SCS ENGINEERS

2017 Annual Groundwater Monitoring and Corrective Action Report

Edgewater Generating Station
Sheboygan, Wisconsin

Prepared for:

Alliant Energy

Prepared by:

SCS ENGINEERS
2830 Dairy Drive
Madison, Wisconsin 53718-6751
(608) 224-2830

January 31, 2018
File No. 25216068.17

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Appendix A – Analytical Laboratory Reports

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1.0 INTRODUCTION

This 2017 Annual Groundwater Monitoring and Corrective Action Report was prepared to support compliance with the groundwater monitoring requirements of the "Coal Combustion Residuals (CCR) Final Rule" published by the U.S. Environmental Protection Agency (USEPA) in the *Hazardous and Solid Waste Management System; Disposal of Coal Combustion Residuals from Electric Utilities; Final Rule*, dated April 17, 2015 (USEPA, 2015). Specifically, this report was prepared to fulfill the requirements of 40 CFR 257.90(e). The applicable sections of the Rule are provided below in *italics*, followed by applicable information relative to the 2017 Annual Groundwater Monitoring and Corrective Action Report for the CCR Units.

This report covers the period of groundwater monitoring from April 8, 2016, through December 31, 2017. April 8, 2016, is the date of the first background sampling round. All future annual reports will cover the period from January 1 through December 31 of the previous year.

The groundwater monitoring system at the Edgewater Generating Station is a multi-unit system. The Edgewater Generation Station has four existing CCR units which are contiguous:

- EDG Slag Pond (existing CCR surface impoundment)
- EDG North A-Pond (existing CCR surface impoundment)
- EDG South A- Pond (existing CCR surface impoundment)
- EDG B-Pond (existing surface CCR impoundment)

The system is designed to detect monitored constituents at the waste boundary of the CCR unit as required by 40 CFR 257.91(d). The groundwater monitoring system consists of one upgradient and three downgradient monitoring wells.

2.0 §257.90(e) ANNUAL REPORT REQUIREMENTS

Annual groundwater monitoring and corrective action report. *For existing CCR landfills and existing CCR surface impoundments, no later than January 31, 2018, and annually thereafter, the owner or operator must prepare an annual groundwater monitoring and corrective action report. For new CCR landfills, new CCR surface impoundments, and all lateral expansions of CCR units, the owner or operator must prepare the initial annual groundwater monitoring and corrective action report no later than January 31 of the year following the calendar year a groundwater monitoring system has been established for such CCR unit as required by this subpart, and annually thereafter. For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year. For purposes of this section, the owner or operator has prepared the annual report when the report is placed in the facility's operating record as required by § 257.105(h)(1). At a minimum, the annual groundwater monitoring and corrective action report must contain the following information, to the extent available:*

2.1 §257.90(E)(1) SITE MAP

A map, aerial image, or diagram showing the CCR unit and all background (or upgradient) and downgradient monitoring wells, to include the well identification numbers, that are part of the groundwater monitoring program for the CCR unit;

A map with an aerial image showing the CCR units and all background (or upgradient) and downgradient monitoring wells with identification numbers for the groundwater monitoring program is provided as **Figure 1**.

2.2 §257.90(E)(2) MONITORING SYSTEM CHANGES

Identification of any monitoring wells that were installed or decommissioned during the preceding year, along with a narrative description of why those actions were taken;

No new monitoring wells were installed and no wells were decommissioned as part of the groundwater monitoring program for the CCR unit in 2017. The downgradient monitoring wells, MW-301, MW-302, and MW-303 were installed on January 15, 2016, through February 4, 2016. Upgradient monitoring well 2R-OW was installed prior to October, 2015.

2.3 §257.90(E)(3) SUMMARY OF SAMPLING EVENTS

In addition to all the monitoring data obtained under §§ 257.90 through 257.98, a summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs;

Eight groundwater samples were collected from each CCR monitoring well for the establishment of background. Background sampling began in April 2016 and concluded in August 2017. Background samples were analyzed for both Appendix III and Appendix IV constituents. A summary including the number of groundwater samples that were collected for analysis for each background and downgradient well, the dates the samples were collected, and whether the sample was required by the detection monitoring or assessment monitoring programs is included in **Table 1**. The results of the analytical laboratory analyses are provided in the laboratory reports in **Appendices A1** through **A8**.

Detection monitoring was initiated at the site on October 17, 2017. The date of sample collection, field measurements, and the analytical results of the analytical laboratory analyses are provided in **Appendix A9**.

Assessment monitoring has not been initiated for the CCR Units at the Edgewater Generating Station.

2.4 §257.90(E)(4) MONITORING TRANSITION NARRATIVE

A narrative discussion of any transition between monitoring programs (e.g., the date and circumstances for transitioning from detection monitoring to assessment monitoring in addition to identifying the constituent(s) detected at a statistically significant increase over background levels);

Following completion of eight background groundwater monitoring events, detection monitoring was initiated in October 2017 as described in **Section 2.3**. There were no transitions between monitoring programs or statistically significant increase (SSI) determinations completed in 2017.

2.5 §257.90(E)(5) OTHER REQUIREMENTS

Other information required to be included in the annual report as specified in §§ 257.90 through 257.98.

Additional potentially applicable requirements for the annual report, and the location of the requirement within the Rule, are provided in the following sections. For each cited section of the Rule, the portion referencing the annual report requirement is provided below in *italics*, followed by applicable information relative to the 2017 Annual Groundwater Monitoring and Corrective Action Report for the CCR Units.

2.5.1 §257.90(e) General Requirements

For the preceding calendar year, the annual report must document the status of the groundwater monitoring and corrective action program for the CCR unit, summarize key actions completed, describe any problems encountered, discuss actions to resolve the problems, and project key activities for the upcoming year.

Status of Groundwater Monitoring and Corrective Action Program. The groundwater monitoring and corrective action program is currently in detection monitoring.

Summary of Key Actions Completed. Collection of background groundwater quality data was completed, and the initial detection monitoring sampling and analysis event was completed.

Description of Any Problems Encountered. No problems were encountered.

Discussion of Actions to Resolve the Problems. Not applicable.

Projection of Key Activities for the Upcoming Year (2018):

- Statistical evaluation and determination of any SSIs for October 2017 monitoring event (by 1/15/18)
- If an SSI is determined, then within 90 days either
  - Complete alternative source demonstration (if applicable), or
  - Establish an assessment monitoring program

- Two semi-annual groundwater sampling and analysis events (April and October 2018)

2.5.2 §257.94(d) Alternative Detection Monitoring Frequency

The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer in the annual groundwater monitoring and corrective action report required by § 257.90(e).

Not Applicable. No alternative detection monitoring frequency has been proposed.

2.5.3 §257.94(e)(2) Alternative Source Demonstration for Detection Monitoring

The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer.

Not Applicable. No alternative source demonstration was completed in 2017.

2.5.4 §257.95(c) Alternative Assessment Monitoring Frequency

The owner or operator must include the demonstration providing the basis for the alternative monitoring frequency and the certification by a qualified professional engineer in the annual groundwater monitoring and corrective action report required by § 257.90(e).

Not Applicable. Assessment monitoring has not been initiated and no alternative assessment monitoring frequency has been proposed.

2.5.5 §257.95(d)(3) Assessment Monitoring Results and Standards

Include the recorded concentrations required by paragraph (d)(1) of this section, identify the background concentrations established under § 257.94(b), and identify the groundwater protection standards established under paragraph (d)(2) of this section in the annual groundwater monitoring and corrective action report required by § 257.90(e).

Not Applicable. Assessment monitoring was not performed in 2017.

2.5.6 §257.95(g)(3)(ii) Alternative Source Demonstration for Assessment Monitoring

The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer.

Not Applicable. Assessment monitoring has not been initiated and no alternative source demonstration for assessment monitoring was completed in 2017.

2.5.7 §257.96(a) Extension of Time for Corrective Measures Assessment

The assessment of corrective measures must be completed within 90 days, unless the owner or operator demonstrates the need for additional time to complete the assessment of corrective measure due to site-specific conditions or circumstances. The owner or operator must obtain a certification from a qualified professional engineer attesting that the demonstration is accurate. The 90-day deadline to complete the assessment of corrective measures may be extended for longer than 60 days. The owner or operator must also include the demonstration in the annual groundwater monitoring and corrective action report required by § 257.90(e), in addition to the certification by a qualified professional engineer.

Not Applicable. Corrective measures assessment has not been initiated.

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TABLE 1

CCR Rule Groundwater Samples Summary

Table 1. CCR Rule Groundwater Samples Summary

Edgewater Generating Station / SCS Engineers Project #25216068

Sample Dates	Downgradient Wells			Background Well
	MW-301	MW-302	MW-303	2R-OW
4/8-11/2016	B	B	B	B
6/20/2016	B	B	B	B
8/9/2016	B	B	B	B
10/20/2016	B	B	B	B
1/23-24/2017	B	B	B	B
4/6/2017	B	B	B	B
6/6/2017	B	B	B	B
8/1-2/2017	B	B	B	B
10/23-24/2017	D	D	D	D
Total Samples	9	9	9	9

