	20	
o-Xylene	ug/L	<0.50	50	50	52.4	54.7	105	109	70-132	4	20	
Toluene	ug/L	<0.50	50	50	50.5	53.2	101	106	81-130	5	20	
Xylene (Total)	ug/L	<1.5	150	150	160	167	107	111	70-134	4	20	
4-Bromofluorobenzene (S)	%						94	98	70-130			
Dibromofluoromethane (S)	%						97	97	70-130			
Toluene-d8 (S)	%						93	96	70-130			

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Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

QC Batch:	290697	Analysis Metho	od: E	PA 8270 by HVI
QC Batch Method:	EPA 3510	Analysis Desci	ription: 8	270 Water PAH by HVI
Associated Lab Sam	ples: 40170015001			
METHOD BLANK:	1700278	Matrix: V	Vater	
Associated Lab Sam	ples: 40170015001			
_		Blank	Reporting	

Parameter	Units	Result	Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.0059	0.030	06/04/18 11:03	
2-Methylnaphthalene	ug/L	<0.0049	0.024	06/04/18 11:03	
Acenaphthene	ug/L	<0.0061	0.030	06/04/18 11:03	
Acenaphthylene	ug/L	<0.0050	0.025	06/04/18 11:03	
Anthracene	ug/L	<0.010	0.052	06/04/18 11:03	
Benzo(a)anthracene	ug/L	<0.0076	0.038	06/04/18 11:03	
Benzo(a)pyrene	ug/L	<0.011	0.053	06/04/18 11:03	
Benzo(b)fluoranthene	ug/L	<0.0057	0.029	06/04/18 11:03	
Benzo(g,h,i)perylene	ug/L	<0.0068	0.034	06/04/18 11:03	
Benzo(k)fluoranthene	ug/L	<0.0076	0.038	06/04/18 11:03	
Chrysene	ug/L	<0.013	0.065	06/04/18 11:03	
Dibenz(a,h)anthracene	ug/L	<0.010	0.050	06/04/18 11:03	
Fluoranthene	ug/L	<0.011	0.053	06/04/18 11:03	
Fluorene	ug/L	<0.0080	0.040	06/04/18 11:03	
Indeno(1,2,3-cd)pyrene	ug/L	<0.018	0.088	06/04/18 11:03	
Naphthalene	ug/L	<0.018	0.092	06/04/18 11:03	
Phenanthrene	ug/L	<0.014	0.069	06/04/18 11:03	
Pyrene	ug/L	<0.0076	0.038	06/04/18 11:03	
2-Fluorobiphenyl (S)	%	58	29-80	06/04/18 11:03	
Terphenyl-d14 (S)	%	80	10-123	06/04/18 11:03	

#### LABORATORY CONTROL SAMPLE: 1700279

	1100210					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
1-Methylnaphthalene	ug/L	2	1.5	76	53-92	
2-Methylnaphthalene	ug/L	2	1.5	73	51-87	
Acenaphthene	ug/L	2	1.4	68	49-90	
Acenaphthylene	ug/L	2	1.3	67	50-84	
Anthracene	ug/L	2	1.6	82	49-109	
Benzo(a)anthracene	ug/L	2	1.4	70	42-97	
Benzo(a)pyrene	ug/L	2	1.6	82	61-106	
Benzo(b)fluoranthene	ug/L	2	1.6	79	51-95	
Benzo(g,h,i)perylene	ug/L	2	1.0	51	27-120	
Benzo(k)fluoranthene	ug/L	2	1.6	82	58-103	
Chrysene	ug/L	2	2.1	107	69-125	
Dibenz(a,h)anthracene	ug/L	2	0.95	48	21-120	
Fluoranthene	ug/L	2	1.8	90	68-110	
Fluorene	ug/L	2	1.5	76	54-95	
Indeno(1,2,3-cd)pyrene	ug/L	2	1.5	76	50-94	
Naphthalene	ug/L	2	1.3	66	46-78	

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#### Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

LABORATORY CONTROL SAMPLE:	1700279					
		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Phenanthrene	ug/L	2	1.6	78	51-95	
Pyrene	ug/L	2	1.8	91	66-106	
2-Fluorobiphenyl (S)	%			63	29-80	
Terphenyl-d14 (S)	%			77	10-123	

#### MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1700280 1700281 MS MSD 40170015001 Spike Spike MS MSD MS MSD % Rec Max Parameter Units Result Conc. Conc. Result Result % Rec % Rec Limits RPD RPD Qual 1-Methylnaphthalene ug/L < 0.0060 2 2 1.5 1.5 74 74 38-92 1 24 2 2-Methylnaphthalene ug/L < 0.0050 2 1.4 1.4 68 69 40-87 0 28 Acenaphthene ug/L < 0.0062 2 2 1.3 1.3 64 66 23-90 3 23 Acenaphthylene ug/L < 0.0051 2 2 1.2 1.2 62 61 31-84 1 25 2 2 1.5 75 74 2 27 Anthracene ug/L < 0.011 1.5 16-111 ug/L Benzo(a)anthracene < 0.0077 2 2 1.1 1.0 56 50 10-98 10 31 2 < 0.011 2 1.3 1.3 66 67 10-106 2 29 Benzo(a)pyrene ug/L 0.0072J 2 2 62 64 10-102 3 27 Benzo(b)fluoranthene ug/L 1.3 1.3 2 2 < 0.0069 0.66 0.69 33 34 10-120 4 33 Benzo(g,h,i)perylene ug/L 2 2 72 Benzo(k)fluoranthene < 0.0077 65 10-107 10 28 ug/L 1.3 1.5 2 2 Chrysene ug/L < 0.013 2.1 2.3 102 112 10-137 9 30 Dibenz(a,h)anthracene ug/L < 0.010 2 2 0.62 0.65 31 32 10-120 4 40 2 2 Fluoranthene ug/L 0.011J 1.6 1.6 80 81 16-127 1 28 Fluorene ug/L <0.0081 2 2 1.4 1.4 69 68 23-95 2 25 Indeno(1,2,3-cd)pyrene <0.018 2 2 1.0 1.0 50 51 10-94 2 30 ug/L < 0.019 2 2 34-78 26 Naphthalene ug/L 1.3 1.3 66 66 0 < 0.014 2 2 71 69 37-95 Phenanthrene ug/L 1.4 1.4 4 24 Pyrene ug/L 0.013J 2 2 1.7 1.7 84 86 33-113 2 32 2-Fluorobiphenyl (S) % 60 61 29-80 Terphenyl-d14 (S) % 68 69 10-123

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Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

QC Batch:	290833	Analysis Method:	EPA 8270 by HVI
QC Batch Method:	EPA 3510	Analysis Description:	8270 Water PAH by HVI
Associated Lab Sam	bles: 40170015002, 40170015003, 40	0170015004, 40170015005	

METHOD BLANK: 1701147

#### 47 Matrix: Water 40170015002 40170015003 40170015004 40170015005

Associated Lab Samples:	40170015002, 40170015003, 4	0170015004, 4	0170015005		
		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.0059	0.030	06/04/18 15:09	
2-Methylnaphthalene	ug/L	<0.0049	0.024	06/04/18 15:09	
Acenaphthene	ug/L	<0.0061	0.030	06/04/18 15:09	
Acenaphthylene	ug/L	<0.0050	0.025	06/04/18 15:09	
Anthracene	ug/L	<0.010	0.052	06/04/18 15:09	
Benzo(a)anthracene	ug/L	<0.0076	0.038	06/04/18 15:09	
Benzo(a)pyrene	ug/L	<0.011	0.053	06/04/18 15:09	
Benzo(b)fluoranthene	ug/L	<0.0057	0.029	06/04/18 15:09	
Benzo(g,h,i)perylene	ug/L	<0.0068	0.034	06/04/18 15:09	
Benzo(k)fluoranthene	ug/L	<0.0076	0.038	06/04/18 15:09	
Chrysene	ug/L	<0.013	0.065	06/04/18 15:09	
Dibenz(a,h)anthracene	ug/L	<0.010	0.050	06/04/18 15:09	
Fluoranthene	ug/L	<0.011	0.053	06/04/18 15:09	
Fluorene	ug/L	<0.0080	0.040	06/04/18 15:09	
Indeno(1,2,3-cd)pyrene	ug/L	<0.018	0.088	06/04/18 15:09	
Naphthalene	ug/L	<0.018	0.092	06/04/18 15:09	
Phenanthrene	ug/L	< 0.014	0.069	06/04/18 15:09	
Pyrene	ug/L	<0.0076	0.038	06/04/18 15:09	
2-Fluorobiphenyl (S)	%	53	29-80	06/04/18 15:09	
Terphenyl-d14 (S)	%	85	10-123	06/04/18 15:09	

LABORATORY CONTROL SAMPLE &	LCSD: 1701148		17	01149						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
1-Methylnaphthalene	ug/L	2	1.4	1.3	69	66	53-92	4	20	
2-Methylnaphthalene	ug/L	2	1.3	1.2	64	61	51-87	4	20	
Acenaphthene	ug/L	2	1.2	1.2	60	60	49-90	0	20	
Acenaphthylene	ug/L	2	1.2	1.1	59	57	50-84	3	20	
Anthracene	ug/L	2	1.5	1.5	76	77	49-109	2	27	
Benzo(a)anthracene	ug/L	2	1.3	1.2	63	59	42-97	6	23	
Benzo(a)pyrene	ug/L	2	1.6	1.6	82	81	61-106	1	20	
Benzo(b)fluoranthene	ug/L	2	1.6	1.5	79	77	51-95	3	20	
Benzo(g,h,i)perylene	ug/L	2	1.1	1.0	55	50	27-120	10	33	
Benzo(k)fluoranthene	ug/L	2	1.7	1.7	86	86	58-103	0	22	
Chrysene	ug/L	2	2.4	2.4	118	119	69-125	1	20	
Dibenz(a,h)anthracene	ug/L	2	1.0	0.89	52	44	21-120	15	39	
Fluoranthene	ug/L	2	1.8	1.7	88	87	68-110	2	24	
Fluorene	ug/L	2	1.3	1.3	65	67	54-95	3	21	
Indeno(1,2,3-cd)pyrene	ug/L	2	1.7	1.6	83	80	50-94	4	26	
Naphthalene	ug/L	2	1.2	1.2	62	58	46-78	7	21	

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Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

LABORATORY CONTROL SAMPLE &		17	01149							
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Phenanthrene	ug/L	2	1.4	1.4	70	70	51-95	0	20	
Pyrene	ug/L	2	1.8	1.8	91	89	66-106	2	24	
2-Fluorobiphenyl (S)	%				55	55	29-80			
Terphenyl-d14 (S)	%				78	78	10-123			

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Project: 1	584/22.2 GREEN E	BAY FORMER M	GP									
Pace Project No.: 4	0170015											
QC Batch:	291158		Analys	sis Method:	E	PA 300.0						
QC Batch Method:	EPA 300.0		Analys	sis Descript	tion: 30	0.0 IC Anio	ns					
Associated Lab Sampl	es: 4017001500	01										
METHOD BLANK: 1	702432		٦	Matrix: Wa	ter							
Associated Lab Sampl	es: 4017001500	01										
_			Blank	K R	eporting							
Paramet	er	Units	Resu	lt	Limit	Analyz	:ed	Qualifiers				
Chloride		mg/L		<0.50	2.0	06/08/18	22:49					
Sulfate		mg/L		<1.0	3.0	06/08/18	22:49					
LABORATORY CONT	ROL SAMPLE:	1702433										
			Spike	LCS	5	LCS	% Red	;				
Paramet	er	Units	Conc.	Resu	lt	% Rec	Limits	Q	ualifiers	_		
Chloride		mg/L	20	)	21.7	108	90	)-110		-		
Sulfate		mg/L	20	)	21.7	108	90	)-110				
MATRIX SPIKE & MAT		ICATE: 17024	34		1702435							
			MS	MSD	1702400							
		40170014001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	3650	2000	2000	5470	5380	91	87	90-110	2	15	M0
Sulfate	mg/L	65.2	100	100	178	177	112	112	90-110	0	15	MO
MATRIX SPIKE & MAT		ICATE: 17024	36		1702437							
			MS	MSD								
		40170015001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Chloride	mg/L	4860	10000	10000	15800	16900	109	120	90-110	6	15	MO
Sulfate	mg/L	90.5	200	200	310	306	110	108	90-110	1	15	

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Project:	1584/22.2 GREE	N BAY FORMER M	1GP									
Pace Project No .:	40170015											
QC Batch:	291357		Analys	sis Method:	E	EPA 300.0						
QC Batch Method:	EPA 300.0		Analys	sis Descript	ion: 3	300.0 IC Anio	ons					
Associated Lab San	nples: 4017001	5002, 4017001500	3, 40170015	004, 40170	0015005							
METHOD BLANK:	1703704		Ν	Matrix: Wat	ter							
Associated Lab San	nples: 4017001	5002, 4017001500	3, 40170015	004, 40170	0015005							
_			Blank	K R	eporting							
Paran	neter	Units	Resul	t	Limit	Analyz		Qualifiers				
Sulfate		mg/L		<1.0	3.0	0 06/13/18	13:40					
		1702705										
LABORATORT COL	NIROL SAMIFLE.	1703705	Spike	LCS	;	LCS	% Rec	2				
Paran	neter	Units	Conc.	Resu	lt	% Rec	Limits	Qı	ualifiers			
Sulfate		mg/L	20		20.3	101	90	)-110		-		
			700		4700707							
MATRIX SPIKE & IV	IATRIX SPIKE DU	PLICATE: 1703	00 MS	MSD	1703707							
		40170015002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er Ur	nits Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Sulfate	 m(	g/L <500	10000	10000	10500	10600	101	102	90-110	1	15	
MATRIX SPIKE & M	IATRIX SPIKE DU	PLICATE: 1703	708		1703709							
			MS	MSD								
		40170173003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er Ur	nits Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Sulfate	m	g/L 131	400	400	545	5 543	103	103	90-110	0	15	

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Project:	1584/22	2.2 GREEN E	BAY FORMER M	GP									
Pace Project No.:	401700	15											
QC Batch:	29095	5		Analys	sis Method:	E	EPA 353.2						
QC Batch Method:	EPA 3	53.2		Analys	sis Descript	ion: 3	353.2 Nitrate	+ Nitrite, pr	eserved				
Associated Lab Sar	mples:	4017001500	01, 40170015002	, 40170015	5003, 40170	0015004, 4	4017001500	5					
METHOD BLANK:	170145	6		Ν	Matrix: Wat	ter							
Associated Lab Sar	mples:	4017001500	1, 40170015002	, 40170015	5003, 40170	0015004, 4	4017001500	5					
				Blank	K R	eporting							
Parar	neter		Units	Resu	lt	Limit	Analyz	zed	Qualifiers				
Nitrogen, NO2 plus	NO3		mg/L	<	0.095	0.25	5 06/05/18	09:50					
LABORATORY CO	NTROL S	AMPLE: 1	701457										
				Spike	LCS	;	LCS	% Rec	;				
Parar	neter		Units	Conc.	Resu	lt	% Rec	Limits	Qı	ualifiers	_		
Nitrogen, NO2 plus	NO3		mg/L	2.5	5	2.5	98	90	-110				
MATRIX SPIKE & M			CATE: 17014	58		1701459							
				MS	MSD								
			40170015001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Nitrogen, NO2 plus	NO3	mg/L	1.5	2.5	2.5	4.0	9 4.0	99	99	90-110	0	20	
MATRIX SPIKE & M			CATE: 17014	60		1701461							
				MS	MSD								
			40170015005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Nitrogen, NO2 plus	NO3	mg/L	0.25J	2.5	2.5	2.8	3 2.8	100	101	90-110	0	20	

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# QUALIFIERS

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

#### 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.

#### **BATCH QUALIFIERS**

Batch: 290908

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

#### ANALYTE QUALIFIERS

- D3 Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
- M0 Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.



# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170015

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40170015001	053018017	EPA 3010	291056	EPA 6020	291159
40170015002	053018009	EPA 3010	291056	EPA 6020	291159
40170015003	053018010	EPA 3010	291056	EPA 6020	291159
40170015004	053018011	EPA 3010	291056	EPA 6020	291159
40170015005	053018012	EPA 3010	291056	EPA 6020	291159
40170015001	053018017	EPA 7470	291213	EPA 7470	291280
40170015002	053018009	EPA 7470	291591	EPA 7470	291655
40170015003	053018010	EPA 7470	291213	EPA 7470	291280
40170015004	053018011	EPA 7470	291213	EPA 7470	291280
40170015005	053018012	EPA 7470	291213	EPA 7470	291280
40170015001	053018017	EPA 3510	290697	EPA 8270 by HVI	290772
40170015002	053018009	EPA 3510	290833	EPA 8270 by HVI	290908
40170015003	053018010	EPA 3510	290833	EPA 8270 by HVI	290908
40170015004	053018011	EPA 3510	290833	EPA 8270 by HVI	290908
40170015005	053018012	EPA 3510	290833	EPA 8270 by HVI	290908
40170015001	053018017	EPA 8260	290673		
40170015002	053018009	EPA 8260	290808		
40170015003	053018010	EPA 8260	290808		
40170015004	053018011	EPA 8260	290808		
40170015005	053018012	EPA 8260	290808		
40170015001	053018017	EPA 300.0	291158		
40170015002	053018009	EPA 300.0	291357		
40170015003	053018010	EPA 300.0	291357		
40170015004	053018011	EPA 300.0	291357		
40170015005	053018012	EPA 300.0	291357		
40170015001	053018017	EPA 353.2	290955		
40170015002	053018009	EPA 353.2	290955		
40170015003	053018010	EPA 353.2	290955		
40170015004	053018011	EPA 353.2	290955		
40170015005	053018012	EPA 353.2	290955		

Pace Analytical

# CHAIN-OF-CUSTODY / Analytical Request Document

Pace Analytical		CHAIN-OF-CU The Chain-of-Custody is a	STODY / Analytical R LEGAL DOCUMENT. All relevant fields	equest Document must be completed accurately.	67983	-0578-00- <u>2</u> 00-8720- 33 of 38
Section A Se	ection B		Section C	J.C.	Pag	e: of C
Required Client Information: Re	equired Project Information:		Invoice Information:	/		5 <u>ş</u>
Company: O'Brien & Gere	eport To: GDSdata@OBG.com		Altention. Accounts Payable	<u></u>		
Address: 234 W. Florida St Co	opy To: Brian Hennings		Company Name: WEC Business S	ervices, LLC REGULATO	DRY AGENCY	
Milwaukee, WI			Address: PO Box 19800, Gree	n Bay, WI 54307  NPDES	GROUND WA	
Email To: <u>GDSdata@OBG.com</u> PL	urchase Order No.:		Pace Quote Reference:			OTHER
Phone: 262-719-5286 Fax: Pr	roject Name: Green Bay Former	MGP	Pace Project Manager:	Site Location	on Wi	
Requested Due Date/TAT: standard Pr	roject Number: 1584/22.2		Pace Profile #:	STAT	E:	
La construction of the second s				Requested Analysis Fill	tered (Y/N)	
Section D Valid Matrix Code Required Client Information MATRIX C		DLLECTED	Preservatives			
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1 053018013	Gir C France	5-30-12 1059	8 XXXX			M.Ø
2 053013014		1 1226	8 XXXX			10
3 0-7318015		1434	87222			VQ
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12 053113024	<u>G~12</u>	12-2-13 (053				
ADDITIONAL COMMENTS	RELINQUISHED BY / AFFIL	LIATION DATE	TIME ACCEPTED		K (D) A	
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**1,3,5- Trimethylbenzene (8260)						
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67983-0578-002

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Company: O'Brien & Gere	Report to: GDSdata@OBG.co		Company Name: WEC Business S	Services, LLC REGILLA	TORYAGENCY	
Address: 234 W. Florida St	Copy To: Brian Hennings		Address: DO Box 19800 Gree	en Bay WI 54307		
Milwaukee, WI	C. de a Maria		Page Quole			
Email Te GDSdata@OBG.com	Purchase Order No.:		Reference: Pace Project		ation	
Phone: 262-719-5286 Fax:	Project Name: Green Bay For		Manager. Paca Pmfile #		WI WI	_ \////////////////////////////////////
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3 052919033		1605			3-++++	
4 052915004	X				2++++	
5 057418005	<b>                                  </b>	121/18 1+12				110 003
6 052912006	¥ Y	1004				10 704
7 052418007	<u> </u>	E 21-21 1715				10 001
8 053013033		1 10000				002
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*Metals- As, Ba, Cd, Cr, Pb, Hg, Se, Ag, Fe, Mn				ν		biggille
**1,2,4- Trimethylbenzene (8260)		h				
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Exce	otions	to pr	eserv	ation of	check	VOA	, Coli	iform,	TOC,	TOX	, тон	, 0&0	6, WI C	DRO, I	Pheno	lics, C	Other:			Head	Ispace	e in V	OA Vi	als (>6	Smm)	: □Yes	s pNo	⊡N/A	\*If ye	IS 100	in hea	dspace	column	
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F-GB-C-046-Rev.02 (29Mar2018) Sample Preservation Receipt Form

Page <u>1</u> of <u>2</u>

		N		
Pace Analytical	Sample Cor	ocument Name: Idition Upon Receipt (SC	UR) Document	Revised: 25Apr2018
		Document No.:	lss	uing Authority:
1241 Bellevue Street, Green Bay, WI 5430	2 F	-GB-C-031-Rev.07	Pace Gre	en Bay Quality Office
Sample	Condition l	Jpon Receipt Form	n (SCUR)	
Client Name: 086		Project # <sup>. F</sup>	WO#:4	0170015
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Packing Material: Bubble Wrap Bub	ble Bags	None   Other	Pamples on	
Cooler Temperature Uncorr: /Corr:	D m	Wet blue bly None	Coampies on	ice, cooling process has begun
Temp Blank Present: Ves Pho	Biolog	ical Tissue is Frozen: 🛽	yes no	Person examining contents:
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Chain of Custody Present:	Yes No	□n/A 1.		
Chain of Custody Filled Out:	Yes DNo	□n/a 2.		
Chain of Custody Relinquished:	Yes No	□n/a 3.		
Sampler Name & Signature on COC:	Yes No	□n/a 4.		
Samples Arrived within Hold Time:	Yes INO	5.		
- VOA Samples frozen upon receipt	□Yes □No	Date/Time:		
Short Hold Time Analysis (<72hr):	Yes No	6.		
Rush Turn Around Time Requested:	Yes No	7.		
Sufficient Volume:		8.		
For Analysis				
Correct Containers Used:	Yes INO	9.		
-Pace Containers Used:	Yes No			
-Pace IR Containers Used:	□Yes □No →			
Containers Intact:	Yes No	10.		
Filtered volume received for Dissolved tests		□N/A 11.		
Sample Labels match COC:		□N/A 12.		
-Includes date/time/ID/Analysis Matrix:	W	_		
Trip Blank Present:	Yes No	□n/a_13.		
Trip Blank Custody Seals Present	□Yes □No .	EIN/A		
Pace Trip Blank Lot # (if purchased):				
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Comments/ Resolution:				
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# Wisconsin Public Service Corporation

700 North Adams Street P.O. Box 19001 Green Bay, WI 54307-9001

www.wisconsinpublicservice.com

July 30, 2018

Mr. Steven M. Grenier, P.E. City of Green Bay 100 North Jefferson Street Green Bay, WI, 54301

# RE: Recent Sampling Results

Wisconsin Public Service Corporation – Former Green Bay Manufactured Gas Plant (MGP) 700 North Adams Street, BRRTS# 0205000254

Dear Mr. Grenier,

WEC Business Services, LLC (WBS), managing the Wisconsin Public Service Corporation (WPSC) former manufactured gas plant site at 700 North Adams Street is providing results of groundwater samples collected as part of routine monitoring (MW-407, MW-417, MW-418) collected in May of 2018, as part of site characterization. Wisconsin Administrative Code Chapter NR716.14 requires responsible parties (WPSC for the above-mentioned site) to report sampling results to the property owner, and occupant, as applicable.

Results of the sampling are summarized in the attached documents. This includes summary tables of the results compared to State standards. Copies of the relevant portions of the associated laboratory reports and a figure showing the locations of samples collected on your property are also included. The results will be presented in a future Remedial Investigation Report.

We appreciate your cooperation as sampling progresses.

If you need additional information, please contact Tauren Beggs from the WDNR at 920-662-5178 or myself at 414-221-2156.

Sincerely,

nender Dominin

Frank Dombrowski Principal Environmental Consultant WEC Energy Group – Business Services Environmental Dept.

Mr. Steven M. Grenier, P.E. City of Green Bay July 30, 2018 Page 2

Enc: Figure 1. City of Green Bay

Table 1. Groundwater Analytical Results for City of Green Bay (May 2018) Table 2. Sample Key for the City of Green Bay (May 2018)

Laboratory Data Reports 40170016\_frc

CC: USEPA RPM – Margaret Gielniewski (via email) WDNR PM – Tauren Beggs (via US Mail and email) WDNR Northeast Region (via email to DNRRRNER@wisconsin.gov) Mr. Brian Hennings, OBG (via email) WPSC – Bob Laskowski (via email)

S. .

# **Figures**



# **Tables**

### Table 1. Groundwater Analytical Results for the City of Green Bay

May 2018 Sample Results Notification

Wisconsin Public Service Corporation

Green Bay Former Manufactured Gas Plant Site 700 N Adams St, Green Bay, Wisconsin

BRRTS#: 02-05-000254 USEPA#: WIN000509948

			PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH
9-digit Code	Station Name	Sample Date	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,ħ)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
		Reporting Units:	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
	<u>v</u>	VI Groundwater PAL:	<u>NS</u>	<u>NS</u>	<u>NS</u>	<u>NS</u>	<u>600</u>	<u>NS</u>	<u>0.02</u>	<u>0.02</u>	<u>NS</u>	<u>NS</u>	<u>0.02</u>	<u>NS</u>	<u>80</u>	<u>80</u>	<u>NS</u>	<u>10</u>	NS	<u>50</u>
	,	WI Groundwater ES:	NS	NS	NS	NS	3,000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	100	NS	250
	_																			
052918003	MW-407	5/29/2018	<0.0059 U	<0.0049 U	<0.0061 U	<0.0050 U	<0.010 U	<0.0076 U	<0.011 U	<0.0057 U	<0.0068 U	<0.0076 U	<0.013 U	<0.010 U	<0.011 U	<0.0080 U	<0.018 U	<0.018 U	<0.014 U	0.0081 J
052918002	MW-417	5/29/2018	<0.0059 U	<0.0049 U	<0.0061 U	<0.0050 U	<0.010 U	<0.0076 U	<0.011 U	<0.0057 U	<0.0068 U	<0.0076 U	<0.013 U	<0.010 U	<0.011 U	<0.0080 U	<0.018 U	<0.018 U	<0.014 U	<0.0076 U
052918001	MW-418	5/29/2018	<0.0058 U	<0.0048 U	<0.0060 U	<0.0049 U	<0.010 U	<0.0074 U	<0.010 U	<0.0056 U	<0.0066 U	<0.0074 U	<0.013 U	<0.0098 U	<0.010 U	<0.0078 U	<0.017 U	<0.018 U	<0.014 U	<0.0075 U

Notes

Underline = concentration that attains or exceeds WDNR PAL

#### BOLD = concentration that attains or exceeds WDNR ES

\* = Level of Detection (LOD) meets or exceeds the PAL and/or the ES Groundwater Criteria

-- = Analysis not performed

< = Concentration is less than reported limit

J = Concentration estimated

U = Not detected

Lab comments, additional data qualifiers and definitions can be found in associated laboratory reports.

Dup = Quality Control Field Duplicate Sample

µg/L = micrograms per liter

BTEX = benzene, toluene, ethylbenzene and xylenes

PAH = polycyclic aromatic hydrocarbons

VOC = Volatile Organic Compound

ES = Enforcement Standard

PAL = Preventive Action Limit

PAL and ES from WI Administrative Code NR 140 groundwater quality standard revised effective February 2017.

NS = A groundwater quality standard has not been established.

NO2 + NO3 = nitrite plus nitrate

1. Total trimethylbenzenes were calculated by NRT, an OBG Company, as follows:

- a. Where no detections were observed, the sum of the reporting limits is presented.
- b. Where detections were observed, the detected results were added together for the total summation.

c. The list of analytes used for the calculation are: 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.

### Table 1. Groundwater Analytical Results for the City of Green Bay

May 2018 Sample Results Notification

Wisconsin Public Service Corporation

Green Bay Former Manufactured Gas Plant Site 700 N Adams St, Green Bay, Wisconsin

BRRTS#: 02-05-000254 USEPA#: WIN000509948

·			BTEX	BTEX	BTEX	BTEX	BTEX	BTEX	VOC	VOC	VOC	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Inorganic	Inorganic	Inorganic
9-digit Code	Station Name	Sample Date	Benzene	Ethylbenzene	Toluene	Xylene, o	Xylenes, m + p	Xylenes, Total	1,2,4-T rimethyl benzene	1,3,5-T rimethyl benzene	Trimethylbenzenes, Total <sup>1</sup>	Arsenic, Dissolved	Barium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Iron, Dissolved	Lead, Dissolved	Manganese, Dissolved	Mercury, Dissolved	Selenium, Dissolved	Silver, Dissolved	Chloride, Total	Nitrogen, NO2 + NO3, Total	Sulfate, Total
		Reporting Units:	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
		WI Groundwater PAL:	<u>0.5</u>	<u>140</u>	<u>160</u>	<u>NS</u>	<u>NS</u>	<u>400</u>	<u>NS</u>	<u>NS</u>	<u>96</u>	<u>1</u>	<u>400</u>	<u>0.5</u>	<u>10</u>	<u>150</u>	<u>1.5</u>	<u>25</u>	<u>0.2</u>	<u>10</u>	<u>10</u>	<u>125,000</u>	<u>2,000</u>	<u>125,000</u>
		WI Groundwater ES:	5	700	800	NS	NS	2,000	NS	NS	480	10	2,000	5	100	300	15	50	2	50	50	250,000	10,000	250,000
	-																							
052918003	MW-407	5/29/2018	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<1.0 U	<1.5 U	<0.50 U	<0.50 U	<1.00 U	<u>1.7 J</u>	<u>532</u>	<0.16 U	<2.0 U	<u>11,100</u>	<0.39 U	<u>819</u>	<0.25 U*	<0.63 U	<0.20 U		<95 U	48,600
052918002	MW-417	5/29/2018	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<1.0 U	<1.5 U	<0.50 U	<0.50 U	<1.00 U	<u>1.4 J</u>	366	<u>2.0 J</u>	<2.0 U	4,930	<u>1.7 J</u>	446	<0.13 U	4.8	<0.20 U		1,300	94,200
052918001	MW-418	5/29/2018	<0.50 U	<0.50 U	<0.50 U	<0.50 U	<1.0 U	<1.5 U	<0.50 U	<0.50 U	<1.00 U	<0.56 U	223	<0.16 U	<2.0 U	<221 U*	<0.39 U	23.6	<0.13 U	<u>12.5</u>	<0.20 U		<u>6,500</u>	69,000

Notes

Underline = concentration that attains or exceeds WDNR PAL

#### BOLD = concentration that attains or exceeds WDNR ES

\* = Level of Detection (LOD) meets or exceeds the PAL and/or the ES Groundwater Criteria

-- = Analysis not performed

< = Concentration is less than reported limit

J = Concentration estimated

U = Not detected

Lab comments, additional data qualifiers and definitions can be found in associated laboratory reports.

Dup = Quality Control Field Duplicate Sample

µg/L = micrograms per liter

BTEX = benzene, toluene, ethylbenzene and xylenes

PAH = polycyclic aromatic hydrocarbons

VOC = Volatile Organic Compound

ES = Enforcement Standard

PAL = Preventive Action Limit

PAL and ES from WI Administrative Code NR 140 groundwater quality standard revised effective February 2017.

NS = A groundwater quality standard has not been established.

NO2 + NO3 = nitrite plus nitrate

1. Total trimethylbenzenes were calculated by NRT, an OBG Company, as follows:

- a. Where no detections were observed, the sum of the reporting limits is presented.
- b. Where detections were observed, the detected results were added together for the total summation.

c. The list of analytes used for the calculation are: 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.