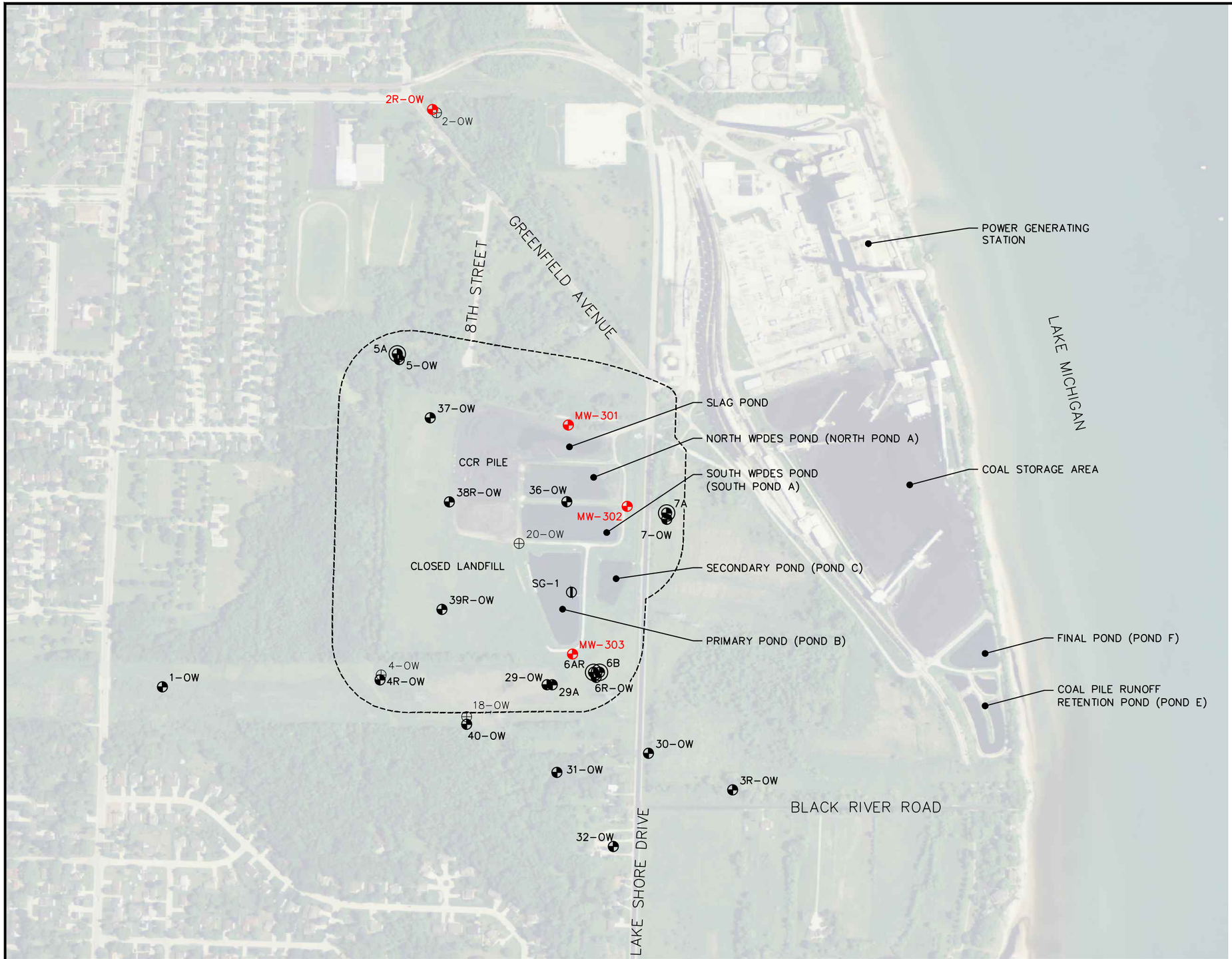
Abbreviations:
B = Background Sample
D = Required by Detection Monitoring Program

Created by:	NDK	Date:	1/4/2018
Last revision by:	NDK	Date:	1/8/2018
Checked by:	JD	Date:	1/8/2018

I:\25216068.00\Reports\2017 Annual Report\[GW_Samples_Summary_Table_EGS-1.xlsx]GW Summary

FIGURE 1

Site Plan and Monitoring Well Locations



N

LEGEND

- ABANDONED MONITORING WELL
- MONITORING WELL
- PIEZOMETER
- DESIGN MANAGEMENT ZONE
- CCR RULE MONITORING WELL

NOTES:

1. AERIAL PHOTOGRAPH FROM THE NATIONAL AGRICULTURE IMAGERY PROGRAM AND PUBLISHED BY THE USDA FSA AERIAL PHOTOGRAPHY FIELD OFFICE. DATE OF IMAGE IS OCTOBER 1, 2013.
2. EXISTING WELL LOCATIONS ARE APPROXIMATE AND ARE BASED ON OCTOBER 2011 WATER TABLE MAP PREPARED BY TRC.
3. DESIGN MANAGEMENT ZONE LOCATION IS APPROXIMATE.
4. NEW MONITORING WELL LOCATIONS WERE SURVEYED BY CQM, INC. ON FEBRUARY 12, 2016.

500 0 500

SCALE: 1" = 500'

PROJECT NO.	25216068.00	DRAWN BY:	KP/BJM
DRAWN:	02/28/14	CHECKED BY:	KAK
REVISED:	01/15/18	APPROVED BY:	

ENGINEER: SCS ENGINEERS
2830 DAIRY DRIVE MADISON, WI 53718-6751
PHONE: (608) 224-2830

CLIENT: WISCONSIN POWER AND LIGHT
EDGEWATER GENERATING STATION
3739 LAKESHORE DRIVE
SHEBOYGAN, WI 53081

SITE: EDGEWATER 1-4 (CLOSED)
ASH DISPOSAL FACILITY
SHEBOYGAN, WISCONSIN

MONITORING WELL LOCATION MAP

FIGURE 1

I:\25216068.00\Drawings\2 Monitoring Well Location Map.dwg, 1/15/2018 3:30:30 PM

APPENDIX A

A1 Round 1 Background Sampling, Analytical Laboratory Report
A2 Round 2 Background Sampling, Analytical Laboratory Report
A3 Round 3 Background Sampling, Analytical Laboratory Report
A4 Round 4 Background Sampling, Analytical Laboratory Report
A5 Round 5 Background Sampling, Analytical Laboratory Report
A6 Round 6 Background Sampling, Analytical Laboratory Report
A7 Round 7 Background Sampling, Analytical Laboratory Report
A8 Round 8 Background Sampling, Analytical Laboratory Report
A9 Fall 2017 Detection Sampling, Analytical Laboratory Report

A1 Round 1 Background Sampling, Analytical Laboratory Report

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

May 06, 2016

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Dear Meghan Blodgett:
Enclosed are the analytical results for sample(s) received by the laboratory on April 14, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current TNI standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
Project Manager

Enclosures

cc: Tom Karwoski, SCS ENGINEERS
Jeff Maxted, ALLIANT ENERGY

Pace Analytical Services, Inc.
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CERTIFICATIONS

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Pennsylvania Certification IDs
1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Georgia Certification #: C040
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Green Bay Certification IDs
1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
Virginia VELAP ID: 460263
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Virginia VELAP Certification ID: 460263
Virginia VELAP ID: 460263
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

SAMPLE SUMMARY

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40130796001	**MW 301**	Water	04/11/16 12:00	04/14/16 09:50
40130796002	**MW 302**	Water	04/08/16 11:05	04/14/16 09:50
40130796003	**MW 303**	Water	04/08/16 10:10	04/14/16 09:50
40130796004	**2R-OW**	Water	04/08/16 12:45	04/14/16 09:50
40130796005	**FIELD BLANK**	Water	04/08/16 09:45	04/14/16 09:50

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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SAMPLE ANALYTE COUNT

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40130796001	**MW 301**	EPA 6020	DS1	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40130796002	**MW 302**	EPA 6020	DS1	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40130796003	**MW 303**	EPA 6020	DS1	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40130796004	**2R-OW**	EPA 6020	DS1	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40130796005	**FIELD BLANK**	EPA 6020	DS1	14	PASI-G

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SAMPLE ANALYTE COUNT

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	AJT	1	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Sample: MW 301 **Lab ID: 40130796001** Collected: 04/11/16 12:00 Received: 04/14/16 09:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.49J**	ug/L	1.0	0.073	1	04/21/16 10:54	04/26/16 19:04	7440-36-0	
Arsenic	**4.3**	ug/L	1.0	0.099	1	04/21/16 10:54	04/26/16 19:04	7440-38-2	
Barium	**48.7**	ug/L	1.0	0.062	1	04/21/16 10:54	04/26/16 19:04	7440-39-3	
Beryllium	**0.18J**	ug/L	1.0	0.13	1	04/21/16 10:54	04/26/16 19:04	7440-41-7	
Boron	**8550**	ug/L	100	20.0	10	04/21/16 10:54	04/28/16 15:50	7440-42-8	P6
Cadmium	**0.20J**	ug/L	1.0	0.089	1	04/21/16 10:54	04/26/16 19:04	7440-43-9	
Calcium	**88700**	ug/L	2500	736	10	04/21/16 10:54	04/26/16 18:37	7440-70-2	P6
Chromium	**3.5**	ug/L	1.0	0.39	1	04/21/16 10:54	04/26/16 19:04	7440-47-3	
Cobalt	**1.2**	ug/L	1.0	0.036	1	04/21/16 10:54	04/26/16 19:04	7440-48-4	
Lead	**2.2**	ug/L	1.0	0.040	1	04/21/16 10:54	04/26/16 19:04	7439-92-1	
Lithium	**21.4**	ug/L	10.0	1.1	10	04/21/16 10:54	04/28/16 15:50	7439-93-2	
Molybdenum	**2200**	ug/L	1.0	0.070	1	04/21/16 10:54	04/26/16 19:04	7439-98-7	
Selenium	**0.52J**	ug/L	1.0	0.21	1	04/21/16 10:54	04/26/16 19:04	7782-49-2	
Thallium	**0.31J**	ug/L	1.0	0.14	1	04/21/16 10:54	04/26/16 19:04	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.18**	ug/L	0.60	0.18	1	04/19/16 14:30	04/20/16 09:15	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.91**	Std. Units			1		04/11/16 12:00		
Field Specific Conductance	**1206**	umhos/cm			1		04/11/16 12:00		
Oxygen, Dissolved	**4.8**	mg/L			1		04/11/16 12:00	7782-44-7	
REDOX	**5.2**	mV			1		04/11/16 12:00		
Turbidity	**10.88**	NTU			1		04/11/16 12:00		
Static Water Level	**599.94**	feet			1		04/11/16 12:00		
Temperature, Water (C)	**7.2**	deg C			1		04/11/16 12:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**838**	mg/L	20.0	8.7	1		04/14/16 15:02		
9040 pH	Analytical Method: EPA 9040								
pH	**7.9**	Std. Units	0.10	0.010	1		04/18/16 10:45		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**16.2**	mg/L	4.0	2.0	1		04/28/16 21:09	16887-00-6	
Fluoride	**0.33J**	mg/L	0.40	0.20	1		04/28/16 21:09	16984-48-8	
Sulfate	**372**	mg/L	80.0	40.0	20		04/29/16 10:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Sample: MW 302 **Lab ID: 40130796002** Collected: 04/08/16 11:05 Received: 04/14/16 09:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.30J**	ug/L	1.0	0.073	1	04/21/16 10:54	04/26/16 19:45	7440-36-0	
Arsenic	**10.3**	ug/L	1.0	0.099	1	04/21/16 10:54	04/26/16 19:45	7440-38-2	
Barium	**152**	ug/L	1.0	0.062	1	04/21/16 10:54	04/26/16 19:45	7440-39-3	
Beryllium	**0.59J**	ug/L	1.0	0.13	1	04/21/16 10:54	04/26/16 19:45	7440-41-7	
Boron	**1950**	ug/L	100	20.0	10	04/21/16 10:54	04/28/16 16:14	7440-42-8	
Cadmium	**0.24J**	ug/L	1.0	0.089	1	04/21/16 10:54	04/26/16 19:45	7440-43-9	
Calcium	**122000**	ug/L	250	73.6	1	04/21/16 10:54	04/26/16 19:45	7440-70-2	
Chromium	**18.7**	ug/L	1.0	0.39	1	04/21/16 10:54	04/26/16 19:45	7440-47-3	
Cobalt	**6.2**	ug/L	1.0	0.036	1	04/21/16 10:54	04/26/16 19:45	7440-48-4	
Lead	**5.5**	ug/L	1.0	0.040	1	04/21/16 10:54	04/26/16 19:45	7439-92-1	
Lithium	**58.1**	ug/L	10.0	1.1	10	04/21/16 10:54	04/28/16 16:14	7439-93-2	
Molybdenum	**610**	ug/L	1.0	0.070	1	04/21/16 10:54	04/26/16 19:45	7439-98-7	
Selenium	**1.3**	ug/L	1.0	0.21	1	04/21/16 10:54	04/26/16 19:45	7782-49-2	
Thallium	**0.35J**	ug/L	1.0	0.14	1	04/21/16 10:54	04/26/16 19:45	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.18**	ug/L	0.60	0.18	1	04/19/16 14:30	04/20/16 09:22	7439-97-6	
Field Data	Analytical Method:								
Field pH	**8.01**	Std. Units			1		04/08/16 11:05		
Field Specific Conductance	**531**	umhos/cm			1		04/08/16 11:05		
Oxygen, Dissolved	**1.0**	mg/L			1		04/08/16 11:05	7782-44-7	
REDOX	**-41**	mV			1		04/08/16 11:05		
Turbidity	**885.4**	NTU			1		04/08/16 11:05		
Static Water Level	**596.39**	feet			1		04/08/16 11:05		
Temperature, Water (C)	**9.0**	deg C			1		04/08/16 11:05		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**352**	mg/L	20.0	8.7	1		04/14/16 14:55		
9040 pH	Analytical Method: EPA 9040								
pH	**7.3**	Std. Units	0.10	0.010	1		04/18/16 10:55		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**18.9**	mg/L	4.0	2.0	1		04/28/16 21:20	16887-00-6	
Fluoride	**0.83**	mg/L	0.40	0.20	1		04/28/16 21:20	16984-48-8	
Sulfate	**75.1**	mg/L	20.0	10.0	5		04/29/16 11:03	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

ANALYTICAL RESULTS

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Sample: MW 303 **Lab ID: 40130796003** Collected: 04/08/16 10:10 Received: 04/14/16 09:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.14J**	ug/L	1.0	0.073	1	04/21/16 10:54	04/26/16 19:58	7440-36-0	
Arsenic	**12.8**	ug/L	1.0	0.099	1	04/21/16 10:54	04/26/16 19:58	7440-38-2	
Barium	**229**	ug/L	1.0	0.062	1	04/21/16 10:54	04/26/16 19:58	7440-39-3	
Beryllium	**0.30J**	ug/L	1.0	0.13	1	04/21/16 10:54	04/26/16 19:58	7440-41-7	
Boron	**4210**	ug/L	10.0	2.0	1	04/21/16 10:54	04/28/16 16:26	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	04/21/16 10:54	04/26/16 19:58	7440-43-9	
Calcium	**176000**	ug/L	250	73.6	1	04/21/16 10:54	04/26/16 19:58	7440-70-2	
Chromium	**14.1**	ug/L	1.0	0.39	1	04/21/16 10:54	04/26/16 19:58	7440-47-3	
Cobalt	**8.7**	ug/L	1.0	0.036	1	04/21/16 10:54	04/26/16 19:58	7440-48-4	
Lead	**4.7**	ug/L	1.0	0.040	1	04/21/16 10:54	04/26/16 19:58	7439-92-1	
Lithium	**17.6**	ug/L	1.0	0.11	1	04/21/16 10:54	04/28/16 16:26	7439-93-2	
Molybdenum	**25.1**	ug/L	1.0	0.070	1	04/21/16 10:54	04/26/16 19:58	7439-98-7	
Selenium	**1.2**	ug/L	1.0	0.21	1	04/21/16 10:54	04/26/16 19:58	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	04/21/16 10:54	04/26/16 19:58	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.18**	ug/L	0.60	0.18	1	04/19/16 14:30	04/20/16 09:24	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.04**	Std. Units			1		04/08/16 10:10		
Field Specific Conductance	**1273**	umhos/cm			1		04/08/16 10:10		
Oxygen, Dissolved	**0.49**	mg/L			1		04/08/16 10:10	7782-44-7	
REDOX	**-48**	mV			1		04/08/16 10:10		
Turbidity	**409.5**	NTU			1		04/08/16 10:10		
Static Water Level	**589.24**	feet			1		04/08/16 10:10		
Temperature, Water (C)	**9.1**	deg C			1		04/08/16 10:10		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**660**	mg/L	20.0	8.7	1		04/14/16 14:55		
9040 pH	Analytical Method: EPA 9040								
pH	**7.2**	Std. Units	0.10	0.010	1		04/18/16 10:55		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**21.8**	mg/L	4.0	2.0	1		04/28/16 21:31	16887-00-6	
Fluoride	**<0.20**	mg/L	0.40	0.20	1		04/28/16 21:31	16984-48-8	
Sulfate	**3.0J**	mg/L	4.0	2.0	1		04/28/16 21:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Sample: 2R-OW **Lab ID: 40130796004** Collected: 04/08/16 12:45 Received: 04/14/16 09:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.30J**	ug/L	1.0	0.073	1	04/21/16 10:54	04/26/16 20:05	7440-36-0	
Arsenic	**5.2**	ug/L	1.0	0.099	1	04/21/16 10:54	04/26/16 20:05	7440-38-2	
Barium	**344**	ug/L	1.0	0.062	1	04/21/16 10:54	04/26/16 20:05	7440-39-3	
Beryllium	**0.83J**	ug/L	1.0	0.13	1	04/21/16 10:54	04/26/16 20:05	7440-41-7	
Boron	**100**	ug/L	10.0	2.0	1	04/21/16 10:54	04/28/16 16:32	7440-42-8	
Cadmium	**0.21J**	ug/L	1.0	0.089	1	04/21/16 10:54	04/26/16 20:05	7440-43-9	
Calcium	**205000**	ug/L	250	73.6	1	04/21/16 10:54	04/26/16 20:05	7440-70-2	
Chromium	**23.6**	ug/L	1.0	0.39	1	04/21/16 10:54	04/26/16 20:05	7440-47-3	
Cobalt	**6.0**	ug/L	1.0	0.036	1	04/21/16 10:54	04/26/16 20:05	7440-48-4	
Lead	**13.0**	ug/L	1.0	0.040	1	04/21/16 10:54	04/26/16 20:05	7439-92-1	
Lithium	**19.6**	ug/L	1.0	0.11	1	04/21/16 10:54	04/28/16 16:32	7439-93-2	
Molybdenum	**0.58J**	ug/L	1.0	0.070	1	04/21/16 10:54	04/26/16 20:05	7439-98-7	
Selenium	**2.2**	ug/L	1.0	0.21	1	04/21/16 10:54	04/26/16 20:05	7782-49-2	
Thallium	**0.19J**	ug/L	1.0	0.14	1	04/21/16 10:54	04/26/16 20:05	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.18**	ug/L	0.60	0.18	1	04/19/16 14:30	04/20/16 09:27	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.34**	Std. Units			1		04/08/16 12:45		
Field Specific Conductance	**1332**	umhos/cm			1		04/08/16 12:45		
Oxygen, Dissolved	**4.6**	mg/L			1		04/08/16 12:45	7782-44-7	
REDOX	**130**	mV			1		04/08/16 12:45		
Turbidity	**612.3**	NTU			1		04/08/16 12:45		
Static Water Level	**610.02**	feet			1		04/08/16 12:45		
Temperature, Water (C)	**5.6**	deg C			1		04/08/16 12:45		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**774**	mg/L	20.0	8.7	1		04/14/16 14:55		
9040 pH	Analytical Method: EPA 9040								
pH	**7.4**	Std. Units	0.10	0.010	1		04/18/16 10:55		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**91.7**	mg/L	20.0	10.0	5		04/29/16 11:14	16887-00-6	
Fluoride	**<0.20**	mg/L	0.40	0.20	1		04/28/16 21:42	16984-48-8	
Sulfate	**19.5**	mg/L	4.0	2.0	1		04/28/16 21:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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ANALYTICAL RESULTS