[O:ECK 7/26/18, C:SGW 7/27/18, QA: JQW 7/30/18]

# Table 2. Sample Key for the City of Green Bay

May 2018 Sample Results Notification Wisconsin Public Service Corporation Green Bay Former Manufactured Gas Plant Site 700 N Adams St, Green Bay, Wisconsin BRRTS#: 02-05-000254 USEPA#: WIN000509948

PACE Lab Report	9-digit code	Location ID Name	Matrix	Date
40170016	052918001	MW-418	Groundwater	05/29/2018
40170016	052918002	MW-417	Groundwater	05/29/2018
40170016	052918003	MW-407	Groundwater	05/29/2018

[O:ECK 7/26/18, C:SGW 7/27/18, QA: JQW 7/30/18]

Notes:

Sorted by: Matrix, Lab Report #, 9-digit code, Location Name, and Date



# Laboratory Data Reports



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

June 15, 2018

Eric Hritsuk OBG

,

RE: Project: 1584/22.2 GREEN BAY FORMER MGP Pace Project No.: 40170016

Dear Eric Hritsuk:

Enclosed are the analytical results for sample(s) received by the laboratory on May 31, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

mate

Brian Basten brian.basten@pacelabs.com (920)469-2436 Project Manager

Enclosures

cc: Phil Brochocki, OBG NRT Data, OBG Robert Paulson, We Energies Steve Wiskes, OBG





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

# CERTIFICATIONS

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

#### **Green Bay Certification IDs**

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



# SAMPLE SUMMARY

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40170016001	052918001	Water	05/29/18 14:19	05/31/18 10:32
40170016002	052918002	Water	05/29/18 15:26	05/31/18 10:32
40170016003	052918003	Water	05/29/18 16:05	05/31/18 10:32



# SAMPLE ANALYTE COUNT

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40170016001	052918001	EPA 6020	DS1	9
		EPA 7470	AJT	1
		EPA 8270 by HVI	TPO	20
		EPA 8260	HNW	11
		EPA 300.0	HMB	1
		EPA 353.2	DAW	1
40170016002	052918002	EPA 6020	DS1	9
		EPA 7470	AJT	1
		EPA 8270 by HVI	TPO	20
		EPA 8260	HNW	11
		EPA 300.0	HMB	1
		EPA 353.2	DAW	1
40170016003	052918003	EPA 6020	DS1	9
		EPA 7470	AJT	1
		EPA 8270 by HVI	TPO	20
		EPA 8260	HNW	11
		EPA 300.0	HMB	1
		EPA 353.2	DAW	1



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

#### Method: EPA 6020

Description:6020 MET ICPMS, DissolvedClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### General Information:

3 samples were analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

#### Hold Time:

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

#### Sample Preparation:

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

#### Initial Calibrations (including MS Tune as applicable):

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

#### Continuing Calibration:

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

#### Internal Standards:

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

#### Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

#### Additional Comments:

Analyte Comments:

#### QC Batch: 291056

- D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
  - 052918001 (Lab ID: 40170016001)
    - Silver, Dissolved
    - Arsenic, Dissolved
    - Cadmium, Dissolved
    - Chromium, Dissolved
    - Iron, Dissolved
    - Lead, Dissolved
  - 052918002 (Lab ID: 40170016002)
    - Silver, Dissolved
    - Arsenic, Dissolved
    - Cadmium, Dissolved



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

# Method: EPA 6020

Description:6020 MET ICPMS, DissolvedClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

Analyte Comments:

QC Batch: 291056

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

- 052918002 (Lab ID: 40170016002)
  - Chromium, Dissolved
  - Lead, Dissolved
- 052918003 (Lab ID: 40170016003)
  - Silver, Dissolved
  - Arsenic, Dissolved
  - Cadmium, Dissolved
  - Chromium, Dissolved
  - Lead, Dissolved
  - Selenium, Dissolved



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

#### Method: EPA 7470

Description:7470 Mercury, DissolvedClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### General Information:

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

#### Hold Time:

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

#### Sample Preparation:

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

#### Initial Calibrations (including MS Tune as applicable):

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

#### Continuing Calibration:

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

#### Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

#### Additional Comments:

Analyte Comments:

#### QC Batch: 291591

- D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
  - 052918003 (Lab ID: 40170016003)
    - Mercury, Dissolved



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

#### Method: EPA 8270 by HVI

Description:8270 MSSV PAH by HVIClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### **General Information:**

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

#### Hold Time:

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

Sample Preparation:

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

#### Initial Calibrations (including MS Tune as applicable):

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

#### Continuing Calibration:

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

#### Internal Standards:

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

#### Surrogates:

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

#### 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: 290662

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

#### Additional Comments:



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

#### Method: EPA 8260

Description:8260 MSV USTClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### General Information:

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

#### Hold Time:

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

### Initial Calibrations (including MS Tune as applicable):

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

#### Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

Additional Comments:



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

#### Method: EPA 300.0

Description:300.0 IC Anions 28 DaysClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### **General Information:**

3 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

#### Hold Time:

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

#### Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

Additional Comments:



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

#### Method: EPA 353.2

Description:353.2 Nitrogen, NO2/NO3 pres.Client:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

#### **General Information:**

3 samples were analyzed for EPA 353.2. 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.

#### Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

#### **Additional Comments:**

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



### Project: 1584/22.2 GREEN BAY FORMER MGP

Појсск

Pace Project No.: 40170016

Sample: 052918001	Lab ID:	40170016001	Collected:	05/29/18	8 14:19	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical	I Method: EPA 6	020 Prepara	tion Meth	od: EPA	3010			
Arsenic, Dissolved	<0.56	ug/L	2.0	0.56	2	06/06/18 07:19	06/13/18 07:29	7440-38-2	D3
Barium, Dissolved	223	ug/L	2.3	0.68	2	06/06/18 07:19	06/13/18 07:29	7440-39-3	
Cadmium, Dissolved	<0.16	ug/L	2.0	0.16	2	06/06/18 07:19	06/13/18 07:29	7440-43-9	D3
Chromium, Dissolved	<2.0	ug/L	6.8	2.0	2	06/06/18 07:19	06/13/18 07:29	7440-47-3	D3
Iron, Dissolved	<221	ug/L	737	221	2	06/06/18 07:19	06/13/18 07:29	7439-89-6	D3
Lead, Dissolved	<0.39	ug/L	2.0	0.39	2	06/06/18 07:19	06/13/18 07:29	7439-92-1	D3
Manganese, Dissolved	23.6	ug/L	18.0	5.4	2	06/06/18 07:19	06/13/18 07:29	7439-96-5	
Selenium, Dissolved	12.5	ug/L	2.1	0.63	2	06/06/18 07:19	06/13/18 07:29	7782-49-2	
Silver, Dissolved	<0.20	ug/L	1.0	0.20	2	06/06/18 07:19	06/13/18 07:29	7440-22-4	D3
7470 Mercury, Dissolved	Analytical	I Method: EPA 7	470 Prepara	tion Meth	od: EPA	7470			
Mercury, Dissolved	<0.13	ug/L	0.42	0.13	1	06/07/18 09:45	06/08/18 08:36	7439-97-6	
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI I	Preparatio	on Metho	od: EPA 3510			
Acenaphthene	<0.0060	ug/L	0.030	0.0060	1	06/01/18 09:53	06/04/18 12:52	83-32-9	
Acenaphthylene	<0.0049	ug/L	0.024	0.0049	1	06/01/18 09:53	06/04/18 12:52	208-96-8	
Anthracene	<0.010	ug/L	0.051	0.010	1	06/01/18 09:53	06/04/18 12:52	120-12-7	
Benzo(a)anthracene	<0.0074	ug/L	0.037	0.0074	1	06/01/18 09:53	06/04/18 12:52	56-55-3	
Benzo(a)pyrene	<0.010	ug/L	0.052	0.010	1	06/01/18 09:53	06/04/18 12:52	50-32-8	
Benzo(b)fluoranthene	<0.0056	ug/L	0.028	0.0056	1	06/01/18 09:53	06/04/18 12:52	205-99-2	
Benzo(g,h,i)perylene	<0.0066	ug/L	0.033	0.0066	1	06/01/18 09:53	06/04/18 12:52	191-24-2	
Benzo(k)fluoranthene	<0.0074	ug/L	0.037	0.0074	1	06/01/18 09:53	06/04/18 12:52	207-08-9	
Chrysene	<0.013	ug/L	0.064	0.013	1	06/01/18 09:53	06/04/18 12:52	218-01-9	
Dibenz(a,h)anthracene	<0.0098	ug/L	0.049	0.0098	1	06/01/18 09:53	06/04/18 12:52	53-70-3	
Fluoranthene	<0.010	ug/L	0.052	0.010	1	06/01/18 09:53	06/04/18 12:52	206-44-0	
Fluorene	<0.0078	ug/L	0.039	0.0078	1	06/01/18 09:53	06/04/18 12:52	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.017	ug/L	0.086	0.017	1	06/01/18 09:53	06/04/18 12:52	193-39-5	
1-Methylnaphthalene	<0.0058	ug/L	0.029	0.0058	1	06/01/18 09:53	06/04/18 12:52	90-12-0	
2-Methylnaphthalene	<0.0048	ug/L	0.024	0.0048	1	06/01/18 09:53	06/04/18 12:52	91-57-6	
Naphthalene	<0.018	ug/L	0.090	0.018	1	06/01/18 09:53	06/04/18 12:52	91-20-3	
Phenanthrene	<0.014	ug/L	0.068	0.014	1	06/01/18 09:53	06/04/18 12:52	85-01-8	
Pyrene Surrogates	<0.0075	ug/L	0.038	0.0075	1	06/01/18 09:53	06/04/18 12:52	129-00-0	
2-Fluorobiphenyl (S)	56	%	29-80		1	06/01/18 09:53	06/04/18 12:52	321-60-8	
Terphenyl-d14 (S)	68	%	10-123		1	06/01/18 09:53	06/04/18 12:52	1718-51-0	
8260 MSV UST	Analytical	Method: EPA 8	260						
Benzene	<0.50	ug/L	1.0	0.50	1		06/01/18 17:57	71-43-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		06/01/18 17:57	100-41-4	
Toluene	<0.50	ug/L	1.0	0.50	1		06/01/18 17:57	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/01/18 17:57	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/01/18 17:57	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		06/01/18 17:57	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		06/01/18 17:57	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		06/01/18 17:57	95-47-6	



#### Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No .: 40170016

Sample:         052918001         Lab ID:         40170016001         Collected:         05/29/18         14:19         Received:         05/31/18         10:32         Matrix:         Wate								atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical	Method: EPA 8	260						
Surrogates									
Dibromofluoromethane (S)	100	%	67-130		1		06/01/18 17:57	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		06/01/18 17:57	2037-26-5	
4-Bromofluorobenzene (S)	97	%	61-130		1		06/01/18 17:57	460-00-4	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0						
Sulfate	69.0	mg/L	15.0	5.0	5		06/12/18 11:13	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical	Method: EPA 3	53.2						
Nitrogen, NO2 plus NO3	6.5	mg/L	0.25	0.095	1		06/05/18 10:02		
Sample: 052918002	Lab ID:	40170016002	Collected:	05/29/18	15:26	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	100		DF	Prepared	Analyzed	CAS No	Qual
6020 MET ICPMS, Dissolved	Analytical	Method: EPA 6	020 Prepara	tion Metho	d: EPA	3010			
Arsenic, Dissolved	1.4J	ug/L	2.0	0.56	2	06/06/18 07:19	06/13/18 07:36	7440-38-2	D3
Barium, Dissolved	366	ug/L	2.3	0.68	2	06/06/18 07:19	06/13/18 07:36	7440-39-3	
Cadmium, Dissolved	2.0J	ug/L	2.0	0.16	2	06/06/18 07:19	06/13/18 07:36	7440-43-9	D3
Chromium, Dissolved	<2.0	ug/L	6.8	2.0	2	06/06/18 07:19	06/13/18 07:36	7440-47-3	D3
Iron, Dissolved	4930	ug/L	737	221	2	06/06/18 07:19	06/13/18 07:36	7439-89-6	
Lead, Dissolved	1.7J	ug/L	2.0	0.39	2	06/06/18 07:19	06/13/18 07:36	7439-92-1	D3
Manganese, Dissolved	446	ug/L	18.0	5.4	2	06/06/18 07:19	06/13/18 07:36	7439-96-5	
Selenium, Dissolved	4.8	ug/L	2.1	0.63	2	06/06/18 07:19	06/13/18 07:36	7782-49-2	
Silver, Dissolved	<0.20	ug/L	1.0	0.20	2	06/06/18 07:19	06/13/18 07:36	7440-22-4	D3
7470 Mercury, Dissolved	Analytical	Method: EPA 7	470 Prepara	tion Metho	d: EPA	7470			
Mercury, Dissolved	<0.13	ug/L	0.42	0.13	1	06/07/18 09:45	06/08/18 08:38	7439-97-6	
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI	Preparatio	n Metho	od: EPA 3510			
Acenaphthene	<0.0061	ua/L	0.030	0.0061	1	06/01/18 09:53	06/04/18 13:11	83-32-9	
Acenaphthylene	<0.0050	ug/L	0.025	0.0050	1	06/01/18 09:53	06/04/18 13:11	208-96-8	
Anthracene	<0.010	ug/L	0.052	0.010	1	06/01/18 09:53	06/04/18 13:11	120-12-7	
Benzo(a)anthracene	<0.0076	ug/L	0.038	0.0076	1	06/01/18 09:53	06/04/18 13:11	56-55-3	
Benzo(a)pyrene	<0.011	ug/L	0.053	0.011	1	06/01/18 09:53	06/04/18 13:11	50-32-8	
Benzo(b)fluoranthene	<0.0057	ug/L	0.029	0.0057	1	06/01/18 09:53	06/04/18 13:11	205-99-2	
Benzo(g,h,i)perylene	<0.0068	ug/L	0.034	0.0068	1	06/01/18 09:53	06/04/18 13:11	191-24-2	
Benzo(k)fluoranthene	<0.0076	ug/L	0.038	0.0076	1	06/01/18 09:53	06/04/18 13:11	207-08-9	
Chrysene	<0.013	ug/L	0.065	0.013	1	06/01/18 09:53	06/04/18 13:11	218-01-9	
Dibenz(a,h)anthracene	<0.010	ug/L	0.050	0.010	1	06/01/18 09:53	06/04/18 13:11	53-70-3	
Fluoranthene	<0.011	ug/L	0.053	0.011	1	06/01/18 09:53	06/04/18 13:11	206-44-0	
Fluorene	<0.0080	ug/L	0.040	0.0080	1	06/01/18 09:53	06/04/18 13:11	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.018	ug/L	0.088	0.018	1	06/01/18 09:53	06/04/18 13:11	193-39-5	
1-Methylnaphthalene	<0.0059	ug/L	0.030	0.0059	1	06/01/18 09:53	06/04/18 13:11	90-12-0	



#### Project: 1584/22.2 GREEN BAY FORMER MGP

- - -

Pace Project No.: 40170016

Sample: 052918002	Lab ID:	40170016002	Collected	: 05/29/18	3 15:26	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI	Preparatio	on Metho	od: EPA 3510			
2-Methylnaphthalene	<0.0049	ug/L	0.024	0.0049	1	06/01/18 09:53	06/04/18 13:11	91-57-6	
Naphthalene	<0.018	ug/L	0.092	0.018	1	06/01/18 09:53	06/04/18 13:11	91-20-3	
Phenanthrene	<0.014	ug/L	0.069	0.014	1	06/01/18 09:53	06/04/18 13:11	85-01-8	
Pyrene	<0.0076	ug/L	0.038	0.0076	1	06/01/18 09:53	06/04/18 13:11	129-00-0	
Surrogates		-							
2-Fluorobiphenyl (S)	52	%	29-80		1	06/01/18 09:53	06/04/18 13:11	321-60-8	
Terphenyl-d14 (S)	65	%	10-123		1	06/01/18 09:53	06/04/18 13:11	1718-51-0	
8260 MSV UST	Analytical	Method: EPA 8	260						
Benzene	<0.50	ug/L	1.0	0.50	1		06/01/18 18:39	71-43-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		06/01/18 18:39	100-41-4	
Toluene	<0.50	ug/L	1.0	0.50	1		06/01/18 18:39	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/01/18 18:39	95-63-6	
1.3.5-Trimethylbenzene	<0.50	ua/L	1.0	0.50	1		06/01/18 18:39	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		06/01/18 18:39	1330-20-7	
m&p-Xvlene	<1.0	ug/L	2.0	1.0	1		06/01/18 18:39	179601-23-1	
o-Xvlene	<0.50	ug/l	1.0	0.50	1		06/01/18 18:39	95-47-6	
Surrogates		49/L	1.0	0.00	•		00,01,10 10.00	00 11 0	
Dibromofluoromethane (S)	102	%	67-130		1		06/01/18 18:39	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		06/01/18 18:39	2037-26-5	
4-Bromofluorobenzene (S)	95	%	61-130		1		06/01/18 18:39	460-00-4	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0						
Sulfate	94.2	mg/L	15.0	5.0	5		06/12/18 11:24	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical	Method: EPA 3	53.2						
Nitrogen, NO2 plus NO3	1.3	mg/L	0.25	0.095	1		06/05/18 10:03		
Sample: 052918003	Lab ID:	40170016003	Collected	: 05/29/18	3 16:05	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
		Mathadi EDA C				2010			
OUZU MET ICPMS, DISSOIVED	Analytical	ivietnoa: EPA 6	u∠u Prepara	auon Meth	ua: EPA	3010			
Arsenic, Dissolved	1.7J	ug/L	2.0	0.56	2	06/06/18 07:19	06/13/18 07:43	7440-38-2	D3
Barium, Dissolved	532	ug/L	2.3	0.68	2	06/06/18 07:19	06/13/18 07:43	7440-39-3	
Cadmium, Dissolved	<0.16	ug/L	2.0	0.16	2	06/06/18 07:19	06/13/18 07:43	7440-43-9	D3
Chromium, Dissolved	<2.0	ua/L	6.8	2.0	2	06/06/18 07:19	06/13/18 07:43	7440-47-3	D3