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Sample: FIELD BLANK **Lab ID: 40130796005** Collected: 04/08/16 09:45 Received: 04/14/16 09:50 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	04/21/16 10:54	04/26/16 20:12	7440-36-0	
Arsenic	**<0.099**	ug/L	1.0	0.099	1	04/21/16 10:54	04/26/16 20:12	7440-38-2	
Barium	**0.42J**	ug/L	1.0	0.062	1	04/21/16 10:54	04/26/16 20:12	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	04/21/16 10:54	04/26/16 20:12	7440-41-7	
Boron	**2.8J**	ug/L	10.0	2.0	1	04/21/16 10:54	04/28/16 16:50	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	04/21/16 10:54	04/26/16 20:12	7440-43-9	
Calcium	**117J**	ug/L	250	73.6	1	04/21/16 10:54	04/26/16 20:12	7440-70-2	
Chromium	**<0.39**	ug/L	1.0	0.39	1	04/21/16 10:54	04/26/16 20:12	7440-47-3	
Cobalt	**<0.036**	ug/L	1.0	0.036	1	04/21/16 10:54	04/26/16 20:12	7440-48-4	
Lead	**<0.040**	ug/L	1.0	0.040	1	04/21/16 10:54	04/26/16 20:12	7439-92-1	
Lithium	**<0.11**	ug/L	1.0	0.11	1	04/21/16 10:54	04/28/16 16:50	7439-93-2	
Molybdenum	**<0.070**	ug/L	1.0	0.070	1	04/21/16 10:54	04/26/16 20:12	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	04/21/16 10:54	04/26/16 20:12	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	04/21/16 10:54	04/26/16 20:12	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.18**	ug/L	0.60	0.18	1	04/19/16 14:30	04/20/16 09:29	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**10.0J**	mg/L	20.0	8.7	1		04/14/16 14:56		
9040 pH	Analytical Method: EPA 9040								
pH	**6.4**	Std. Units	0.10	0.010	1		04/18/16 10:55		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**<2.0**	mg/L	4.0	2.0	1		04/28/16 21:53	16887-00-6	
Fluoride	**<0.20**	mg/L	0.40	0.20	1		04/28/16 21:53	16984-48-8	
Sulfate	**<2.0**	mg/L	4.0	2.0	1		04/28/16 21:53	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

QC Batch: MERP/5700 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40130796001, 40130796002, 40130796003, 40130796004, 40130796005

METHOD BLANK: 1322591 Matrix: Water
Associated Lab Samples: 40130796001, 40130796002, 40130796003, 40130796004, 40130796005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.18	0.60	04/20/16 08:26	

LABORATORY CONTROL SAMPLE: 1322592

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.6	112	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1322593 1322594

Parameter	Units	40130990001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	0.00018U mg/L	5	5	5.5	5.4	110	109	85-115	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

QC Batch: MPRP/13644 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40130796001, 40130796002, 40130796003, 40130796004, 40130796005

METHOD BLANK: 1323569 Matrix: Water
Associated Lab Samples: 40130796001, 40130796002, 40130796003, 40130796004, 40130796005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	<0.073	1.0	04/26/16 18:24	
Arsenic	ug/L	<0.099	1.0	04/26/16 18:24	
Barium	ug/L	<0.062	1.0	04/26/16 18:24	
Beryllium	ug/L	<0.13	1.0	04/26/16 18:24	
Boron	ug/L	<2.0	10.0	04/28/16 15:38	
Cadmium	ug/L	<0.089	1.0	04/26/16 18:24	
Calcium	ug/L	<73.6	250	04/26/16 18:24	
Chromium	ug/L	<0.39	1.0	04/26/16 18:24	
Cobalt	ug/L	<0.036	1.0	04/26/16 18:24	
Lead	ug/L	0.14J	1.0	04/26/16 18:24	
Lithium	ug/L	<0.11	1.0	04/28/16 15:38	
Molybdenum	ug/L	<0.070	1.0	04/26/16 18:24	
Selenium	ug/L	<0.21	1.0	04/26/16 18:24	
Thallium	ug/L	<0.14	1.0	04/26/16 18:24	

LABORATORY CONTROL SAMPLE: 1323570

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	543	109	80-120	
Arsenic	ug/L	500	528	106	80-120	
Barium	ug/L	500	534	107	80-120	
Beryllium	ug/L	500	502	100	80-120	
Boron	ug/L	500	532	106	80-120	
Cadmium	ug/L	500	538	108	80-120	
Calcium	ug/L	5000	5470	109	80-120	
Chromium	ug/L	500	515	103	80-120	
Cobalt	ug/L	500	515	103	80-120	
Lead	ug/L	500	489	98	80-120	
Lithium	ug/L	500	506	101	80-120	
Molybdenum	ug/L	500	543	109	80-120	
Selenium	ug/L	500	548	110	80-120	
Thallium	ug/L	500	484	97	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1323571 1323572

Parameter	Units	40130796001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	0.49J	500	500	534	530	107	106	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1323571 1323572

Parameter	Units	40130796001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	4.3	500	500	523	517	104	103	75-125	1	20	
Barium	ug/L	48.7	500	500	565	566	103	103	75-125	0	20	
Beryllium	ug/L	0.18J	500	500	453	455	90	91	75-125	0	20	
Boron	ug/L	8550	500	500	9050	8880	99	65	75-125	2	20	P6
Cadmium	ug/L	0.20J	500	500	510	504	102	101	75-125	1	20	
Calcium	ug/L	88700	5000	5000	93800	91300	103	53	75-125	3	20	P6
Chromium	ug/L	3.5	500	500	493	489	98	97	75-125	1	20	
Cobalt	ug/L	1.2	500	500	469	465	94	93	75-125	1	20	
Lead	ug/L	2.2	500	500	482	479	96	95	75-125	1	20	
Lithium	ug/L	21.4	500	500	506	507	97	97	75-125	0	20	
Molybdenum	ug/L	2200	500	500	2640	2610	87	82	75-125	1	20	
Selenium	ug/L	0.52J	500	500	539	535	108	107	75-125	1	20	
Thallium	ug/L	0.31J	500	500	478	476	95	95	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

QC Batch: WET/24868 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40130796001, 40130796002, 40130796003, 40130796004, 40130796005

METHOD BLANK: 1320186 Matrix: Water
Associated Lab Samples: 40130796001, 40130796002, 40130796003, 40130796004, 40130796005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	04/14/16 14:50	

LABORATORY CONTROL SAMPLE: 1320187

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	597	584	98	80-120	

SAMPLE DUPLICATE: 1320188

Parameter	Units	40130474001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	486	466	4	5	

SAMPLE DUPLICATE: 1320189

Parameter	Units	40130594002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	472	470	0	5	

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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QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

QC Batch: WET/24896 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40130796001, 40130796002, 40130796003, 40130796004, 40130796005

SAMPLE DUPLICATE: 1322027

Parameter	Units	40130714004 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	12.1	12.2	0	20	H6

SAMPLE DUPLICATE: 1322028

Parameter	Units	40130796001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.9	7.9	0	20	H6

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

QC Batch: WETA/33367 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40130796001, 40130796002, 40130796003, 40130796004, 40130796005

METHOD BLANK: 1326237 Matrix: Water
Associated Lab Samples: 40130796001, 40130796002, 40130796003, 40130796004, 40130796005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<2.0	4.0	04/28/16 19:30	
Fluoride	mg/L	<0.20	0.40	04/28/16 19:30	
Sulfate	mg/L	<2.0	4.0	04/28/16 19:30	

LABORATORY CONTROL SAMPLE: 1326238

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.3	97	90-110	
Fluoride	mg/L	2	2.1	107	90-110	
Sulfate	mg/L	20	19.6	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1326239 1326240

Parameter	Units	40130775003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1380	1000	1000	2500	2490	112	111	90-110	0	20	M0
Fluoride	mg/L	<10.0	100	100	112	113	112	113	90-110	1	20	M0
Sulfate	mg/L	<100	1000	1000	1010	1020	92	93	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1326241 1326242

Parameter	Units	40130815001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	151	200	200	363	356	106	103	90-110	2	20	
Fluoride	mg/L	<2.0	20	20	21.9	22.1	109	110	90-110	1	20	
Sulfate	mg/L	165	200	200	378	371	107	103	90-110	2	20	

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

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Sample: MW 301 **Lab ID: 40130796001** Collected: 04/11/16 12:00 Received: 04/14/16 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.320 ± 0.488 (0.786) C:NA T:89%**	pCi/L	05/05/16 11:32	13982-63-3	
Radium-228	EPA 904.0	**0.0904 ± 0.327 (0.738) C:82% T:82%**	pCi/L	05/04/16 15:28	15262-20-1	
Total Radium	Total Radium Calculation	**0.410 ± 0.815 (1.52)**	pCi/L	05/06/16 09:07	7440-14-4	

Sample: MW 302 **Lab ID: 40130796002** Collected: 04/08/16 11:05 Received: 04/14/16 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.843 ± 0.967 (0.571) C:NA T:59%**	pCi/L	05/05/16 11:53	13982-63-3	
Radium-228	EPA 904.0	**0.623 ± 0.379 (0.698) C:82% T:73%**	pCi/L	05/04/16 15:28	15262-20-1	
Total Radium	Total Radium Calculation	**1.47 ± 1.35 (1.27)**	pCi/L	05/06/16 09:07	7440-14-4	

Sample: MW 303 **Lab ID: 40130796003** Collected: 04/08/16 10:10 Received: 04/14/16 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.239 ± 0.587 (0.972) C:NA T:65%**	pCi/L	05/05/16 11:45	13982-63-3	
Radium-228	EPA 904.0	**1.20 ± 0.468 (0.719) C:81% T:76%**	pCi/L	05/04/16 15:28	15262-20-1	
Total Radium	Total Radium Calculation	**1.44 ± 1.06 (1.69)**	pCi/L	05/06/16 09:07	7440-14-4	

Sample: 2R-OW **Lab ID: 40130796004** Collected: 04/08/16 12:45 Received: 04/14/16 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.304 ± 0.769 (1.22) C:NA T:65%**	pCi/L	05/05/16 12:05	13982-63-3	
Radium-228	EPA 904.0	**0.641 ± 0.376 (0.699) C:83% T:85%**	pCi/L	05/04/16 15:28	15262-20-1	
Total Radium	Total Radium Calculation	**0.945 ± 1.15 (1.92)**	pCi/L	05/06/16 09:07	7440-14-4	

Sample: FIELD BLANK **Lab ID: 40130796005** Collected: 04/08/16 09:45 Received: 04/14/16 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**1.59 ± 0.955 (0.391) C:NA T:90%**	pCi/L	05/05/16 12:28	13982-63-3	
Radium-228	EPA 904.0	**0.138 ± 0.303 (0.671) C:82% T:85%**	pCi/L	05/04/16 15:29	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Sample: FIELD BLANK **Lab ID: 40130796005** Collected: 04/08/16 09:45 Received: 04/14/16 09:50 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.73 ± 1.26 (1.06)**	pCi/L	05/06/16 09:07	7440-14-4	

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

QC Batch: RADC/29126 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 40130796001, 40130796002, 40130796003, 40130796004, 40130796005

METHOD BLANK: 1064925 Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.255 ± 0.284 (0.712) C:86% T:78%	pCi/L	05/04/16 15:27	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

QC Batch: RADC/29121 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 40130796001, 40130796002, 40130796003, 40130796004, 40130796005

METHOD BLANK: 1064911 Matrix: Water
Associated Lab Samples:

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.306 (0.622) C:NA T:86%	pCi/L	05/05/16 11:32	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

DEFINITIONS

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

ND - Not Detected at or above LOD.