# **REPORT OF LABORATORY ANALYSIS**

737

2.0

18.0

2.1

1.0

11100

<0.39

<0.63

<0.20

819

ug/L

ug/L

ug/L

ug/L

ug/L

221

0.39

5.4

0.63

0.20

2

2

2

2

2

06/06/18 07:19 06/13/18 07:43 7439-89-6

06/06/18 07:19 06/13/18 07:43 7439-92-1

06/06/18 07:19 06/13/18 07:43 7439-96-5

06/06/18 07:19 06/13/18 07:43 7782-49-2

06/06/18 07:19 06/13/18 07:43 7440-22-4

Iron, Dissolved

Lead, Dissolved

Silver, Dissolved

Manganese, Dissolved

Selenium, Dissolved

D3

D3

D3



#### Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

Sample: 052918003	Lab ID:	40170016003	Collected	d: 05/29/18	3 16:05	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
7470 Mercury, Dissolved	Analytical	Method: EPA 7	470 Prepar	ation Meth	od: EPA	7470			
Mercury, Dissolved	<0.25	ug/L	0.84	0.25	1	06/12/18 09:55	06/13/18 09:06	7439-97-6	D3
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI	Preparatio	on Metho	od: EPA 3510			
Acenaphthene	<0.0061	ug/L	0.030	0.0061	1	06/01/18 09:53	06/04/18 13:29	83-32-9	
Acenaphthylene	<0.0050	ug/L	0.025	0.0050	1	06/01/18 09:53	06/04/18 13:29	208-96-8	
Anthracene	<0.010	ug/L	0.052	0.010	1	06/01/18 09:53	06/04/18 13:29	120-12-7	
Benzo(a)anthracene	<0.0076	ug/L	0.038	0.0076	1	06/01/18 09:53	06/04/18 13:29	56-55-3	
Benzo(a)pyrene	<0.011	ug/L	0.053	0.011	1	06/01/18 09:53	06/04/18 13:29	50-32-8	
Benzo(b)fluoranthene	<0.0057	ug/L	0.029	0.0057	1	06/01/18 09:53	06/04/18 13:29	205-99-2	
Benzo(g,h,i)perylene	<0.0068	ug/L	0.034	0.0068	1	06/01/18 09:53	06/04/18 13:29	191-24-2	
Benzo(k)fluoranthene	<0.0076	ug/L	0.038	0.0076	1	06/01/18 09:53	06/04/18 13:29	207-08-9	
Chrysene	<0.013	ug/L	0.065	0.013	1	06/01/18 09:53	06/04/18 13:29	218-01-9	
Dibenz(a,h)anthracene	<0.010	ug/L	0.050	0.010	1	06/01/18 09:53	06/04/18 13:29	53-70-3	
Fluoranthene	<0.011	ug/L	0.053	0.011	1	06/01/18 09:53	06/04/18 13:29	206-44-0	
Fluorene	<0.0080	ua/L	0.040	0.0080	1	06/01/18 09:53	06/04/18 13:29	86-73-7	
Indeno(1.2.3-cd)pyrene	<0.018	ua/L	0.088	0.018	1	06/01/18 09:53	06/04/18 13:29	193-39-5	
1-Methylnaphthalene	<0.0059	ua/L	0.030	0.0059	1	06/01/18 09:53	06/04/18 13:29	90-12-0	
2-Methylnaphthalene	< 0.0049	ua/L	0.024	0.0049	1	06/01/18 09:53	06/04/18 13:29	91-57-6	
Naphthalene	<0.018	ua/l	0.092	0.018	1	06/01/18 09:53	06/04/18 13:29	91-20-3	
Phenanthrene	< 0.014	ua/l	0.069	0.014	1	06/01/18 09:53	06/04/18 13:29	85-01-8	
Pyrene	0.0081.1	ug/L	0.038	0.0076	1	06/01/18 09:53	06/04/18 13:29	129-00-0	
Surrogates	0.00010	ug/ L	0.000	0.0010	•	00,01,10 00.00	00,01,1010.20	120 00 0	
2-Fluorobiphenyl (S)	47	%	29-80		1	06/01/18 09:53	06/04/18 13:29	321-60-8	
Terphenyl-d14 (S)	58	%	10-123		1	06/01/18 09:53	06/04/18 13:29	1718-51-0	
8260 MSV UST	Analytical	Method: EPA 8	260						
Benzene	<0.50	ug/L	1.0	0.50	1		06/01/18 19:01	71-43-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		06/01/18 19:01	100-41-4	
Toluene	<0.50	ug/L	1.0	0.50	1		06/01/18 19:01	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/01/18 19:01	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/01/18 19:01	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		06/01/18 19:01	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		06/01/18 19:01	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		06/01/18 19:01	95-47-6	
Dibromofluoromothene (S)	101	0/	67 120		1		06/01/19 10:04	1969 52 7	
Taluana da (S)	101	% 0/	70 420		1		06/01/18 19:01	1000-03-7	
Diverse (S)	100	%	70-130		1		06/01/18 19:01	2037-26-5	
4-Bromonuorobenzene (S)	90	70	61-130		I		06/01/18 19:01	460-00-4	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0						
Sulfate	48.6	mg/L	15.0	5.0	5		06/12/18 11:34	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical	Method: EPA 3	53.2						
Nitrogen, NO2 plus NO3	<0.095	ma/L	0.25	0.095	1		06/05/18 10:04		



Project:	1584/22.2 GF	EEN BAY	FORMER MO	ЭP									
Pace Project No.:	40170016												
QC Batch:	291213			Analys	sis Method	l: E	PA 7470						
QC Batch Method:	EPA 7470			Analys	sis Descrip	otion: 74	470 Mercury	/ Dissolved	ł				
Associated Lab San	nples: 40170	0016001,	40170016002										
METHOD BLANK:	1702838			٦	Matrix: Wa	ater							
Associated Lab San	nples: 40170	0016001,	40170016002										
_				Blank	k F	Reporting							
Paran	neter		Units	Resu	lt	Limit	Analyz	.ed	Qualifiers				
Mercury, Dissolved			ug/L		<0.13	0.42	06/08/18	08:04					
LABORATORY COM	NTROL SAMPL	E: 170	2839										
				Spike	LC	S	LCS	% Re	с				
Paran	neter		Units	Conc.	Res	ult	% Rec	Limit	s Qi	ualifiers			
Mercury, Dissolved			ug/L	5	5	4.9	98	8	5-115				
MATRIX SPIKE & M	IATRIX SPIKE	DUPLICA	TE: 170284	40		1702841							
				MS	MSD								
		4	0170015001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved		ug/L	<0.25	10	10	9.8	9.8	98	98	85-115	1	20	

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



Project:	1584/22.2 GRE	EN BAY	FORMER MO	ЭP									
Pace Project No.:	40170016												
QC Batch:	291591			Analys	sis Method	: E	PA 7470						
QC Batch Method:	EPA 7470			Analys	sis Descrip	tion: 7	470 Mercury	Dissolved					
Associated Lab San	nples: 401700	16003											
METHOD BLANK:	1705073			١	Matrix: Wa	ter							
Associated Lab San	nples: 401700	16003											
				Blank	K R	Reporting							
Paran	neter		Units	Resu	lt	Limit	Analyz	ed	Qualifiers				
Mercury, Dissolved			ug/L		<0.13	0.42	2 06/13/18	09:02					
LABORATORY COM	ITROL SAMPLE	: 170	5074										
				Spike	LCS	6	LCS	% Rec	;				
Paran	neter		Units	Conc.	Resu	ult	% Rec	Limits	Qı	alifiers	_		
Mercury, Dissolved			ug/L	5	5	5.4	107	85	-115				
MATRIX SPIKE & N	IATRIX SPIKE D	UPLICA	TE: 17050	75		1705076							
				MS	MSD								
		4	0170016003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	r l	Jnits	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved		ug/L	<0.25	10	10	10.5	10.5	105	105	85-115	0	20	

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



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

QC Batch:	291056	Analysis Method:	EPA 6020
QC Batch Method:	EPA 3010	Analysis Description:	6020 MET Dissolved
Associated Lab Sam	ples: 40170016001, 40170016002, 4	0170016003	
METHOD BLANK:	1702029	Matrix: Water	

Associated Lab Samples: 40170016001, 40170016002, 40170016003

		_,			
		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
Arsenic, Dissolved	ug/L	<0.28	1.0	06/13/18 06:00	
Barium, Dissolved	ug/L	<0.34	1.1	06/13/18 06:00	
Cadmium, Dissolved	ug/L	<0.081	1.0	06/13/18 06:00	
Chromium, Dissolved	ug/L	<1.0	3.4	06/13/18 06:00	
Iron, Dissolved	ug/L	<111	368	06/13/18 06:00	
Lead, Dissolved	ug/L	<0.20	1.0	06/13/18 06:00	
Manganese, Dissolved	ug/L	<2.7	9.0	06/13/18 06:00	
Selenium, Dissolved	ug/L	< 0.32	1.1	06/13/18 06:00	
Silver, Dissolved	ug/L	<0.10	0.50	06/13/18 06:00	

# LABORATORY CONTROL SAMPLE: 1702030

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	495	99	80-120	
Barium, Dissolved	ug/L	500	473	95	80-120	
Cadmium, Dissolved	ug/L	500	508	102	80-120	
Chromium, Dissolved	ug/L	500	456	91	80-120	
Iron, Dissolved	ug/L	5000	5220	104	80-120	
Lead, Dissolved	ug/L	500	453	91	80-120	
Manganese, Dissolved	ug/L	500	462	92	80-120	
Selenium, Dissolved	ug/L	500	511	102	80-120	
Silver, Dissolved	ug/L	250	225	90	80-120	

MATRIX SPIKE & MATRIX S		ATE: 17020	31		1702032							
			MS	MSD								
	4	0170015001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Arsenic, Dissolved	ug/L	<2.8	500	500	496	501	99	100	75-125	1	20	
Barium, Dissolved	ug/L	545	500	500	1000	1020	91	94	75-125	1	20	
Cadmium, Dissolved	ug/L	0.92J	500	500	476	485	95	97	75-125	2	20	
Chromium, Dissolved	ug/L	<10.2	500	500	471	476	94	95	75-125	1	20	
Iron, Dissolved	ug/L	<1110	5000	5000	4820	4840	92	93	75-125	0	20	
Lead, Dissolved	ug/L	<2.0	500	500	464	470	93	94	75-125	1	20	
Manganese, Dissolved	ug/L	400	500	500	850	870	90	94	75-125	2	20	
Selenium, Dissolved	ug/L	<3.2	500	500	516	530	103	106	75-125	3	20	
Silver, Dissolved	ug/L	<1.0	250	250	225	228	90	91	75-125	2	20	

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

# **REPORT OF LABORATORY ANALYSIS**

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Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

QC Batch:	290668	Analysis Method:	EPA 8260
QC Batch Method:	EPA 8260	Analysis Description:	8260 MSV UST-WATER
Associated Lab Sam	ples: 40170016001, 40170016002, 4	0170016003	

METHOD BLANK: 1700208

Matrix: Water

Associated Lab Samples:	40170016001, 40170016002, 40	170016003			
Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,2,4-Trimethylbenzene	ug/L	<0.50	1.0	06/01/18 16:31	
1,3,5-Trimethylbenzene	ug/L	<0.50	1.0	06/01/18 16:31	
Benzene	ug/L	<0.50	1.0	06/01/18 16:31	
Ethylbenzene	ug/L	<0.50	1.0	06/01/18 16:31	
m&p-Xylene	ug/L	<1.0	2.0	06/01/18 16:31	
o-Xylene	ug/L	<0.50	1.0	06/01/18 16:31	
Toluene	ug/L	<0.50	1.0	06/01/18 16:31	
Xylene (Total)	ug/L	<1.5	3.0	06/01/18 16:31	
4-Bromofluorobenzene (S)	%	97	61-130	06/01/18 16:31	
Dibromofluoromethane (S)	%	102	67-130	06/01/18 16:31	
Toluene-d8 (S)	%	101	70-130	06/01/18 16:31	

#### LABORATORY CONTROL SAMPLE: 1700209

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzene	ug/L	50	48.0	96	73-145	
Ethylbenzene	ug/L	50	49.5	99	87-129	
m&p-Xylene	ug/L	100	98.1	98	70-130	
o-Xylene	ug/L	50	48.6	97	70-130	
Toluene	ug/L	50	46.7	93	82-130	
Xylene (Total)	ug/L	150	147	98	70-130	
4-Bromofluorobenzene (S)	%			100	61-130	
Dibromofluoromethane (S)	%			101	67-130	
Toluene-d8 (S)	%			99	70-130	

MATRIX SPIKE & MATRIX SPI	IATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1700436 1700437											
			MS	MSD								
	4	0170016001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzene	ug/L	<0.50	50	50	49.9	49.6	100	99	73-145	1	20	
Ethylbenzene	ug/L	<0.50	50	50	51.2	51.2	102	102	87-129	0	20	
m&p-Xylene	ug/L	<1.0	100	100	101	101	101	101	70-130	0	20	
o-Xylene	ug/L	<0.50	50	50	50.5	50.5	101	101	70-130	0	20	
Toluene	ug/L	<0.50	50	50	48.6	48.7	97	97	82-131	0	20	
Xylene (Total)	ug/L	<1.5	150	150	151	152	101	101	70-130	0	20	
4-Bromofluorobenzene (S)	%						103	100	61-130			
Dibromofluoromethane (S)	%						102	100	67-130			
Toluene-d8 (S)	%						100	99	70-130			

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

# **REPORT OF LABORATORY ANALYSIS**

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Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

QC Batch:	290662	Analysis Method:	EPA 8270 by HVI
QC Batch Method:	EPA 3510	Analysis Description:	8270 Water PAH by HVI
Associated Lab Samp	bles: 40170016001, 40170016002, 4	0170016003	

METHOD BLANK: 1700194

# Matrix: Water

Associated Lab Samples:	40170016001, 40170016002, 4	0170016003			
Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1-Methylnanhthalene		-0.0059	0.030	06/01/18 12:49	
2-Methylnaphthalene	ug/L	<0.0039	0.030	06/01/18 12:49	
Acenaphthene	ug/L	<0.0061	0.030	06/01/18 12:49	
Acenaphthylene	ug/L	<0.0050	0.025	06/01/18 12:49	
Anthracene	ug/L	<0.010	0.052	06/01/18 12:49	
Benzo(a)anthracene	ug/L	<0.0076	0.038	06/01/18 12:49	
Benzo(a)pyrene	ug/L	<0.011	0.053	06/01/18 12:49	
Benzo(b)fluoranthene	ug/L	<0.0057	0.029	06/01/18 12:49	
Benzo(g,h,i)perylene	ug/L	<0.0068	0.034	06/01/18 12:49	
Benzo(k)fluoranthene	ug/L	<0.0076	0.038	06/01/18 12:49	
Chrysene	ug/L	<0.013	0.065	06/01/18 12:49	
Dibenz(a,h)anthracene	ug/L	<0.010	0.050	06/01/18 12:49	
Fluoranthene	ug/L	<0.011	0.053	06/01/18 12:49	
Fluorene	ug/L	<0.0080	0.040	06/01/18 12:49	
Indeno(1,2,3-cd)pyrene	ug/L	<0.018	0.088	06/01/18 12:49	
Naphthalene	ug/L	<0.018	0.092	06/01/18 12:49	
Phenanthrene	ug/L	<0.014	0.069	06/01/18 12:49	
Pyrene	ug/L	<0.0076	0.038	06/01/18 12:49	
2-Fluorobiphenyl (S)	%	61	29-80	06/01/18 12:49	
Terphenyl-d14 (S)	%	81	10-123	06/01/18 12:49	

LABORATORY CONTROL SAMPLE & I	LCSD: 1700195		17	00196						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
1-Methylnaphthalene	ug/L	2	1.5	1.5	73	76	53-92	4	20	
2-Methylnaphthalene	ug/L	2	1.4	1.4	70	72	51-87	3	20	
Acenaphthene	ug/L	2	1.3	1.3	64	66	49-90	4	20	
Acenaphthylene	ug/L	2	1.3	1.3	64	65	50-84	2	20	
Anthracene	ug/L	2	1.6	1.7	79	84	49-109	6	27	
Benzo(a)anthracene	ug/L	2	1.3	1.3	63	63	42-97	1	23	
Benzo(a)pyrene	ug/L	2	1.7	1.7	83	84	61-106	1	20	
Benzo(b)fluoranthene	ug/L	2	1.5	1.5	75	76	51-95	2	20	
Benzo(g,h,i)perylene	ug/L	2	0.69	0.70	35	35	27-120	2	33	
Benzo(k)fluoranthene	ug/L	2	1.8	1.7	88	85	58-103	3	22	
Chrysene	ug/L	2	2.3	2.4	117	121	69-125	4	20	
Dibenz(a,h)anthracene	ug/L	2	0.55	0.58	28	29	21-120	5	39	
Fluoranthene	ug/L	2	1.8	1.8	88	92	68-110	4	24	
Fluorene	ug/L	2	1.4	1.5	71	73	54-95	2	21	
Indeno(1,2,3-cd)pyrene	ug/L	2	1.4	1.4	68	69	50-94	1	26	
Naphthalene	ug/L	2	1.3	1.4	65	69	46-78	7	21	

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.



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

LABORATORY CONTROL SAMPLE &	17	700196								
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Phenanthrene	ug/L	2	1.5	1.5	73	76	51-95	4	20	
Pyrene	ug/L	2	1.8	1.9	90	94	66-106	4	24	
2-Fluorobiphenyl (S)	%				60	61	29-80			
Terphenyl-d14 (S)	%				77	80	10-123			

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

# **REPORT OF LABORATORY ANALYSIS**

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Project:	1584/22.2 GRE	EN BAY	FORMER MO	GP									
Pace Project No .:	40170016												
QC Batch:	291319			Analys	is Method:	E	PA 300.0						
QC Batch Method:	EPA 300.0			Analys	is Descript	ion: 3	00.0 IC Anio	ons					
Associated Lab Sar	nples: 401700	16001, 4	40170016002	, 40170016	003								
METHOD BLANK:	1703513			Ν	Aatrix: Wa	ter							
Associated Lab Sar	nples: 401700	16001, 4	40170016002	, 40170016	003								
				Blank	k R	eporting							
Paran	neter		Units	Resul	t	Limit	Analyz	ed	Qualifiers				
Sulfate			mg/L		<1.0	3.0	06/12/18	10:21					
LABORATORY CO	NTROL SAMPLE	1703	3514	Spiko			1.00	0/ Por					
Parar	neter		Units	Conc.	Resu	, Ilt	% Rec	Limits	Qı	ualifiers			
Sulfate			mg/L	20		20.1	101	90	)-110		-		
			TE 47005	4 5		4700540							
MATRIX SPIKE & N	IATRIX SPIKE D	JPLICA	TE: 17035	15 MS	MSD	1703516							
		4(	0170380001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er l	Inits	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Sulfate	r	ng/L	10.1J	100	100	112	112	102	102	90-110	0	15	
			TE: 17025	17		1702519							
MATRIA SPIKE & N	IATRIA SPIKE D	JPLICA	IE. 17035	MS	MSD	1703516							
		40	0170062002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er l	Inits	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Sulfate	r	ng/L	<100	2000	2000	2080	2130	101	104	90-110	2	15	

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.



Project:	1584/22.2 GRE	EN BAY FORMER M	IGP									
Pace Project No .:	40170016											
QC Batch:	290955		Analys	is Method:	E	PA 353.2						
QC Batch Method:	EPA 353.2		Analys	is Descript	ion: 3	53.2 Nitrate	+ Nitrite, pi	reserved				
Associated Lab San	nples: 401700	16001, 40170016002	2, 40170016	003								
METHOD BLANK:	1701456		N	Aatrix: Wat	er							
Associated Lab San	nples: 401700	16001, 40170016002	2, 40170016	003								
			Blank	R	eporting							
Paran	neter	Units	Resul	t	Limit	Analyz	ed	Qualifiers				
Nitrogen, NO2 plus	NO3	mg/L	<(	0.095	0.25	5 06/05/18	09:50					
LABORATORY CON	NTROL SAMPLE	: 1701457										
			Spike	LCS	i i	LCS	% Rec	;				
Paran	neter	Units	Conc.	Resu	lt	% Rec	Limits	Qu	alifiers			
Nitrogen, NO2 plus	NO3	mg/L	2.5		2.5	98	90	-110		-		
			150		1701450							
WATKIA SPIKE & W	AIRIA SPIRE D	UPLICATE. 17014	MS	MSD	1701459							
		40170015001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er L	Jnits Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Nitrogen, NO2 plus	NO3 r	ng/L 1.5	2.5	2.5	4.0	4.0	99	99	90-110	0	20	
MATRIX SPIKE & M	IATRIX SPIKE D	UPLICATE: 17014	60		1701461							
			MS	MSD								
		40170015005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er l	Jnits Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Nitrogen, NO2 plus	NO3 r	ng/L 0.25J	2.5	2.5	2.8	2.8	100	101	90-110	0	20	

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



# QUALIFIERS

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

#### 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.

# **BATCH QUALIFIERS**

Batch: 290760

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

# ANALYTE QUALIFIERS

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



# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170016

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40170016001	052918001	EPA 3010	291056	EPA 6020	291159
40170016002	052918002	EPA 3010	291056	EPA 6020	291159
40170016003	052918003	EPA 3010	291056	EPA 6020	291159
40170016001	052918001	EPA 7470	291213	EPA 7470	291280
40170016002	052918002	EPA 7470	291213	EPA 7470	291280
40170016003	052918003	EPA 7470	291591	EPA 7470	291655
40170016001	052918001	EPA 3510	290662	EPA 8270 by HVI	290760
40170016002	052918002	EPA 3510	290662	EPA 8270 by HVI	290760
40170016003	052918003	EPA 3510	290662	EPA 8270 by HVI	290760
40170016001	052918001	EPA 8260	290668		
40170016002	052918002	EPA 8260	290668		
40170016003	052918003	EPA 8260	290668		
40170016001	052918001	EPA 300.0	291319		
40170016002	052918002	EPA 300.0	291319		
40170016003	052918003	EPA 300.0	291319		
40170016001	052918001	EPA 353.2	290955		
40170016002	052918002	EPA 353.2	290955		
40170016003	052918003	EPA 353.2	290955		

Analytical www.pacelabs.com

# CHAIN-OF-CUSTODY / Analytical Request Document The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.

COC#: 67983-0578-0018

/ www.pacelabs.com		QC°	Meline Men		40170116 S
Section A Required Cli Ont Information:	Section B	0-0	Section C		
Company: O'Brien & Gere	Report To: GDSdata@OBG.com		Invoice Information:		Page: C of
Address: 234 W. Florida St	Copy To: Brian Hennings		Accounts Payable		······································
Milwaukee, WI			Company Name: WEC Business Services, LLC	REGULATORY AGENC	Y
Email To: GDSdata@OBG.com	Purchase Order No :		Address: PO Box 19800, Green Bay, WI 54307	🗌 NPDES 💆 GROU	
Phone: 26.2-719-5286 [Fax:	Project Name: O D		Pace Quote Reference:		
Page and Date TAT: standard	Froject Name: Green Bay Former MGP		Pace Project Manager:	Site Location	
	Project Number: 1584/22.2		Pace Profile #:	STATE: WI	<u>'</u> `
Section D Valid Matrix C	Codes O	<u> </u>	Requested A	Inalysis Filtered (Y/N)	
Recret Fred Client Information MATRIX			Preservatives	YNN	
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4 052919004	VAR	1707			10,000
5 05 4919005		1712	3 AAAA		-1115/
6 03 291 2006		1824			110
7 052218007		1945			116
8 03 30 (0,00 3		0715			
9 07312000		0300			
10 03 50 100 10		0336 1			
		0941			112
		0426			N D
EPA Level 2	RELINGUISHED BY / AFFILIATION	DATE	TIME ACCEPTED BY / AFFILIATION	DATE TIME	SAMPLE CONDITIONS
Metals- As, Ba, Cd, Cr, Pb, Hg, Se, Ag, Fe, Mn	un borntry 0156	05-31-19 1	U32 King the	5/3/18 1032 1	ROP I VIN I
*12.4- Trimethylbenzene (8260)	/		1		the training the second
*13.5- Trimethylbenzene (8260)					Mazille
				1	*
	SAMPLER NAME AN	ID SIGNATURE		<b></b>	
	PRINT Name	of SAMPLER:	Aber Barreme		ved o V/N) (V/N) (Y/N) N)
	SIGNATURE	of SAMPLER:	Mar R. DATE Signed D	C/R0/10	Temp Received to ( los (los (los (los (los (los (los (los (
			(MM/DD/YY): 0.	2/27/10	

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

Page 1 of 2

# Sample Preservation Receipt Form

# Project # 40170016

OBG

**Client Name:** 

Cli	ent	Na	me:		7	26	2	•					-		Pro	ojec	t #	4	<u>v(</u>	70	2011	<u>k</u>			-								0 20
	All c	ontain	ners n	eedin	g pres	ervati	on ha	ive be	en ch	ecked Lab	and r	noted of pH	below, paper	IOL	s ⊡No ∧SH	∩N/¤	4 (Lai	b Std :	#ID of	prese	ervatio	n (if p	H adjı	usted)	:				Initial comp	l when	A	Date/	
		****		Glas	S	Contract from a new order			New Constant		Plast	tic					Vi	ials		Tanaka - 1000 a 100		Jars		G	ener	al	* (mm3<)	ß	Act pH ≥9	212	ß	justed	Volume
Pace Lab #	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	BP3C	BP3N	BP3S	DG9A	DG9T	VG9U	VG9H	VG9M	VG9D	JGFU	WGFU	WPFU	SP5T	ZPLC	N	voA Vials	H2SO4 pH	NaOH+Zn	NaOH pH	HNO3 pH	pH after ac	(mL)
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002					12-													3										2			~		2.5 / 5 / 10
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000													56.69		633988																		2.5/5/10
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012	10/2/18	1000000											120020		1200620			1.002200		100800	1242820	1999994		1998935	1346.00	482558		434420	0000000	100000000			2.5/5/10
013	SKOLIS-	10000000			1268688	8 45203865			1,0688333	2 22230556	1 2 9 9 7 5 5 5	1 22692999			3899965		299863	1	8 74338984			-20032200	1988997 1		2060009			222233	2000000	19888888	-469639639		2.5/5/10
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Excep	tions	to pre	eserva	ation o	check:	VQA	, coli	formi,	TOC,	тох,	тон,	, O&G	, WI C	RO, F	Pheno	lics, C	)ther:			Head	Ispace	e in V(	DA Via	als (>6	6mm) :	oYes	No	□N/A	*lf ye	s look	in head	Ispace	column
AG1U	1 liter amber glass BP1U 1 liter plastic unpres										pres			D	59A	40 m	nL aml	oer as	corbio	:		JC	ifU	4 oz	ambe	er jar u	Inpres						
AG1H	1 liter amber glass HCL BP2N 500 mL plastic HNO3 125 mL amber glass H2SO4 BP27 500 mL plastic NaOH									INO3			D	39T	40 m	nL aml	oer Na	a Thio			W	GFU	4 oz	clear	jar un	pres							
AG4S	J 125 mL amber glass H2SO4 BP2Z 500 mL plastic NaOH, J 120 mL amber glass unpres BP3U 250 mL plastic unpres									IaOH,	Znact		Ve	59U	40 m	nL clea	ir vial	unpre	25		W	PFU	4 oz	plasti	c jar ı	inpres							
AG511	J 100 mL amber glass unpres BP30 250 mL plastic unpres									Inpres				39H	40 m	nt clea	ir vial	HCL	L			)ET	120	ا مع				_		I			
AG2S	500	00 mL amber glass unpres     BP3C     250 mL plastic NaOH       00 mL amber glass H2SO4     BP3N     250 mL plastic HNO3													V6 V6	191VI 59D	40 m	nt clea	ir vial Ir vial	DI	1		5	-51 PLC	120 ziplo	mL pl	astic M	va Thio	osultat	e	-		
BG3U	S 500 mL amber glass dipres U 250 mL clear glass unpres								P3S	250	mL pla	astic F	12504												GN:	L.p.O	r nag						

F-GB-C-046-Rev.02 (29Mar2018) Sample Preservation Receipt Form

Document No::       Issuing Authority:         Light Believue Street, Green Bay, WI 54302         Document No::       Proc Green Bay Quality Office         Sample Condition Upon Receipt Form (SCUR)         Project #:         OBC         Client Name:       OBC         OBC         Cuitor Sample Condition Upon Receipt Form (SCUR)         Project #:       WO# : 401700016         Cuitor Samples Contert To Pace Other         Project #:       WO# : 401700016         Cuitor Samples Present: [ yes f no         Deals intact [ yes f no         Project #:       Project #:         Project #:       Project #:         Cooler Temperature       Imore:         Project #:       Project #:         Project #:       Project #:         Cooler Temperature       Imore:         Cooler Temperature       Project #:         Project #:       Project #:         Cooler Temperature       Imore	Pace Analytical"	Docu Sample Condition	ment Name: on Upon Receipt (SCUR)	Document Re	vised: 25Apr2018
1241 Belevus Street; Green Bay, WI 54302       F-SB-C-031-Rev.07       Pace Green Bay Quality Office         Sample Condition Upon Receipt Form (SCUR)         Project #: W0# : 401 700016         Courter; I' CS Logistics F Fed Ex J' Speedee I' UPS I' Watco         Custody Seal on Cooler/Box Present; I' yes F no         Castody Seal on Cooler/Box Present; I' yes F no         Fack market i' yes F no         Belogistics F readex J' Speedee         Tracking #         Custody Seal on Cooler/Box Present; I' yes F no         Present Biologistic IT issue Is Frozen: I' yes F no         Temp State: Wet Blue Dry, None         Coder Temperature         Uncorr         Uncorr         Tomp State Reserved: I' yes F no         Biological Tissue Is Frozen: I' yes F no         Temp State Reserved: I' we Frozen: I' yes F no         Determining con Disc.         Determining con Disc.         Project Manages my be C.         Determining con Disc.         Conter Temperature         On Colspan= Disc.         On Colspan= Disc.         On Colspan= Disc.		Doc	sument No.:	Issuind	Authority:
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Client Name:       036         Courier:       CS Logistics F Fed Ex F Speedee IT UPS F Waltco         Courier:       F Pace Other:         Tracking 3:	Sample Co	ndition Upo	n Receipt Form (S	CUR)	
Courier: [C SL Logistics   Fed Ex   Speedee   UPS   Waltco Custody Seal on Samples Present:   yes   no Custody Seal on Cooler/Box Present:   yes   no Seals intact   yes   no Custody Seal on Samples Present:   yes   no Temp Studt beabox freazing to 6°C. Bidta Samples may be received at s 0°C. Chain of Custody Present:   //rec   No Custody Presen	Client Name: OBG		Project #:	0#:40	170016
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Por Analysis_Crees       No       MS/MS/D_2res       No       NA         Correct Containers Used:       Image: Section of the sec			8.		
Correct Containers Used:       If Yes       No       9.         -Pace Containers Used:       If Yes       No       IN/A         -Pace IR Containers Used:       If Yes       No       IN/A         Containers Intact:       If Yes       No       IO.         Filtered volume received for Dissolved tests       If Yes       No       IO.         Sample Labels match COC:       If Yes       No       IN/A         -Includes date/time/ID/Analysis       Matrix:       Image: State Sta					
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Person Contacted: Date/Time: Comments/ Resolution: Project Manager Review: Date: 5-31-18	Client Notification/ Resolution:		If checke	d, see attached for	m for additional comments
Project Manager Review:	Person Contacted:	Date/	Time:		
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Page 2ª		U-			Page 2age 28



# Wisconsin Public Service Corporation

700 North Adams Street P.O. Box 19001 Green Bay, WI 54307-9001

www.wisconsinpublicservice.com

July 30, 2018

Mr. Jeffery Weyers Harbinger Development, LLC 111 North Washington Street, #400 Green Bay, WI, 54301

# RE: Recent Sampling Results

Wisconsin Public Service Corporation – Former Green Bay Manufactured Gas Plant (MGP) 700 North Adams Street, BRRTS# 0205000254

Dear Mr. Weyers,

WEC Business Services, LLC (WBS), managing the Wisconsin Public Service Corporation (WPSC) former manufactured gas plant site at 700 North Adams Street is providing results of groundwater samples (MW-401BR, MW-402R) collected in May of 2018, as part routine monitoring. Similar to other recent sampling events, no samples were collected from MW-401AR due to the presence of dense non-aqueous phase liquid (DNAPL). The presence of DNAPL in MW-401AR is not a recent occurrence, nor does it present a risk to people using the parking lot. Wisconsin Administrative Code Chapter NR716.14 requires responsible parties (WPSC for the above-mentioned site) to report sampling results to the property owner, and occupant, as applicable.

Results of the sampling are summarized in the attached documents. This includes summary tables of the results compared to State standards. Copies of the relevant portions of the associated laboratory reports and a figure showing the locations of samples collected on your property are also included. The results will be presented in a future Remedial Investigation Report.

We appreciate your cooperation as sampling progresses.

If you need additional information, please contact Tauren Beggs from the WDNR at 920-662-5178 or myself at 414-221-2156.

Sincerely,

rander Dominute

Frank Dombrowski Principal Environmental Consultant WEC Energy Group – Business Services Environmental Dept.