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

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

H6	Analysis initiated outside of the 15 minute EPA required holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216068.00 WPL EDGEWATER CLOSED
Pace Project No.: 40130796

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40130796001	**MW 301**	EPA 3010	MPRP/13644	EPA 6020	ICPM/6352
40130796002	**MW 302**	EPA 3010	MPRP/13644	EPA 6020	ICPM/6352
40130796003	**MW 303**	EPA 3010	MPRP/13644	EPA 6020	ICPM/6352
40130796004	**2R-OW**	EPA 3010	MPRP/13644	EPA 6020	ICPM/6352
40130796005	**FIELD BLANK**	EPA 3010	MPRP/13644	EPA 6020	ICPM/6352
40130796001	**MW 301**	EPA 7470	MERP/5700	EPA 7470	MERC/8036
40130796002	**MW 302**	EPA 7470	MERP/5700	EPA 7470	MERC/8036
40130796003	**MW 303**	EPA 7470	MERP/5700	EPA 7470	MERC/8036
40130796004	**2R-OW**	EPA 7470	MERP/5700	EPA 7470	MERC/8036
40130796005	**FIELD BLANK**	EPA 7470	MERP/5700	EPA 7470	MERC/8036
40130796001	**MW 301**		PM/		
40130796002	**MW 302**		PM/		
40130796003	**MW 303**		PM/		
40130796004	**2R-OW**		PM/		
40130796001	**MW 301**	EPA 903.1	RADC/29121		
40130796002	**MW 302**	EPA 903.1	RADC/29121		
40130796003	**MW 303**	EPA 903.1	RADC/29121		
40130796004	**2R-OW**	EPA 903.1	RADC/29121		
40130796005	**FIELD BLANK**	EPA 903.1	RADC/29121		
40130796001	**MW 301**	EPA 904.0	RADC/29126		
40130796002	**MW 302**	EPA 904.0	RADC/29126		
40130796003	**MW 303**	EPA 904.0	RADC/29126		
40130796004	**2R-OW**	EPA 904.0	RADC/29126		
40130796005	**FIELD BLANK**	EPA 904.0	RADC/29126		
40130796001	**MW 301**	Total Radium Calculation	RADC/29328		
40130796002	**MW 302**	Total Radium Calculation	RADC/29328		
40130796003	**MW 303**	Total Radium Calculation	RADC/29328		
40130796004	**2R-OW**	Total Radium Calculation	RADC/29328		
40130796005	**FIELD BLANK**	Total Radium Calculation	RADC/29328		
40130796001	**MW 301**	SM 2540C	WET/24868		
40130796002	**MW 302**	SM 2540C	WET/24868		
40130796003	**MW 303**	SM 2540C	WET/24868		
40130796004	**2R-OW**	SM 2540C	WET/24868		
40130796005	**FIELD BLANK**	SM 2540C	WET/24868		
40130796001	**MW 301**	EPA 9040	WET/24896		
40130796002	**MW 302**	EPA 9040	WET/24896		
40130796003	**MW 303**	EPA 9040	WET/24896		
40130796004	**2R-OW**	EPA 9040	WET/24896		
40130796005	**FIELD BLANK**	EPA 9040	WET/24896		
40130796001	**MW 301**	EPA 300.0	WETA/33367		
40130796002	**MW 302**	EPA 300.0	WETA/33367		
40130796003	**MW 303**	EPA 300.0	WETA/33367		
40130796004	**2R-OW**	EPA 300.0	WETA/33367		
40130796005	**FIELD BLANK**	EPA 300.0	WETA/33367		

REPORT OF LABORATORY ANALYSIS

4013079G

Pace Analytical®
www.pacelabs.com

MV

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

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	SCS Engineers
Branch/Location:	Madison Wis
Project Contact:	Meg Blodgett
Phone:	608-216-7362
Project Number:	25216088.00
Project Name:	Edgewater #4 CCR
Project State:	Wisconsin
Sampled By (Print):	Gary Sterkel
Sampled By (Sign):	Gary Sterkel
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	Tom Karwoski
Invoice To Company:	SCS Engineers
Invoice To Address:	2830 Dairy Dr Madison Wis
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: TDS, Cl, F, SO4	B, Ca, Sb, Ar, Ba, Be, Cd, Cr, Co	Pb, Li, Mo, Se, Tl	Mercury	Radium 226	Radium 228	pH	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	MW 301	4/11/16	1200	GW	N	A	X	X	X	X	X	X	X	2-250mlp^A	2-250mlp^D	2-500mlp^D
002	MW 302	4/8/16	1105	GW	N	D	X	X	X	X	X	X	X			
003	MW 303	4/8/16	1010	GW	N	D	X	X	X	X	X	X	X			
004	2R-OW	4/8/16	1245	GW	N	D	X	X	X	X	X	X	X			
005	Field Blank	4/8/16	0945	W	N	D	X	X	X	X	X	X	X			

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Gary Sterkel	4/12/16 0900	Mary Jannin	4/12/16 10:12
Mary Jannin	4/12/16 1400		
SCS Logistics	4/14/16 0950	pace	4/14/16 0950

PACE Project No. 4013079G

Receipt Temp = ROI °C

Sample Receipt pH: OK / Adjusted

Cooler Custody Seal: Present / Not Present; Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

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

Project #: WO#: 40130796

Client Name: SCS Engineers

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

Tracking #:

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

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: 8.0 /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents: Date: 4/14/16 Initials: BH

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐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 ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr): BH 4/14/16	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☑ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3) H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed BH / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution: Client returned 2-250mlp^A, 2-250mlp^D, 2-500mlp^D bottles 2-1Lag^B BH 4/14/16 BH 4/14/16

Project Manager Review: Amt for DM **Date:** 4/13/16

F-GB-C-031-Rev.03 (9April2015) SCUR Form

A2 Round 2 Background Sampling, Analytical Laboratory Report

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

January 25, 2018

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Dear Meghan Blodgett:
Enclosed are the analytical results for sample(s) received by the laboratory on June 22, 2016. 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.

Revision 1 - This report replaces the July 18, 2016 report. This report has been reissued on January 25, 2018. In 2017, the process for calculating Total Radium concentration using results from individual Ra-226 and Ra-228 analyses was standardized. At the client's request, this project from 2016 has been revised to include a Total Radium concentration using the standardized method.

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

Sincerely,

Tod Noltemeyer

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

Enclosures

cc: Tom Karwoski, SCS ENGINEERS
Kyle Kramer, SCS ENGINEERS
Jeff Maxted, ALLIANT ENERGY
Marc Morandi, ALLIANT ENERGY

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

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

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

SAMPLE SUMMARY

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40134243001	**2-OW**	Water	06/20/16 15:00	06/22/16 16:17
40134243002	**EGS-MW301**	Water	06/20/16 11:10	06/22/16 16:17
40134243003	**EGS-MW302**	Water	06/20/16 14:05	06/22/16 16:17
40134243004	**EGS-MW303**	Water	06/20/16 12:05	06/22/16 16:17
40134243005	**FIELD BLANK**	Water	06/20/16 15:15	06/22/16 16:17

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SAMPLE ANALYTE COUNT

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40134243001	**2-OW**	EPA 6020	DS1	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40134243002	**EGS-MW301**	EPA 6020	DS1	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40134243003	**EGS-MW302**	EPA 6020	DS1	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40134243004	**EGS-MW303**	EPA 6020	DS1	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40134243005	**FIELD BLANK**	EPA 6020	DS1	14	PASI-G

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SAMPLE ANALYTE COUNT

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	AJT	1	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G