Mr. Jeffery Weyers Harbinger Development, LLC July 30, 2018 Page 2

Enc: Figure 1. Harbinger Development, LLC

Table 1. Groundwater Analytical Results for Harbinger Development, LLC (May 2018) Table 2. Sample Key for Harbinger Development, LLC (May 2018)

Laboratory Reports 40170062\_frc

CC: USEPA RPM – Margaret Gielniewski (via email) WDNR PM – Tauren Beggs (via US Mail and email) WDNR Northeast Region (via email to DNRRRNER@wisconsin.gov) Mr. Brian Hennings, OBG (via email)

S. .

# **Figures**



# **Tables**

# Table 1. Groundwater Analytical Results for Harbinger Development, LLC.

May 2018 Sample Results Notification

Wisconsin Public Service Corporation

Green Bay Former Manufactured Gas Plant Site 700 N Adams St, Green Bay, Wisconsin

BRRTS#: 02-05-000254 USEPA#: WIN000509948

			РАН	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH	PAH
9-digit Code	Station Name	Sample Date	1-Methylnaphthalene	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Dibenz(a,ħ)anthracene	Fluoranthene	Fluorene	Indeno(1,2,3-cd)pyrene	Naphthalene	Phenanthrene	Pyrene
	Reporting Units:			μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
	<u>\</u>	NI Groundwater PAL:	<u>NS</u>	<u>NS</u>	<u>NS</u>	<u>NS</u>	<u>600</u>	<u>NS</u>	<u>0.02</u>	<u>0.02</u>	<u>NS</u>	<u>NS</u>	<u>0.02</u>	<u>NS</u>	<u>80</u>	<u>80</u>	<u>NS</u>	<u>10</u>	NS	<u>50</u>
		WI Groundwater ES:	NS	NS	NS	NS	3,000	NS	0.2	0.2	NS	NS	0.2	NS	400	400	NS	100	NS	250
053018008	MW-401BR	5/30/2018	<0.0060 U	<0.0050 U	<0.0062 U	<0.0051 U	<0.011 U	<0.0077 U	<0.011 U	<u>0.029 J</u>	0.024 J	0.015 J	<u>0.036 J</u>	<0.010 U	0.053 J	<0.0081 U	0.019 J	<0.019 U	0.024 J	0.044
053018019	MW-402R	5/30/2018	122	10.0	22.6	2.6	1.7 J	<0.38 U	<0.53 U*	<0.29 U*	<0.34 U	<0.38 U	<0.65 U*	<0.50 U	0.77 J	17.4	<0.88 U	<u>326</u>	15.7	0.71 J

Notes

Underline = concentration that attains or exceeds WDNR PAL

BOLD = concentration that attains or exceeds WDNR ES

- \* = Level of Detection (LOD) meets or exceeds the PAL and/or the ES Groundwater Criteria
- -- = Analysis not performed

< = Concentration is less than reported limit

J = Concentration estimated

U = Not detected

Lab comments, additional data qualifiers and definitions can be found in associated laboratory reports.

Dup = Quality Control Field Duplicate Sample

µg/L = micrograms per liter

BTEX = benzene, toluene, ethylbenzene and xylenes

PAH = polycyclic aromatic hydrocarbons

VOC = Volatile Organic Compound

ES = Enforcement Standard

PAL = Preventive Action Limit

PAL and ES from WI Administrative Code NR 140 groundwater quality standard revised effective February 2017.

NS = A groundwater quality standard has not been established.

NO2 + NO3 = nitrite plus nitrate

1. Total trimethylbenzenes were calculated by NRT, an OBG Company, as follows:

- a. Where no detections were observed, the sum of the reporting limits is presented.
- b. Where detections were observed, the detected results were added together for the total summation.
- c. The list of analytes used for the calculation are: 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.

# Table 1. Groundwater Analytical Results for Harbinger Development, LLC.

May 2018 Sample Results Notification

Wisconsin Public Service Corporation

Green Bay Former Manufactured Gas Plant Site 700 N Adams St, Green Bay, Wisconsin

BRRTS#: 02-05-000254 USEPA#: WIN000509948

			BTEX	BTEX	BTEX	BTEX	BTEX	BTEX	VOC	VOC	VOC	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Metal	Inorganic	Inorganic	Inorganic
9-digit Code	Station Name	Sample Date	Benzene	Ethylbenzene	Toluene	Xylene, o	Xylenes, m + p	Xylenes, Total	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	Trimethylbenzenes, Total <sup>1</sup>	Arsenic, Dissolved	Barium, Dissolved	Cadmium, Dissolved	Chromium, Dissolved	Iron, Dissolved	Lead, Dissolved	Manganese, Dissolved	Mercury, Dissolved	Selenium, Dissolved	Silver, Dissolved	Chloride, Total	Nitrogen, NO2 + NO3, Total	Sulfate, Total
		Reporting Units:	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L	μg/L
		WI Groundwater PAL:	<u>0.5</u>	<u>140</u>	<u>160</u>	<u>NS</u>	<u>NS</u>	<u>400</u>	<u>NS</u>	<u>NS</u>	<u>96</u>	<u>1</u>	<u>400</u>	<u>0.5</u>	<u>10</u>	<u>150</u>	<u>1.5</u>	<u>25</u>	<u>0.2</u>	<u>10</u>	<u>10</u>	<u>125,000</u>	<u>2,000</u>	<u>125,000</u>
		WI Groundwater ES:	5	700	800	NS	NS	2,000	NS	NS	480	10	2,000	5	100	300	15	50	2	50	50	250,000	10,000	250,000
	-																							
053018008	MW-401BR	5/30/2018	<0.50 U*	<0.50 U	<0.50 U	<0.50 U	<1.0 U	<1.5 U	<0.50 U	<0.50 U	<1.00 U	<0.56 U	25.2	<0.16 U	<2.0 U	<221 U*	<0.39 U	<5.4 U	<0.13 U	<0.63 U	<0.20 U		330	<u>1,140,000</u>
053018019	MW-402R	5/30/2018	<u>418</u>	83.4	41.4	60.2	64.2	124	48.3	5.0	53.3	<u>5.9 J</u>	<u>2,270</u>	<1.6 U	<20.4 U*	<u>26,100</u>	<3.9 U*	<u>2,190</u>	<0.50 U*	<6.3 U	<2.0 U		<95 U	<100,000 U
																					[O:E	CK 7/26/18. C:S	GW 7/27/18. O	A: JQW 7/30/18]

Notes

Underline = concentration that attains or exceeds WDNR PAL

BOLD = concentration that attains or exceeds WDNR ES

- \* = Level of Detection (LOD) meets or exceeds the PAL and/or the ES Groundwater Criteria
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1. Total trimethylbenzenes were calculated by NRT, an OBG Company, as follows:

- a. Where no detections were observed, the sum of the reporting limits is presented.
- b. Where detections were observed, the detected results were added together for the total summation.
- c. The list of analytes used for the calculation are: 1,2,4-Trimethylbenzene and 1,3,5-Trimethylbenzene.

PAGE 2 OF 2 1584 May2018 GW 3rd Party.xlsx

# Table 2. Sample Key for Harbinger Development, LLC.

May 2018 Sample Results Notification Wisconsin Public Service Corporation Green Bay Former Manufactured Gas Plant Site 700 N Adams St, Green Bay, Wisconsin BRRTS#: 02-05-000254 USEPA#: WIN000509948

PACE Lab Report	9-digit code	Location ID Name	Matrix	Date
40170062	053018008	MW-401BR	Groundwater	05/30/2018
40170062	053018019	MW-402R	Groundwater	05/30/2018

[O:ECK 7/26/18, C:SGW 7/27/18. QA: JQW 7/30/18]

Notes:

Sorted by: Matrix, Lab Report #, 9-digit code, Location Name, and Date



# Laboratory Data Reports



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

June 15, 2018

Eric Hritsuk OBG

,

RE: Project: 1584/22.2 GREEN BAY FORMER MGP Pace Project No.: 40170062

Dear Eric Hritsuk:

Enclosed are the analytical results for sample(s) received by the laboratory on May 31, 2018. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

mate

Brian Basten brian.basten@pacelabs.com (920)469-2436 Project Manager

Enclosures

cc: Phil Brochocki, OBG NRT Data, OBG Robert Paulson, We Energies Steve Wiskes, OBG





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

# CERTIFICATIONS

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

#### **Green Bay Certification IDs**

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



# SAMPLE SUMMARY

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40170062001	053018008	Water	05/30/18 07:15	05/31/18 10:32
40170062002	053018019	Water	05/30/18 17:49	05/31/18 10:32



# SAMPLE ANALYTE COUNT

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40170062001	053018008	EPA 6020	DS1	9
		EPA 7470	AJT	1
		EPA 8270 by HVI	TPO	20
		EPA 8260	LAP	11
		EPA 300.0	HMB	1
		EPA 353.2	DAW	1
40170062002	053018019	EPA 6020	DS1	9
		EPA 7470	AJT	1
		EPA 8270 by HVI	TPO	20
		EPA 8260	LAP	11
		EPA 300.0	HMB	1
		EPA 353.2	DAW	1



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

#### Method: EPA 6020

Description:6020 MET ICPMS, DissolvedClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

# General Information:

2 samples were analyzed for EPA 6020. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

#### Hold Time:

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

#### Sample Preparation:

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

#### Initial Calibrations (including MS Tune as applicable):

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

#### Continuing Calibration:

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

#### Internal Standards:

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

#### Method Blank:

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

# Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

#### Additional Comments:

Analyte Comments:

# QC Batch: 291463

- D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
  - 053018008 (Lab ID: 40170062001)
    - Silver, Dissolved
    - Arsenic, Dissolved
    - · Cadmium, Dissolved
    - Chromium, Dissolved
    - Iron, Dissolved
    - Manganese, Dissolved
    - · Lead, Dissolved
    - Selenium, Dissolved
  - 053018019 (Lab ID: 40170062002)
    - · Silver, Dissolved



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

# Method: EPA 6020 Description: 6020 MET ICPMS, Dissolved

Client: O'Brien & Gere Engineers, Inc Integrys WI

Date: June 15, 2018

Analyte Comments:

QC Batch: 291463

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

• 053018019 (Lab ID: 40170062002)

• Arsenic, Dissolved

- Cadmium, Dissolved
- Chromium, Dissolved
- Lead, Dissolved
- Selenium, Dissolved



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

#### Method: EPA 7470

Description:7470 Mercury, DissolvedClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

# General Information:

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

#### Hold Time:

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

#### Sample Preparation:

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

#### Initial Calibrations (including MS Tune as applicable):

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

#### Continuing Calibration:

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

#### Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

# Matrix Spikes:

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

#### Additional Comments:

Analyte Comments:

#### QC Batch: 291591

- D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
  - 053018019 (Lab ID: 40170062002)
    - Mercury, Dissolved



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

#### Method: EPA 8270 by HVI

Description:8270 MSSV PAH by HVIClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

# **General Information:**

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

#### Hold Time:

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

Sample Preparation:

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

#### Initial Calibrations (including MS Tune as applicable):

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

#### Continuing Calibration:

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

#### Internal Standards:

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

#### Surrogates:

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

#### 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: 290833

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

# Additional Comments:



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

# Method: EPA 8260

Description:8260 MSV USTClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

# General Information:

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

#### Hold Time:

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

# Initial Calibrations (including MS Tune as applicable):

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

#### Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

Additional Comments:



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

# Method: EPA 300.0

Description:300.0 IC Anions 28 DaysClient:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

# **General Information:**

2 samples were analyzed for EPA 300.0. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

# Hold Time:

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

# Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

#### Additional Comments:

Analyte Comments:

# QC Batch: 291319

- D3: Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
  - 053018019 (Lab ID: 40170062002)

Sulfate



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

#### Method: EPA 353.2

Description:353.2 Nitrogen, NO2/NO3 pres.Client:O'Brien & Gere Engineers, Inc. Integrys WIDate:June 15, 2018

# **General Information:**

2 samples were analyzed for EPA 353.2. 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.

# Method Blank:

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

#### Laboratory Control Spike:

All laboratory control spike compounds were within QC limits with any exceptions noted below.

#### Matrix Spikes:

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

#### **Additional Comments:**

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



# ANALYTICAL RESULTS

# Project: 1584/22.2 GREEN BAY FORMER MGP

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Pace Project No.: 40170062

Sample: 053018008	Lab ID:	40170062001	Collected:	05/30/1	8 07:15	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical	Method: EPA 6	020 Prepara	tion Meth	iod: EPA	3010			
Arsenic, Dissolved	<0.56	ug/L	2.0	0.56	2	06/11/18 07:31	06/15/18 02:58	7440-38-2	D3
Barium, Dissolved	25.2	ug/L	2.3	0.68	2	06/11/18 07:31	06/13/18 21:39	7440-39-3	
Cadmium, Dissolved	<0.16	ug/L	2.0	0.16	2	06/11/18 07:31	06/15/18 02:58	7440-43-9	D3
Chromium, Dissolved	<2.0	ug/L	6.8	2.0	2	06/11/18 07:31	06/15/18 02:58	7440-47-3	D3
Iron, Dissolved	<221	ug/L	737	221	2	06/11/18 07:31	06/15/18 02:58	7439-89-6	D3
Lead, Dissolved	<0.39	ug/L	2.0	0.39	2	06/11/18 07:31	06/13/18 21:39	7439-92-1	D3
Manganese, Dissolved	<5.4	ug/L	18.0	5.4	2	06/11/18 07:31	06/15/18 02:58	7439-96-5	D3
Selenium, Dissolved	<0.63	ug/L	2.1	0.63	2	06/11/18 07:31	06/15/18 02:58	7782-49-2	D3
Silver, Dissolved	<0.20	ug/L	1.0	0.20	2	06/11/18 07:31	06/15/18 02:58	7440-22-4	D3
7470 Mercury, Dissolved	Analytical	Method: EPA 7	470 Prepara	tion Meth	od: EPA	7470			
Mercury, Dissolved	<0.13	ug/L	0.42	0.13	1	06/07/18 09:45	06/08/18 08:41	7439-97-6	
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI I	Preparatio	on Metho	od: EPA 3510			
Acenaphthene	<0.0062	ug/L	0.031	0.0062	1	06/04/18 10:05	06/07/18 17:12	83-32-9	
Acenaphthylene	<0.0051	ug/L	0.025	0.0051	1	06/04/18 10:05	06/07/18 17:12	208-96-8	
Anthracene	<0.011	ug/L	0.053	0.011	1	06/04/18 10:05	06/07/18 17:12	120-12-7	
Benzo(a)anthracene	<0.0077	ug/L	0.039	0.0077	1	06/04/18 10:05	06/07/18 17:12	56-55-3	
Benzo(a)pyrene	<0.011	ug/L	0.054	0.011	1	06/04/18 10:05	06/07/18 17:12	50-32-8	
Benzo(b)fluoranthene	0.029J	ug/L	0.029	0.0059	1	06/04/18 10:05	06/07/18 17:12	205-99-2	
Benzo(g,h,i)perylene	0.024J	ug/L	0.035	0.0069	1	06/04/18 10:05	06/07/18 17:12	191-24-2	
Benzo(k)fluoranthene	0.015J	ug/L	0.039	0.0077	1	06/04/18 10:05	06/07/18 17:12	207-08-9	
Chrysene	0.036J	ug/L	0.067	0.013	1	06/04/18 10:05	06/07/18 17:12	218-01-9	
Dibenz(a,h)anthracene	<0.010	ug/L	0.051	0.010	1	06/04/18 10:05	06/07/18 17:12	53-70-3	
Fluoranthene	0.053J	ug/L	0.054	0.011	1	06/04/18 10:05	06/07/18 17:12	206-44-0	
Fluorene	<0.0081	ug/L	0.041	0.0081	1	06/04/18 10:05	06/07/18 17:12	86-73-7	
Indeno(1,2,3-cd)pyrene	0.019J	ug/L	0.090	0.018	1	06/04/18 10:05	06/07/18 17:12	193-39-5	
1-Methylnaphthalene	<0.0060	ug/L	0.030	0.0060	1	06/04/18 10:05	06/07/18 17:12	90-12-0	
2-Methylnaphthalene	<0.0050	ug/L	0.025	0.0050	1	06/04/18 10:05	06/07/18 17:12	91-57-6	
Naphthalene	<0.019	ug/L	0.094	0.019	1	06/04/18 10:05	06/07/18 17:12	91-20-3	
Phenanthrene	0.024J	ug/L	0.070	0.014	1	06/04/18 10:05	06/07/18 17:12	85-01-8	
Pyrene Surrogates	0.044	ug/L	0.039	0.0078	1	06/04/18 10:05	06/07/18 17:12	129-00-0	
2-Eluorobiphenyl (S)	53	%	29-80		1	06/04/18 10:05	06/07/18 17:12	321-60-8	
Terphenyl-d14 (S)	70	%	10-123		1	06/04/18 10:05	06/07/18 17:12	1718-51-0	
8260 MSV UST	Analytical	Method: EPA 8	260						
Benzene	<0.50	ug/L	1.0	0.50	1		06/05/18 12:35	71-43-2	
Ethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 12:35	100-41-4	
Toluene	<0.50	ug/L	1.0	0.50	1		06/05/18 12:35	108-88-3	
1,2,4-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 12:35	95-63-6	
1,3,5-Trimethylbenzene	<0.50	ug/L	1.0	0.50	1		06/05/18 12:35	108-67-8	
Xylene (Total)	<1.5	ug/L	3.0	1.5	1		06/05/18 12:35	1330-20-7	
m&p-Xylene	<1.0	ug/L	2.0	1.0	1		06/05/18 12:35	179601-23-1	
o-Xylene	<0.50	ug/L	1.0	0.50	1		06/05/18 12:35	95-47-6	