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ANALYTICAL RESULTS

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Sample: 2-OW **Lab ID: 40134243001** Collected: 06/20/16 15:00 Received: 06/22/16 16:17 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	06/27/16 08:52	06/28/16 05:07	7440-36-0	
Arsenic	**0.34J**	ug/L	1.0	0.099	1	06/27/16 08:52	06/28/16 05:07	7440-38-2	
Barium	**110**	ug/L	1.0	0.062	1	06/27/16 08:52	06/28/16 05:07	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	06/27/16 08:52	06/28/16 05:07	7440-41-7	
Boron	**22.4**	ug/L	10.0	2.0	1	06/27/16 08:52	06/28/16 05:07	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	06/27/16 08:52	06/28/16 05:07	7440-43-9	
Calcium	**148000**	ug/L	250	73.6	1	06/27/16 08:52	06/28/16 05:07	7440-70-2	
Chromium	**3.1**	ug/L	1.0	0.39	1	06/27/16 08:52	06/28/16 05:07	7440-47-3	
Cobalt	**0.081J**	ug/L	1.0	0.036	1	06/27/16 08:52	06/28/16 05:07	7440-48-4	
Lead	**0.17J**	ug/L	1.0	0.040	1	06/27/16 08:52	06/28/16 05:07	7439-92-1	
Lithium	**9.6**	ug/L	1.0	0.11	1	06/27/16 08:52	06/28/16 05:07	7439-93-2	
Molybdenum	**0.28J**	ug/L	1.0	0.070	1	06/27/16 08:52	06/28/16 05:07	7439-98-7	B
Selenium	**<0.21**	ug/L	1.0	0.21	1	06/27/16 08:52	06/28/16 05:07	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/27/16 08:52	06/28/16 05:07	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	06/30/16 13:30	07/01/16 09:32	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.02**	Std. Units			1		06/20/16 15:00		
Field Specific Conductance	**1277**	umhos/cm			1		06/20/16 15:00		
Oxygen, Dissolved	**0.9**	mg/L			1		06/20/16 15:00	7782-44-7	
REDOX	**82**	mV			1		06/20/16 15:00		
Turbidity	**10.97**	NTU			1		06/20/16 15:00		
Static Water Level	**606.70**	feet			1		06/20/16 15:00		
Temperature, Water (C)	**10.6**	deg C			1		06/20/16 15:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**908**	mg/L	20.0	8.7	1		06/23/16 15:34		
9040 pH	Analytical Method: EPA 9040								
pH	**7.4**	Std. Units	0.10	0.010	1		06/27/16 10:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**232**	mg/L	40.0	20.0	10		07/05/16 20:24	16887-00-6	B
Fluoride	**<0.20**	mg/L	0.40	0.20	1		07/05/16 14:49	16984-48-8	
Sulfate	**28.0**	mg/L	4.0	2.0	1		07/05/16 14:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Sample: EGS-MW301 **Lab ID: 40134243002** Collected: 06/20/16 11:10 Received: 06/22/16 16:17 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.21J**	ug/L	1.0	0.073	1	06/27/16 08:52	06/28/16 05:14	7440-36-0	
Arsenic	**2.4**	ug/L	1.0	0.099	1	06/27/16 08:52	06/28/16 05:14	7440-38-2	
Barium	**32.6**	ug/L	1.0	0.062	1	06/27/16 08:52	06/28/16 05:14	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	06/27/16 08:52	06/28/16 05:14	7440-41-7	
Boron	**8190**	ug/L	200	39.9	20	06/27/16 08:52	06/28/16 12:02	7440-42-8	
Cadmium	**0.22J**	ug/L	1.0	0.089	1	06/27/16 08:52	06/28/16 05:14	7440-43-9	
Calcium	**92200**	ug/L	250	73.6	1	06/27/16 08:52	06/28/16 05:14	7440-70-2	
Chromium	**0.55J**	ug/L	1.0	0.39	1	06/27/16 08:52	06/28/16 05:14	7440-47-3	
Cobalt	**0.39J**	ug/L	1.0	0.036	1	06/27/16 08:52	06/28/16 05:14	7440-48-4	
Lead	**0.30J**	ug/L	1.0	0.040	1	06/27/16 08:52	06/28/16 05:14	7439-92-1	
Lithium	**14.2**	ug/L	1.0	0.11	1	06/27/16 08:52	06/28/16 05:14	7439-93-2	
Molybdenum	**2040**	ug/L	1.0	0.070	1	06/27/16 08:52	06/28/16 05:14	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	06/27/16 08:52	06/28/16 05:14	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/27/16 08:52	06/28/16 05:14	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	06/30/16 13:30	07/01/16 09:35	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.48**	Std. Units			1		06/20/16 11:10		
Field Specific Conductance	**1173**	umhos/cm			1		06/20/16 11:10		
Oxygen, Dissolved	**1.6**	mg/L			1		06/20/16 11:10	7782-44-7	
REDOX	**89**	mV			1		06/20/16 11:10		
Turbidity	**3.13**	NTU			1		06/20/16 11:10		
Static Water Level	**598.3**	feet			1		06/20/16 11:10		
Temperature, Water (C)	**10.1**	deg C			1		06/20/16 11:10		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**794**	mg/L	20.0	8.7	1		06/23/16 15:35		
9040 pH	Analytical Method: EPA 9040								
pH	**7.6**	Std. Units	0.10	0.010	1		06/27/16 10:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**15.9**	mg/L	4.0	2.0	1		07/05/16 15:00	16887-00-6	B
Fluoride	**0.36J**	mg/L	0.40	0.20	1		07/05/16 15:00	16984-48-8	
Sulfate	**343**	mg/L	40.0	20.0	10		07/05/16 20:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Sample: EGS-MW302 **Lab ID: 40134243003** Collected: 06/20/16 14:05 Received: 06/22/16 16:17 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.085J**	ug/L	1.0	0.073	1	06/27/16 08:52	06/28/16 05:21	7440-36-0	
Arsenic	**9.7**	ug/L	1.0	0.099	1	06/27/16 08:52	06/28/16 05:21	7440-38-2	
Barium	**109**	ug/L	1.0	0.062	1	06/27/16 08:52	06/28/16 05:21	7440-39-3	
Beryllium	**0.35J**	ug/L	1.0	0.13	1	06/27/16 08:52	06/28/16 05:21	7440-41-7	
Boron	**2010**	ug/L	10.0	2.0	1	06/27/16 08:52	06/28/16 05:21	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	06/27/16 08:52	06/28/16 05:21	7440-43-9	
Calcium	**116000**	ug/L	250	73.6	1	06/27/16 08:52	06/28/16 05:21	7440-70-2	
Chromium	**11.1**	ug/L	1.0	0.39	1	06/27/16 08:52	06/28/16 05:21	7440-47-3	
Cobalt	**3.6**	ug/L	1.0	0.036	1	06/27/16 08:52	06/28/16 05:21	7440-48-4	
Lead	**3.3**	ug/L	1.0	0.040	1	06/27/16 08:52	06/28/16 05:21	7439-92-1	
Lithium	**62.3**	ug/L	1.0	0.11	1	06/27/16 08:52	06/28/16 05:21	7439-93-2	
Molybdenum	**640**	ug/L	1.0	0.070	1	06/27/16 08:52	06/28/16 05:21	7439-98-7	
Selenium	**0.76J**	ug/L	1.0	0.21	1	06/27/16 08:52	06/28/16 05:21	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/27/16 08:52	06/28/16 05:21	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	06/30/16 13:30	07/01/16 09:37	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.73**	Std. Units			1		06/20/16 14:05		
Field Specific Conductance	**564**	umhos/cm			1		06/20/16 14:05		
Oxygen, Dissolved	**0.2**	mg/L			1		06/20/16 14:05	7782-44-7	
REDOX	**-123**	mV			1		06/20/16 14:05		
Turbidity	**369.4**	NTU			1		06/20/16 14:05		
Static Water Level	**595.68**	feet			1		06/20/16 14:05		
Temperature, Water (C)	**13.1**	deg C			1		06/20/16 14:05		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**364**	mg/L	20.0	8.7	1		06/23/16 15:35		
9040 pH	Analytical Method: EPA 9040								
pH	**7.8**	Std. Units	0.10	0.010	1		06/27/16 10:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**27.2**	mg/L	20.0	10.0	5		07/05/16 15:35	16887-00-6	B
Fluoride	**1.3J**	mg/L	2.0	1.0	5		07/05/16 15:35	16984-48-8	D3
Sulfate	**89.6**	mg/L	20.0	10.0	5		07/05/16 15:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Sample: EGS-MW303 **Lab ID: 40134243004** Collected: 06/20/16 12:05 Received: 06/22/16 16:17 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	06/27/16 08:52	06/28/16 05:28	7440-36-0	
Arsenic	**9.7**	ug/L	1.0	0.099	1	06/27/16 08:52	06/28/16 05:28	7440-38-2	
Barium	**189**	ug/L	1.0	0.062	1	06/27/16 08:52	06/28/16 05:28	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	06/27/16 08:52	06/28/16 05:28	7440-41-7	
Boron	**3360**	ug/L	10.0	2.0	1	06/27/16 08:52	06/28/16 05:28	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	06/27/16 08:52	06/28/16 05:28	7440-43-9	
Calcium	**138000**	ug/L	250	73.6	1	06/27/16 08:52	06/28/16 05:28	7440-70-2	
Chromium	**1.5**	ug/L	1.0	0.39	1	06/27/16 08:52	06/28/16 05:28	7440-47-3	
Cobalt	**5.3**	ug/L	1.0	0.036	1	06/27/16 08:52	06/28/16 05:28	7440-48-4	
Lead	**0.28J**	ug/L	1.0	0.040	1	06/27/16 08:52	06/28/16 05:28	7439-92-1	
Lithium	**9.1**	ug/L	1.0	0.11	1	06/27/16 08:52	06/28/16 05:28	7439-93-2	
Molybdenum	**11.6**	ug/L	1.0	0.070	1	06/27/16 08:52	06/28/16 05:28	7439-98-7	
Selenium	**0.48J**	ug/L	1.0	0.21	1	06/27/16 08:52	06/28/16 05:28	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/27/16 08:52	06/28/16 05:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	06/30/16 13:30	07/01/16 09:39	7439-97-6	
Field Data	Analytical Method:								
Field pH	**6.79**	Std. Units			1		06/20/16 12:05		
Field Specific Conductance	**1196**	umhos/cm			1		06/20/16 12:05		
Oxygen, Dissolved	**0.9**	mg/L			1		06/20/16 12:05	7782-44-7	
REDOX	**-71**	mV			1		06/20/16 12:05		
Turbidity	**18.26**	NTU			1		06/20/16 12:05		
Static Water Level	**587.22**	feet			1		06/20/16 12:05		
Temperature, Water (C)	**11.6**	deg C			1		06/20/16 12:05		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**716**	mg/L	20.0	8.7	1		06/23/16 15:35		
9040 pH	Analytical Method: EPA 9040								
pH	**7.0**	Std. Units	0.10	0.010	1		06/27/16 10:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**31.5**	mg/L	20.0	10.0	5		07/05/16 15:47	16887-00-6	B
Fluoride	**<1.0**	mg/L	2.0	1.0	5		07/05/16 15:47	16984-48-8	D3
Sulfate	**11.4J**	mg/L	20.0	10.0	5		07/05/16 15:47	14808-79-8	D3

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Sample: FIELD BLANK **Lab ID: 40134243005** Collected: 06/20/16 15:15 Received: 06/22/16 16:17 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	06/27/16 08:52	06/28/16 05:34	7440-36-0	
Arsenic	**<0.099**	ug/L	1.0	0.099	1	06/27/16 08:52	06/28/16 05:34	7440-38-2	
Barium	**0.23J**	ug/L	1.0	0.062	1	06/27/16 08:52	06/28/16 05:34	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	06/27/16 08:52	06/28/16 05:34	7440-41-7	
Boron	**12.4**	ug/L	10.0	2.0	1	06/27/16 08:52	06/28/16 05:34	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	06/27/16 08:52	06/28/16 05:34	7440-43-9	
Calcium	**<73.6**	ug/L	250	73.6	1	06/27/16 08:52	06/28/16 05:34	7440-70-2	
Chromium	**<0.39**	ug/L	1.0	0.39	1	06/27/16 08:52	06/28/16 05:34	7440-47-3	
Cobalt	**<0.036**	ug/L	1.0	0.036	1	06/27/16 08:52	06/28/16 05:34	7440-48-4	
Lead	**0.10J**	ug/L	1.0	0.040	1	06/27/16 08:52	06/28/16 05:34	7439-92-1	
Lithium	**<0.11**	ug/L	1.0	0.11	1	06/27/16 08:52	06/28/16 05:34	7439-93-2	
Molybdenum	**<0.070**	ug/L	1.0	0.070	1	06/27/16 08:52	06/28/16 05:34	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	06/27/16 08:52	06/28/16 05:34	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/27/16 08:52	06/28/16 05:34	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	06/30/16 13:30	07/01/16 09:42	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**<8.7**	mg/L	20.0	8.7	1		06/23/16 15:36		
9040 pH	Analytical Method: EPA 9040								
pH	**4.8**	Std. Units	0.10	0.010	1		06/27/16 11:00		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**<2.0**	mg/L	4.0	2.0	1		07/05/16 15:58	16887-00-6	
Fluoride	**<0.20**	mg/L	0.40	0.20	1		07/05/16 15:58	16984-48-8	
Sulfate	**<2.0**	mg/L	4.0	2.0	1		07/05/16 15:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

QC Batch: 228745 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

METHOD BLANK: 1357931 Matrix: Water
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	07/01/16 08:39	

LABORATORY CONTROL SAMPLE: 1357932

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	5.0	100	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1357933 1357934

Parameter	Units	40134131001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.13	5	5	4.6	4.8	91	97	85-115	6	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

QC Batch: 228244 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

METHOD BLANK: 1355563 Matrix: Water
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	<0.073	1.0	06/28/16 02:11	
Arsenic	ug/L	<0.099	1.0	06/28/16 02:11	
Barium	ug/L	<0.062	1.0	06/28/16 02:11	
Beryllium	ug/L	<0.13	1.0	06/28/16 02:11	
Boron	ug/L	<2.0	10.0	06/28/16 02:11	
Cadmium	ug/L	<0.089	1.0	06/28/16 02:11	
Calcium	ug/L	<73.6	250	06/28/16 02:11	
Chromium	ug/L	<0.39	1.0	06/28/16 02:11	
Cobalt	ug/L	<0.036	1.0	06/28/16 02:11	
Lead	ug/L	<0.040	1.0	06/28/16 02:11	
Lithium	ug/L	<0.11	1.0	06/28/16 02:11	
Molybdenum	ug/L	0.16J	1.0	06/28/16 02:11	
Selenium	ug/L	<0.21	1.0	06/28/16 02:11	
Thallium	ug/L	<0.14	1.0	06/28/16 02:11	

LABORATORY CONTROL SAMPLE: 1355564

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	488	98	80-120	
Arsenic	ug/L	500	466	93	80-120	
Barium	ug/L	500	451	90	80-120	
Beryllium	ug/L	500	456	91	80-120	
Boron	ug/L	500	444	89	80-120	
Cadmium	ug/L	500	459	92	80-120	
Calcium	ug/L	5000	4960	99	80-120	
Chromium	ug/L	500	455	91	80-120	
Cobalt	ug/L	500	442	88	80-120	
Lead	ug/L	500	446	89	80-120	
Lithium	ug/L	500	443	89	80-120	
Molybdenum	ug/L	500	481	96	80-120	
Selenium	ug/L	500	480	96	80-120	
Thallium	ug/L	500	405	81	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1355565 1355566

Parameter	Units	40134242003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	0.10J	500	500	499	497	100	99	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1355565 1355566

Parameter	Units	40134242003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	5.3	500	500	475	478	94	95	75-125	1	20	
Barium	ug/L	80.2	500	500	538	544	92	93	75-125	1	20	
Beryllium	ug/L	<0.13	500	500	473	475	95	95	75-125	0	20	
Boron	ug/L	85.0	500	500	550	554	93	94	75-125	1	20	
Cadmium	ug/L	<0.089	500	500	456	458	91	92	75-125	0	20	
Calcium	ug/L	36900	5000	5000	44000	40600	144	76	75-125	8	20	P6
Chromium	ug/L	1.0	500	500	452	458	90	91	75-125	1	20	
Cobalt	ug/L	0.50J	500	500	439	446	88	89	75-125	2	20	
Lead	ug/L	0.26J	500	500	450	461	90	92	75-125	2	20	
Lithium	ug/L	10.2	500	500	469	476	92	93	75-125	1	20	
Molybdenum	ug/L	12.7	500	500	498	504	97	98	75-125	1	20	
Selenium	ug/L	<0.21	500	500	476	480	95	96	75-125	1	20	
Thallium	ug/L	0.17J	500	500	410	425	82	85	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

QC Batch: 228090 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

METHOD BLANK: 1354418 Matrix: Water
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	06/23/16 15:30	

LABORATORY CONTROL SAMPLE: 1354419

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	586	580	99	80-120	

SAMPLE DUPLICATE: 1354420

Parameter	Units	40134052011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	852	828	3	5	

SAMPLE DUPLICATE: 1354421

Parameter	Units	40134052012 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1090	1210	10	5	R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

QC Batch: 228566 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

METHOD BLANK: 1356985 Matrix: Water
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	2.6J	4.0	07/05/16 10:58	
Fluoride	mg/L	<0.20	0.40	07/05/16 10:58	
Sulfate	mg/L	<2.0	4.0	07/05/16 10:58	

LABORATORY CONTROL SAMPLE: 1356986

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.2	96	90-110	
Fluoride	mg/L	2	2.0	100	90-110	
Sulfate	mg/L	20	19.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1356987 1356988

Parameter	Units	40133857001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	8.0	20	20	26.3	26.7	92	93	90-110	1	20	
Fluoride	mg/L	0.29J	2	2	2.2	2.2	95	97	90-110	2	20	
Sulfate	mg/L	61.1	100	100	157	159	96	98	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1356989 1356990

Parameter	Units	40134253001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	10200	10000	10000	20600	20500	103	103	90-110	0	20	
Fluoride	mg/L	<20.0	200	200	215	219	101	103	90-110	2	20	
Sulfate	mg/L	223J	2000	2000	2010	2030	90	90	90-110	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Sample: 2-OW **Lab ID: 40134243001** Collected: 06/20/16 15:00 Received: 06/22/16 16:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.433 ± 1.24 (1.88) C:NA T:89%**	pCi/L	07/14/16 14:14	13982-63-3	
Radium-228	EPA 904.0	**0.382 ± 0.346 (0.704) C:80% T:87%**	pCi/L	07/14/16 16:34	15262-20-1	
Total Radium	Total Radium Calculation	**0.815 ± 1.59 (2.58)**	pCi/L	07/18/16 13:59	7440-14-4	

Sample: EGS-MW301 **Lab ID: 40134243002** Collected: 06/20/16 11:10 Received: 06/22/16 16:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.958 ± 1.31 (1.85) C:NA T:85%**	pCi/L	07/14/16 14:11	13982-63-3	
Radium-228	EPA 904.0	**0.661 ± 0.420 (0.794) C:81% T:77%**	pCi/L	07/14/16 16:34	15262-20-1	
Total Radium	Total Radium Calculation	**1.62 ± 1.73 (2.64)**	pCi/L	07/18/16 13:59	7440-14-4	

Sample: EGS-MW302 **Lab ID: 40134243003** Collected: 06/20/16 14:05 Received: 06/22/16 16:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**-0.408 ± 1.39 (2.37) C:NA T:79%**	pCi/L	07/14/16 15:35	13982-63-3	
Radium-228	EPA 904.0	**0.505 ± 0.417 (0.838) C:82% T:77%**	pCi/L	07/14/16 16:34	15262-20-1	
Total Radium	Total Radium Calculation	**0.505 ± 1.81 (3.21)**	pCi/L	07/18/16 11:37	7440-14-4	

Sample: EGS-MW303 **Lab ID: 40134243004** Collected: 06/20/16 12:05 Received: 06/22/16 16:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**1.03 ± 1.54 (2.19) C:NA T:88%**	pCi/L	07/14/16 14:33	13982-63-3	
Radium-228	EPA 904.0	**0.898 ± 0.416 (0.701) C:83% T:84%**	pCi/L	07/14/16 16:34	15262-20-1	
Total Radium	Total Radium Calculation	**1.93 ± 1.96 (2.89)**	pCi/L	07/18/16 13:59	7440-14-4	

Sample: FIELD BLANK **Lab ID: 40134243005** Collected: 06/20/16 15:15 Received: 06/22/16 16:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**-0.441 ± 1.22 (2.08) C:NA T:88%**	pCi/L	07/14/16 14:35	13982-63-3	
Radium-228	EPA 904.0	**0.286 ± 0.341 (0.719) C:81% T:83%**	pCi/L	07/14/16 16:35	15262-20-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Sample: FIELD BLANK **Lab ID: 40134243005** Collected: 06/20/16 15:15 Received: 06/22/16 16:17 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.286 ± 1.56 (2.80)**	pCi/L	07/18/16 11:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

QC Batch: 225562 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

METHOD BLANK: 1104851 Matrix: Water
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.873 ± 0.460 (0.817) C:76% T:78%	pCi/L	07/14/16 12:36	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

QC Batch: 225464 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

METHOD BLANK: 1104431 Matrix: Water
Associated Lab Samples: 40134243001, 40134243002, 40134243003, 40134243004, 40134243005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.000 ± 0.401 (0.898) C:NA T:89%	pCi/L	07/14/16 14:36	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

DEFINITIONS

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

ND - Not Detected at or above LOD.