# ANALYTICAL RESULTS

# Project: 1584/22.2 GREEN BAY FORMER MGP

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Pace Project No.: 40170062

Sample: 053018008	Lab ID:	40170062001	Collected:	05/30/18	3 07:15	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8260 MSV UST	Analytical	Method: EPA 8	260						
Surrogates									
Dibromofluoromethane (S)	94	%	70-130		1		06/05/18 12:35	1868-53-7	
Toluene-d8 (S)	99	%	70-130		1		06/05/18 12:35	2037-26-5	
4-Bromofluorobenzene (S)	87	%	70-130		1		06/05/18 12:35	460-00-4	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0						
Sulfate	1140	mg/L	300	100	100		06/13/18 10:51	14808-79-8	
353.2 Nitrogen, NO2/NO3 pres.	Analytical	Method: EPA 3	53.2						
Nitrogen, NO2 plus NO3	0.33	mg/L	0.25	0.095	1		06/05/18 10:07		
Sample: 053018019	Lab ID:	40170062002	Collected:	05/30/18	3 17:49	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS, Dissolved	Analytical	Method: EPA 6	020 Prepara	ation Meth	od: EPA	3010			
Arsenic. Dissolved	5.9J	ua/L	20.0	5.6	20	06/11/18 07:31	06/15/18 03:25	7440-38-2	D3
Barium, Dissolved	2270	ug/L	22.8	6.8	20	06/11/18 07:31	06/13/18 22:06	7440-39-3	
Cadmium, Dissolved	<1.6	ug/L	20.0	1.6	20	06/11/18 07:31	06/15/18 03:25	7440-43-9	D3
Chromium, Dissolved	<20.4	ug/L	68.0	20.4	20	06/11/18 07:31	06/15/18 03:25	7440-47-3	D3
Iron, Dissolved	26100	ug/L	7370	2210	20	06/11/18 07:31	06/15/18 03:25	7439-89-6	
Lead, Dissolved	<3.9	ug/L	20.0	3.9	20	06/11/18 07:31	06/13/18 22:06	7439-92-1	D3
Manganese, Dissolved	2190	ug/L	180	54.0	20	06/11/18 07:31	06/15/18 03:25	7439-96-5	
Selenium, Dissolved	<6.3	ug/L	21.2	6.3	20	06/11/18 07:31	06/15/18 03:25	7782-49-2	D3
Silver, Dissolved	<2.0	ug/L	10.0	2.0	20	06/11/18 07:31	06/15/18 03:25	7440-22-4	D3
7470 Mercury, Dissolved	Analytical	Method: EPA 7	470 Prepara	ation Meth	od: EPA	7470			
Mercury, Dissolved	<0.50	ug/L	1.7	0.50	1	06/12/18 09:55	06/13/18 10:00	7439-97-6	D3
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI	Preparatio	on Metho	od: EPA 3510			
Acenaphthene	22.6	ug/L	1.5	0.30	50	06/04/18 10:05	06/07/18 23:02	83-32-9	
Acenaphthylene	2.6	ug/L	1.2	0.25	50	06/04/18 10:05	06/07/18 23:02	208-96-8	
Anthracene	1.7J	ug/L	2.6	0.52	50	06/04/18 10:05	06/07/18 23:02	120-12-7	
Benzo(a)anthracene	<0.38	ug/L	1.9	0.38	50	06/04/18 10:05	06/07/18 23:02	56-55-3	
Benzo(a)pyrene	<0.53	ug/L	2.6	0.53	50	06/04/18 10:05	06/07/18 23:02	50-32-8	
Benzo(b)fluoranthene	<0.29	ug/L	1.4	0.29	50	06/04/18 10:05	06/07/18 23:02	205-99-2	
Benzo(g,h,i)perylene	<0.34	ug/L	1.7	0.34	50	06/04/18 10:05	06/07/18 23:02	191-24-2	
Benzo(k)fluoranthene	<0.38	ug/L	1.9	0.38	50	06/04/18 10:05	06/07/18 23:02	207-08-9	
Chrysene	<0.65	ug/L	3.3	0.65	50	06/04/18 10:05	06/07/18 23:02	218-01-9	
Dibenz(a,h)anthracene	<0.50	ug/L	2.5	0.50	50	06/04/18 10:05	06/07/18 23:02	53-70-3	
Fluoranthene	0.77J	ug/L	2.7	0.53	50	06/04/18 10:05	06/07/18 23:02	206-44-0	
Fluorene	17.4	ug/L	2.0	0.40	50	06/04/18 10:05	06/07/18 23:02	86-73-7	
Indeno(1,2,3-cd)pyrene	<0.88	ug/L	4.4	0.88	50	06/04/18 10:05	06/07/18 23:02	193-39-5	
1-Methylnaphthalene	122	ug/L	1.5	0.30	50	06/04/18 10:05	06/07/18 23:02	90-12-0	



# ANALYTICAL RESULTS

# Project: 1584/22.2 GREEN BAY FORMER MGP

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Pace Project No.: 40170062

Sample: 053018019	Lab ID:	40170062002	Collecte	d: 05/30/18	3 17:49	Received: 05/	31/18 10:32 Ma	atrix: Water	
Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
8270 MSSV PAH by HVI	Analytical	Method: EPA 8	270 by HVI	Preparatio	n Meth	nod: EPA 3510			
2-Methylnaphthalene	10.0	ug/L	1.2	0.24	50	06/04/18 10:05	06/07/18 23:02	91-57-6	
Naphthalene	326	ug/L	4.6	0.92	50	06/04/18 10:05	06/07/18 23:02	91-20-3	
Phenanthrene	15.7	ug/L	3.4	0.69	50	06/04/18 10:05	06/07/18 23:02	85-01-8	
Pyrene <b>Surrogates</b>	0.71J	ug/L	1.9	0.38	50	06/04/18 10:05	06/07/18 23:02	129-00-0	
2-Fluorobiphenyl (S)	43	%	29-80		50	06/04/18 10:05	06/07/18 23:02	321-60-8	
Terphenyl-d14 (S)	38	%	10-123		50	06/04/18 10:05	06/07/18 23:02	1718-51-0	
8260 MSV UST	Analytical	Method: EPA 8	260						
Benzene	418	ug/L	4.0	2.0	4		06/06/18 03:26	71-43-2	
Ethylbenzene	83.4	ug/L	4.0	2.0	4		06/06/18 03:26	100-41-4	
Toluene	41.4	ug/L	4.0	2.0	4		06/06/18 03:26	108-88-3	
1,2,4-Trimethylbenzene	48.3	ug/L	4.0	2.0	4		06/06/18 03:26	95-63-6	
1,3,5-Trimethylbenzene	5.0	ug/L	4.0	2.0	4		06/06/18 03:26	108-67-8	
Xylene (Total)	124	ug/L	12.0	6.0	4		06/06/18 03:26	1330-20-7	
m&p-Xylene	64.2	ug/L	8.0	4.0	4		06/06/18 03:26	179601-23-1	
o-Xylene <i>Surrogates</i>	60.2	ug/L	4.0	2.0	4		06/06/18 03:26	95-47-6	
Dibromofluoromethane (S)	92	%	70-130		4		06/06/18 03:26	1868-53-7	
Toluene-d8 (S)	93	%	70-130		4		06/06/18 03:26	2037-26-5	
4-Bromofluorobenzene (S)	92	%	70-130		4		06/06/18 03:26	460-00-4	
300.0 IC Anions 28 Days	Analytical	Method: EPA 3	00.0						
Sulfate	<100	mg/L	300	100	100		06/13/18 11:02	14808-79-8	D3
353.2 Nitrogen, NO2/NO3 pres.	Analytical	Method: EPA 3	53.2						
Nitrogen, NO2 plus NO3	<0.095	mg/L	0.25	0.095	1		06/05/18 10:12		



Project:	1584/22.2 GREEN	BAY FORMER M	GP									
Pace Project No.:	40170062											
QC Batch:	291213		Analys	is Method:	E	PA 7470						
QC Batch Method:	EPA 7470		Analys	is Descript	ion: 74	470 Mercury	Dissolved					
Associated Lab Samp	oles: 40170062	001										
METHOD BLANK:	1702838		Ν	latrix: Wat	ter							
Associated Lab Samp	oles: 40170062	001										
			Blank	R	eporting							
Parame	eter	Units	Result	t	Limit	Analyz	ed	Qualifiers				
Mercury, Dissolved		ug/L	<	:0.13	0.42	06/08/18	08:04					
LABORATORY CON	TROL SAMPLE:	1702839										
Parame	eter	Units	Spike Conc.	LCS Resu	; Ilt	LCS % Rec	% Rec Limits	; Qı	alifiers			
Mercury, Dissolved		ug/L	5		4.9	98	85	5-115		-		
MATRIX SPIKE & MA	TRIX SPIKE DUF	PLICATE: 17028	40		1702841							
		10170015001	MS	MSD					04 D			
Parameter	Uni	40170015001 ts Result	Spike Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury, Dissolved	ug/	/L <0.25	10	10	9.8	9.8	98	98	85-115	1	20	

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



Project:	1584/22.2 GREEN	BAY FORMER M	GP									
Pace Project No.:	40170062											
QC Batch:	291591		Analys	is Method:	E	PA 7470						
QC Batch Method:	EPA 7470		Analys	is Descript	ion: 7	470 Mercury	Dissolved					
Associated Lab Sam	ples: 40170062	002										
METHOD BLANK:	1705073		N	latrix: Wat	er							
Associated Lab Sam	ples: 40170062	002										
			Blank	R	eporting							
Param	eter	Units	Resul	t	Limit	Analyz	ed	Qualifiers				
Mercury, Dissolved		ug/L	<	:0.13	0.42	06/13/18	09:02					
LABORATORY CON	TROL SAMPLE:	1705074										
			Spike	LCS		LCS	% Rec	;				
Param	eter	Units	Conc.	Resu	lt	% Rec	Limits	Qı	alifiers	_		
Mercury, Dissolved		ug/L	5		5.4	107	85	-115				
MATRIX SPIKE & M	ATRIX SPIKE DUF	PLICATE: 17050	75		1705076							
			MS	MSD								
_		40170016003	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Uni	ts Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Mercury, Dissolved	ug/	′L <0.25	10	10	10.5	10.5	105	105	85-115	0	20	

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



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No 40170062

Pace Project No.: 401700	62						
QC Batch: 29146	n: 291463		nod: EF	EPA 6020			
QC Batch Method: EPA 3	C Batch Method: EPA 3010		cription: 60	20 MET Dissolved			
Associated Lab Samples:	40170062001, 40170062002						
METHOD BLANK: 170466	3	Matrix:	Water				
Associated Lab Samples:	40170062001, 40170062002						
		Blank	Reporting				
Parameter	Units	Result	Limit	Analyzed	Qualifiers		
Arsenic, Dissolved	ug/L	<0.28	1.0	06/15/18 02:44			
Barium, Dissolved	ug/L	<0.34	1.1	06/13/18 21:26			
Cadmium, Dissolved	ug/L	<0.081	1.0	06/15/18 02:44			
Chromium, Dissolved	ug/L	<1.0	3.4	06/15/18 02:44			
Iron, Dissolved	ug/L	<111	368	06/15/18 02:44			
Lead, Dissolved	ug/L	<0.20	1.0	06/13/18 21:26			
Manganese, Dissolved	ug/L	<2.7	9.0	06/15/18 02:44			
Selenium, Dissolved	ug/L	< 0.32	1.1	06/15/18 02:44			

# LABORATORY CONTROL SAMPLE: 1704664

Silver, Dissolved

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Arsenic, Dissolved	ug/L	500	505	101	80-120	
Barium, Dissolved	ug/L	500	496	99	80-120	
Cadmium, Dissolved	ug/L	500	531	106	80-120	
Chromium, Dissolved	ug/L	500	491	98	80-120	
Iron, Dissolved	ug/L	5000	5100	102	80-120	
Lead, Dissolved	ug/L	500	498	100	80-120	
Manganese, Dissolved	ug/L	500	483	97	80-120	
Selenium, Dissolved	ug/L	500	540	108	80-120	
Silver, Dissolved	ug/L	250	256	103	80-120	

<0.10

0.50 06/15/18 02:44

ug/L

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1704665 1704666												
	4	0170062001	MS Spike	MSD Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Arsenic, Dissolved	ug/L	<0.56	500	500	512	510	102	102	75-125	0	20	
Barium, Dissolved	ug/L	25.2	500	500	530	524	101	100	75-125	1	20	
Cadmium, Dissolved	ug/L	<0.16	500	500	520	518	104	104	75-125	0	20	
Chromium, Dissolved	ug/L	<2.0	500	500	487	493	97	99	75-125	1	20	
Iron, Dissolved	ug/L	<221	5000	5000	4950	4960	99	99	75-125	0	20	
Lead, Dissolved	ug/L	<0.39	500	500	509	513	102	103	75-125	1	20	
Manganese, Dissolved	ug/L	<5.4	500	500	476	479	95	95	75-125	1	20	
Selenium, Dissolved	ug/L	<0.63	500	500	527	517	105	103	75-125	2	20	
Silver, Dissolved	ug/L	<0.20	250	250	237	241	95	96	75-125	2	20	

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# **REPORT OF LABORATORY ANALYSIS**

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Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

,						
QC Batch:	2908	308	Analysis Meth	nod: EF	PA 8260	
QC Batch Method:	EPA	8260	Analysis Des	cription: 82	60 MSV UST-WAT	ER
Associated Lab Sa	mples:	40170062001, 40170062002				
METHOD BLANK:	17010	)72	Matrix:	Water		
Associated Lab Sa	mples:	40170062001, 40170062002				
			Blank	Reporting		
Para	meter	Units	Result	Limit	Analyzed	Qualifiers
1,2,4-Trimethylben	zene	ug/L	<0.50	1.0	06/05/18 07:29	
1,3,5-Trimethylben	zene	ug/L	<0.50	1.0	06/05/18 07:29	
Benzene		ug/L	<0.50	1.0	06/05/18 07:29	
Ethylbenzene		ug/L	<0.50	1.0	06/05/18 07:29	
m&p-Xylene		ug/L	<1.0	2.0	06/05/18 07:29	
o-Xylene		ug/L	<0.50	1.0	06/05/18 07:29	
Toluene		ug/L	<0.50	1.0	06/05/18 07:29	
Xylene (Total)		ug/L	<1.5	3.0	06/05/18 07:29	

89

95

98

70-130 06/05/18 07:29

70-130 06/05/18 07:29

70-130 06/05/18 07:29

LABORATORY CONTROL SAMPLE:	1701073

4-Bromofluorobenzene (S)

Dibromofluoromethane (S)

Toluene-d8 (S)

		Spike	LCS	LCS	% Rec	
Parameter	Units	Conc.	Result	% Rec	Limits	Qualifiers
Benzene	ug/L	50	43.6	87	69-137	
Ethylbenzene	ug/L	50	51.6	103	86-127	
m&p-Xylene	ug/L	100	112	112	70-131	
o-Xylene	ug/L	50	52.7	105	70-130	
Toluene	ug/L	50	50.1	100	84-124	
Xylene (Total)	ug/L	150	164	110	70-130	
4-Bromofluorobenzene (S)	%			99	70-130	
Dibromofluoromethane (S)	%			98	70-130	
Toluene-d8 (S)	%			96	70-130	

%

%

%

MATRIX SPIKE & MATRIX SPI	KE DUPLICA	TE: 17014	70		1701471							
			MS	MSD								
	4	0170015002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Parameter	Units	Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Benzene	ug/L	<0.50	50	50	44.4	44.5	89	89	66-143	0	20	
Ethylbenzene	ug/L	<0.50	50	50	49.7	52.0	99	104	81-136	4	20	
m&p-Xylene	ug/L	<1.0	100	100	108	112	108	112	70-135	4	20	
o-Xylene	ug/L	<0.50	50	50	52.4	54.7	105	109	70-132	4	20	
Toluene	ug/L	<0.50	50	50	50.5	53.2	101	106	81-130	5	20	
Xylene (Total)	ug/L	<1.5	150	150	160	167	107	111	70-134	4	20	
4-Bromofluorobenzene (S)	%						94	98	70-130			
Dibromofluoromethane (S)	%						97	97	70-130			
Toluene-d8 (S)	%						93	96	70-130			

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Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

QC Batch:	290833	Analysis Method:	EPA 8270 by HVI
QC Batch Method:	EPA 3510	Analysis Description:	8270 Water PAH by HVI
Associated Lab Sam	ples: 40170062001, 40170062002		
METHOD BLANK:	1701147	Matrix: Water	
Associated Lab Sam	ples: 40170062001, 40170062002		

		Blank	Reporting		
Parameter	Units	Result	Limit	Analyzed	Qualifiers
1-Methylnaphthalene	ug/L	<0.0059	0.030	06/04/18 15:09	
2-Methylnaphthalene	ug/L	<0.0049	0.024	06/04/18 15:09	
Acenaphthene	ug/L	<0.0061	0.030	06/04/18 15:09	
Acenaphthylene	ug/L	<0.0050	0.025	06/04/18 15:09	
Anthracene	ug/L	<0.010	0.052	06/04/18 15:09	
Benzo(a)anthracene	ug/L	<0.0076	0.038	06/04/18 15:09	
Benzo(a)pyrene	ug/L	<0.011	0.053	06/04/18 15:09	
Benzo(b)fluoranthene	ug/L	<0.0057	0.029	06/04/18 15:09	
Benzo(g,h,i)perylene	ug/L	<0.0068	0.034	06/04/18 15:09	
Benzo(k)fluoranthene	ug/L	<0.0076	0.038	06/04/18 15:09	
Chrysene	ug/L	<0.013	0.065	06/04/18 15:09	
Dibenz(a,h)anthracene	ug/L	<0.010	0.050	06/04/18 15:09	
Fluoranthene	ug/L	<0.011	0.053	06/04/18 15:09	
Fluorene	ug/L	<0.0080	0.040	06/04/18 15:09	
Indeno(1,2,3-cd)pyrene	ug/L	<0.018	0.088	06/04/18 15:09	
Naphthalene	ug/L	<0.018	0.092	06/04/18 15:09	
Phenanthrene	ug/L	<0.014	0.069	06/04/18 15:09	
Pyrene	ug/L	<0.0076	0.038	06/04/18 15:09	
2-Fluorobiphenyl (S)	%	53	29-80	06/04/18 15:09	
Terphenyl-d14 (S)	%	85	10-123	06/04/18 15:09	

LABORATORY CONTROL SAMPLE & LCSD:	1701148		17	01149						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
1-Methylnaphthalene	ug/L	2	1.4	1.3	69	66	53-92	4	20	
2-Methylnaphthalene	ug/L	2	1.3	1.2	64	61	51-87	4	20	
Acenaphthene	ug/L	2	1.2	1.2	60	60	49-90	0	20	
Acenaphthylene	ug/L	2	1.2	1.1	59	57	50-84	3	20	
Anthracene	ug/L	2	1.5	1.5	76	77	49-109	2	27	
Benzo(a)anthracene	ug/L	2	1.3	1.2	63	59	42-97	6	23	
Benzo(a)pyrene	ug/L	2	1.6	1.6	82	81	61-106	1	20	
Benzo(b)fluoranthene	ug/L	2	1.6	1.5	79	77	51-95	3	20	
Benzo(g,h,i)perylene	ug/L	2	1.1	1.0	55	50	27-120	10	33	
Benzo(k)fluoranthene	ug/L	2	1.7	1.7	86	86	58-103	0	22	
Chrysene	ug/L	2	2.4	2.4	118	119	69-125	1	20	
Dibenz(a,h)anthracene	ug/L	2	1.0	0.89	52	44	21-120	15	39	
Fluoranthene	ug/L	2	1.8	1.7	88	87	68-110	2	24	
Fluorene	ug/L	2	1.3	1.3	65	67	54-95	3	21	
Indeno(1,2,3-cd)pyrene	ug/L	2	1.7	1.6	83	80	50-94	4	26	
Naphthalene	ug/L	2	1.2	1.2	62	58	46-78	7	21	

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.



Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

LABORATORY CONTROL SAMPLE &	LCSD: 1701148		17	01149						
		Spike	LCS	LCSD	LCS	LCSD	% Rec		Max	
Parameter	Units	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qualifiers
Phenanthrene	ug/L	2	1.4	1.4	70	70	51-95	0	20	
Pyrene	ug/L	2	1.8	1.8	91	89	66-106	2	24	
2-Fluorobiphenyl (S)	%				55	55	29-80			
Terphenyl-d14 (S)	%				78	78	10-123			

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# **REPORT OF LABORATORY ANALYSIS**

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Project:	1584/22.2 GREEN	BAY FORMER M	GP									
Pace Project No.:	40170062											
QC Batch:	291319		Analys	is Method:	E	PA 300.0						
QC Batch Method:	EPA 300.0		Analys	is Descript	ion: 3	00.0 IC Anio	ons					
Associated Lab San	nples: 40170062	001, 40170062002	!									
METHOD BLANK:	1703513		Ν	Aatrix: Wat	ter							
Associated Lab San	nples: 40170062	001, 40170062002	2									
			Blank	K R	eporting							
Paran	neter	Units	Resul	t	Limit	Analyz	zed	Qualifiers				
Sulfate		mg/L		<1.0	3.0	06/12/18	10:21					
LABORATORY COM	NTROL SAMPLE:	1703514										
			Spike	LCS	;	LCS	% Red	<b>;</b>				
Paran	neter	Units	Conc.	Resu	llt	% Rec	Limits	a Qu	ualifiers			
Sulfate		mg/L	20		20.1	101	90	)-110				
MATRIX SPIKE & M	IATRIX SPIKE DUF	PLICATE: 17035	15		1703516							
			MS	MSD								
		40170380001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	r Un	ts Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Sulfate	mg	/L 10.1J	100	100	112	112	102	102	90-110	0	15	
MATRIX SPIKE & N	IATRIX SPIKE DUF	PLICATE: 17035	17		1703518							
			MS	MSD								
		40170062002	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	r Uni	ts Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Sulfate	mg	/L <100	2000	2000	2080	2130	101	104	90-110	2	15	

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.



Project:	1584/22.2 GREE	N BAY FORMER M	GP									
Pace Project No.:	40170062											
QC Batch:	290955		Analys	is Method:	E	PA 353.2						
QC Batch Method:	EPA 353.2		Analys	is Descript	ion: 3	53.2 Nitrate	+ Nitrite, pr	reserved				
Associated Lab San	nples: 4017006	2001, 40170062002	!									
METHOD BLANK:	1701456		Ν	Aatrix: Wat	er							
Associated Lab San	nples: 4017006	2001, 40170062002	2									
			Blank	R	eporting							
Paran	neter	Units	Resul	t	Limit	Analyz	ed	Qualifiers				
Nitrogen, NO2 plus	NO3	mg/L	<(	).095	0.25	5 06/05/18	09:50					
LABORATORY CON	NTROL SAMPLE:	1701457										
			Spike	LCS		LCS	% Rec	;				
Paran	neter	Units	Conc.	Resu	lt	% Rec	Limits	Qı	ualifiers			
Nitrogen, NO2 plus	NO3	mg/L	2.5		2.5	98	90	-110		-		
MATRIX SPIKE & M		PLICATE: 17014	58		1701459							
			MS	MSD	1701400							
		40170015001	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	er Ur	nits Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Nitrogen, NO2 plus l	NO3 m	g/L 1.5	2.5	2.5	4.0	4.0	99	99	90-110	0	20	
MATRIX SPIKE & M	IATRIX SPIKE DU	PLICATE: 17014	60		1701461							
	-	-	MS	MSD	-							
		40170015005	Spike	Spike	MS	MSD	MS	MSD	% Rec		Max	
Paramete	r Ur	nits Result	Conc.	Conc.	Result	Result	% Rec	% Rec	Limits	RPD	RPD	Qual
Nitrogen, NO2 plus l	NO3 m	g/L 0.25J	2.5	2.5	2.8	2.8	100	101	90-110	0	20	

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### QUALIFIERS

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

#### 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.

#### **BATCH QUALIFIERS**

Batch: 290908

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

#### ANALYTE QUALIFIERS

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



# QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 1584/22.2 GREEN BAY FORMER MGP

Pace Project No.: 40170062

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40170062001	053018008	EPA 3010	291463	EPA 6020	291557
40170062002	053018019	EPA 3010	291463	EPA 6020	291557
40170062001	053018008	EPA 7470	291213	EPA 7470	291280
40170062002	053018019	EPA 7470	291591	EPA 7470	291655
40170062001	053018008	EPA 3510	290833	EPA 8270 by HVI	290908
40170062002	053018019	EPA 3510	290833	EPA 8270 by HVI	290908
40170062001	053018008	EPA 8260	290808		
40170062002	053018019	EPA 8260	290808		
40170062001	053018008	EPA 300.0	291319		
40170062002	053018019	EPA 300.0	291319		
40170062001	053018008	EPA 353.2	290955		
40170062002	053018019	EPA 353.2	290955		

Section A Required Cliet Information: Company: O'Brien & Gere Address: 234 W. Florida St Milwaukee, WI mail To: <u>GDSdata@OBG.com</u> hone: 262/719-5286 Fax: equested Disp Date/TAT: standard	Section B Required Pro- Report To: ( Copy To: E Purchase Orc Project Name Project Numb	bject Inf DSda Brian H Ier No.: Gr er: 15	omation: ata@OBG. lennings reen Bay F 84/22.2	com	GP		Se Inv Att Co Add	roice Info ention:	S:3 ormation: Acc	ounts F	ayable	$\square$	' —	/	-			[	Page	- <i>i</i> 07 - 1	700	of [	LCI / G
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hone: 262719-5286 Fax: squested Die Date/TAT: standard	Project Name Project Numb	: Gr er: 15	een Bay F 84/22.2	ormer M	GP		Pac	a Quote	FU	DOX 19	500, Gr	een B	ay, wi	54307	15	NPDES	\$ <u></u>	GROUN	D WAT	rer [	DRI	KING WA	ſER
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Required Client Information MATRIX			`	COLL	ECTED				Pres	ervative	s	NIN	NN		N V								
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\*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

e Analytical'

# **CHAIN-OF-CUSTODY / Analytical Request Document**

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

QC Miller Mar 5.31.14



Required Client Information:	Regulated Project Information:		Section C				Page:	l of (					
Company: O'Brien & Gere	Report To: GDSdata@OB	BG.com	Attention:	Accounts Payable	1		L						
Address: 234 W. Florida St	Copy To: Brian Hennings	S	Company N	ame: WEC Business	Services, LLC	REGULATORY AGENCY							
Milwaukeė, WI			Address:	PO Box 19800, Gr	een Bay, WI 54307								
Email To: GDSdata@OBG.com	Purchase Order No.:		Pace Quote										
Phone: 262-719-5286 Fax:	Project Name: Green Bay	v Former MGP	Reference: Pace Project				<u> </u>						
Requested Due Date/TAT: standard	Project Number: 1584/22.2	,	Manager: Pace Profile I	ŧ		Site Location	wı /////						
	L	•				STATE:							
Section D			<u> </u>		Requested A	nalysis Filtered (Y/N							
Required Client Information MATRIX	Codes (L) (d) (d) (d) (d) (d) (d) (d) (d) (d) (d	COLLECTED		Preservatives	X N N N N	YNN							
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4 053318016		152	6 8 X				1 10	-00X					
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6 0530190VB		17344 171	2 6 00				10	1,009					
7 053018019		1 174	19 8 XD				1/4)	002					
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12 053113024	0~1	5-8-13 65	3 8 7				146	AY V					
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Metals- As, Ba, Cd, Cr, Pb, Hg, Se, Ag, Fe, Mn	CALL GWING	7000 5.4	NO POJA	110	- Ple	5/11/10 10-32							
1,2,4- Trimethylbenzene (8260)		·						<u> </u>					
1,3,5- Trimethylbenzene (8260)													
		SAMPLER NAME AND SIG	GNATURE										
·		PRINT Name of SA	MPLER: 11	B. a. h			N)	C XIN					
		SIGNATURE of SA	MPLER: ///.	B	DATE Signed		Temp Los	stody mples (Y/I					
			<u> </u>	Barthan	(MM/DD/YY): 0	5130119	<b>~</b> .	30 8					

Cli	Pace Analytical Services, LLPace Analytical Services, LL1241 Bellevue Street, Suite Green Bay, WI 543 Client Name:Client Name:Client Street Project #Client Name:Client Street Project # <t< th=""></t<>																																
	All co	ontair	ners n	eeding	prese	ervatio	on hav	ve bee	en che	ecked Lab	and n Lot# c	oted t	- pelow; paper:	eres 10U	⊡No .SY	- ⊡N/A ר(	Lab	Std #	ID of	prese	vatior	n (if pl	H adju	sted):	-				Initial comp	when leted:	Xa	Date/ Time:	
				Glass	5						Plast	ic		100			Vi	als				Jars		G	enera	al	als (>6mm) *	pH ≤2	Zn Act pH ≥9	H ≥12	H≤2	· adjusted	Volume (mL)
Pace Lab #	AG1U	AG1H	AG4S	AG4U	AG5U	AG2S	BG3U	BP1U	BP2N	BP2Z	BP3U	врзс	BP3N	BP3S	DG9A	DG9T	NG9N	VG9H	VG9N	VG9D	JGFU	WGFI	WPF(	SP5T	ZPLC	SN SN	VOA Vi	H2SO4	NaOH+	ИаОН р	HNO3 p	pH after	
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AG1U	1 lite	er an	nber ø	lass				BF	P1U	1 lite	er plas	stic un	pres			D	39A	40 m	Lam	ber as	corbio	5		JC	SFU	4 oz	ambe	er jar u	Inpres				1
AG1H	1 lite	er an	nber g	lass H	CL			BF	2N	500	mL pl	astic H	INO3			D	G9T	40 m	Lam	ber Na	a Thio	i		w	GFU	4 oz	clear	jar un	pres				
AG4S	125	mL a	mber	glass	H2SO4	4		В	P2Z	500	mL pl	astic N	NaOH,	Znact	:	V	39U	40 m	L clea	ar vial	unpre	25		W	PFU	4 oz	plast	ic jar ı	Inpres				J
AG4U	120	mL a	mber	glass	unpre	S		BF	P3U	250	mL pl	astic u	unpres	5		V	59H	40 m	L clea	ar vial	HCL					1							•
AG5U	100	mL a	mber	glass	unpre	S		BI	P3C	250	mL pl	astic M	NaOH			Ve ve	i9M	40 mL clear vial MeOH							PST	120	mL pl	astic î	Na Thi	osultat	e		
AG2S BG3U	250	mL a mL c	imper lear g	giass i lass ur	nzs04 Ipres	4		BI	-3N P3S	250	mL pl	astic H astic H	12SO4	Ļ			חפנ	40 m	il clea	ar vial	וט				GN	21010	ic pag						

F-GB-C-046-Rev.02 (29Mar2018) Sample Preservation Receipt Form

Page <u>1</u> of <u>2</u>

	Do	Sumont Nome:	
Pace Analytical	Sample Condi	tion Upon Receipt (SCUR)	Document Revised: 25Apr2018
· · · · · · · · · · · · · · · · · · ·	De	ocument No.:	Issuing Authority:
1241 Bellevue Street, Green Bay, WI 54302	F-G	B-C-031-Rev.07	Pace Green Bay Quality Office
Sample (	Condition Up	on Receipt Form (	SCUR)
Client Name: OB G		Project #:	10#:40170062
Courier: CS Logistics Fed Ex Speede		Waltco	
Client Pace Other:			
Tracking #:			
Custody Seal on Cooler/Box Present: Tyes	no Seals inta	ict: 🗂 yes 🗂 no	
Custody Seal on Samples Present: 🔽 yes	no Seals inta	ict: ℾyes ℾno	
Packing Material: T Bubble Wrap T Bubb	ble Bags 🔽 No	one Cother	
Thermometer Used <u>SR - NH</u>	Type of Ice: 🕅	et Blue Dry None	Samples on ice, cooling process has begun
Cooler Temperature Uncorr: /Corr:	<u> </u>	J Tieseus is Frances 🐖 🗤	
Temp Blank Present: 1 yes 1 no Temp should be above freezing to $6^{\circ}$ C. Biota Samples may be received at $\leq 0^{\circ}$ C.	Biologica	a rissue is frozen. 👔 y	Date:
Chain of Custody Present:		1/A 1.	
Chain of Custody Filled Out:	TYes No No	VA 2.	
Chain of Custody Relinguished:	-Elfes INO IN	I/A 3.	
Sampler Name & Signature on COC:		VA 4.	
Samples Arrived within Hold Time	Fives No	5	
- VOA Samples frozen unon receint		Date/Time:	
- VOA Samples nozen upon receipt		Dater time.	
		7	
Rush Turn Around Time Requested:			
		8.	
For Analysis: Lives Lino MS/MSD		I/A	
Correct Containers Used:	Yes No	9.	
-Pace Containers Used:	¶Yes □No □1	4/A	
-Pace IR Containers Used:	Yes No DA	17A	
Containers Intact:	Pres INO	10.	
Filtered volume received for Dissolved tests		#A 11.	
Sample Labels match COC:		1/A 12.002- 250	ompt -No time.
-Includes date/time/ID/Analysis Matrix:	$\sim$		6778
Trip Blank Present:		N/A 13.	Se .
Trip Blank Custody Seals Present	□Yes □No ♀	VA	
Pace Trip Blank Lot # (if purchased):			
Client Notification/ Resolution:	Da	If check	ked, see attached form for additional comments
Comments/ Resolution:	Đa		
	12		
Project Manager Review:	<u> </u>		Date: <u>6 ~/ ~/ ¥</u>
	$\mathcal{W}$		
	G		Page Page