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

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

B	Analyte was detected in the associated method blank.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40134243001	**2-OW**	EPA 3010	228244	EPA 6020	228332
40134243002	**EGS-MW301**	EPA 3010	228244	EPA 6020	228332
40134243003	**EGS-MW302**	EPA 3010	228244	EPA 6020	228332
40134243004	**EGS-MW303**	EPA 3010	228244	EPA 6020	228332
40134243005	**FIELD BLANK**	EPA 3010	228244	EPA 6020	228332
40134243001	**2-OW**	EPA 7470	228745	EPA 7470	228775
40134243002	**EGS-MW301**	EPA 7470	228745	EPA 7470	228775
40134243003	**EGS-MW302**	EPA 7470	228745	EPA 7470	228775
40134243004	**EGS-MW303**	EPA 7470	228745	EPA 7470	228775
40134243005	**FIELD BLANK**	EPA 7470	228745	EPA 7470	228775
40134243001	**2-OW**				
40134243002	**EGS-MW301**				
40134243003	**EGS-MW302**				
40134243004	**EGS-MW303**				
40134243001	**2-OW**	EPA 903.1	225464		
40134243002	**EGS-MW301**	EPA 903.1	225464		
40134243003	**EGS-MW302**	EPA 903.1	225464		
40134243004	**EGS-MW303**	EPA 903.1	225464		
40134243005	**FIELD BLANK**	EPA 903.1	225464		
40134243001	**2-OW**	EPA 904.0	225562		
40134243002	**EGS-MW301**	EPA 904.0	225562		
40134243003	**EGS-MW302**	EPA 904.0	225562		
40134243004	**EGS-MW303**	EPA 904.0	225562		
40134243005	**FIELD BLANK**	EPA 904.0	225562		
40134243001	**2-OW**	Total Radium Calculation	226620		
40134243002	**EGS-MW301**	Total Radium Calculation	226620		
40134243003	**EGS-MW302**	Total Radium Calculation	285975		
40134243004	**EGS-MW303**	Total Radium Calculation	226620		
40134243005	**FIELD BLANK**	Total Radium Calculation	285975		
40134243001	**2-OW**	SM 2540C	228090		
40134243002	**EGS-MW301**	SM 2540C	228090		
40134243003	**EGS-MW302**	SM 2540C	228090		
40134243004	**EGS-MW303**	SM 2540C	228090		
40134243005	**FIELD BLANK**	SM 2540C	228090		
40134243001	**2-OW**	EPA 9040	228306		
40134243002	**EGS-MW301**	EPA 9040	228306		
40134243003	**EGS-MW302**	EPA 9040	228306		
40134243004	**EGS-MW303**	EPA 9040	228306		
40134243005	**FIELD BLANK**	EPA 9040	228306		
40134243001	**2-OW**	EPA 300.0	228566		
40134243002	**EGS-MW301**	EPA 300.0	228566		
40134243003	**EGS-MW302**	EPA 300.0	228566		
40134243004	**EGS-MW303**	EPA 300.0	228566		

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216068.00 WPL-EDGEWATER CLOS
Pace Project No.: 40134243

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40134243005	**FIELD BLANK**	EPA 300.0	228566		

40134243

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

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CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	SCS Engineers
Branch/Location:	Madison WI
Project Contact:	Meg Blodgett
Phone:	608-216-7362
Project Number:	25216069.00
Project Name:	WPL-Edgewater Closed
Project State:	WI
Sampled By (Print):	Gary Sturtel
Sampled By (Sign):	Gary Sturtel
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	SCS Engineers
Invoice To Address:	2830 Dairy Drive Madison WI 53718
Invoice To Phone:	

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

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

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: Chloride/F/Fluoride Sulfate TDS	pH	Radium 226 Ra-228	B, Ca, Sb, As, Ba Be, Ca, Cr	Co, Pb, Li, Mo Sl, Ti	Mercury	Radium 228	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
001	2-OW	6/20/16	1500	GW	N	A	X	X	X	X	X	X	X	2-500ml p	3-250ml pAAD	
002	EGS-MW301	6/20/16	1110	GW	N	A	X	X	X	X	X	X	X			
003	EGS-MW 302	6/20/16	1405	GW	N	A	X	X	X	X	X	X	X			
004	EGS-MW 303	6/20/16	1205	GW	N	A	X	X	X	X	X	X	X			
005	Field Blank	6/20/16	1515	GW	N	A	X	X	X	X	X	X	X			

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

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Gary Sturtel	6/22/16 0800	Mary Fannin	6/22/16 11:56
Mary Fannin	6/22/16 12:20	Melissa Vinnemeier-Pace	6/22/16 1220
Melissa Vinnemeier-Pace	6/22/16 1617	Rose Pace	6/22/16 1617
Relinquished By:	Date/Time:	Received By:	Date/Time:
Relinquished By:	Date/Time:	Received By:	Date/Time:

PACE Project No.
40134243

Receipt Temp = R01 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

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

Project #: **WO# : 40134243**

40134243

Client Name: SCS

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☑ Pace Other: _____

Tracking #: _____

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

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other _____

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

Cooler Temperature Uncorr: 2.0 /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☒ no

Person examining contents:
Date: 6/23/16
Initials: h

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

				Comments:
Chain of Custody Present:	☑Yes	☐No	☐N/A	1.
Chain of Custody Filled Out:	☑Yes	☐No	☐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	☐No	☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes	☐No		Date/Time:
Short Hold Time Analysis (<72hr):	☑Yes	☐No	☐N/A	6.
Rush Turn Around Time Requested:	☐Yes	☑No	☐N/A	7.
Sufficient Volume:	☑Yes	☐No	☐N/A	8.
Correct Containers Used:	☑Yes	☐No	☐N/A	9.
-Pace Containers Used:	☑Yes	☐No	☐N/A	
-Pace IR Containers Used:	☐Yes	☐No	☒N/A	
Containers Intact:	☑Yes	☐No	☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes	☐No	☒N/A	11.
Sample Labels match COC:	☐Yes	☑No	☐N/A	12. 001 ID: 2R-OW; 002-004 notes before ID 6/23/16 h
-Includes date/time/ID/Analysis Matrix: W				
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes	☐No	☐N/A	13. ☑HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes	☐No	☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes	☑No		Initial when completed: 12 / Lab Std #ID of preservative: / Date/Time:
Headspace in VOA Vials (>6mm):	☐Yes	☐No	☒N/A	14.
Trip Blank Present:	☐Yes	☑No	☐N/A	15.
Trip Blank Custody Seals Present	☐Yes	☐No	☒N/A	
Pace Trip Blank Lot # (if purchased):				

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: 6/23/16 h

Client returned 2-250ml pp, 3-250ml ppAAP unused 6/23/16 h

Project Manager Review: AWA for DM **Date:** 6/23/16

F-GB-C-031-Rev.03 (9April2015) SCUR Form

A3 Round 3 Background Sampling, Analytical Laboratory Report

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

September 09, 2016

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

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

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

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
Project Manager

Enclosures

cc: Tom Karwoski, SCS ENGINEERS
Jeff Maxted, ALLIANT ENERGY
Marc Morandi, ALLIANT ENERGY

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

CERTIFICATIONS

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Green Bay Certification IDs

1241 Bellevue Street, Green Bay, WI 54302
Florida/NELAP Certification #: E87948
Illinois Certification #: 200050
Kentucky Certification #: 82
Louisiana Certification #: 04168
Minnesota Certification #: 055-999-334
Virginia VELAP ID: 460263
North Dakota Certification #: R-150
South Carolina Certification #: 83006001
Texas Certification #: T104704529-14-1
US Dept of Agriculture #: S-76505
Virginia VELAP Certification ID: 460263
Virginia VELAP ID: 460263
Wisconsin Certification #: 405132750
Wisconsin DATCP Certification #: 105-444

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40136690001	**2R-OW**	Water	08/09/16 12:05	08/12/16 10:00
40136690002	**EGS MW 301**	Water	08/09/16 09:40	08/12/16 10:00
40136690003	**EGS MW 302**	Water	08/09/16 11:10	08/12/16 10:00
40136690004	**EGS MW 303**	Water	08/09/16 10:30	08/12/16 10:00
40136690005	**FIELD BLANK**	Water	08/09/16 11:20	08/12/16 10:00

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

SAMPLE ANALYTE COUNT

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40136690001	**2R-OW**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	AB1	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40136690002	**EGS MW 301**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	AB1	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40136690003	**EGS MW 302**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	AB1	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40136690004	**EGS MW 303**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	AB1	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40136690005	**FIELD BLANK**	EPA 6020	SDW	14	PASI-G

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

SAMPLE ANALYTE COUNT

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	AJT	1	PASI-G
		EPA 903.1	AB1	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Sample: 2R-OW **Lab ID: 40136690001** Collected: 08/09/16 12:05 Received: 08/12/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	08/22/16 09:44	08/23/16 09:53	7440-36-0	
Arsenic	**0.39J**	ug/L	1.0	0.099	1	08/22/16 09:44	08/23/16 09:53	7440-38-2	3q
Barium	**155**	ug/L	1.0	0.062	1	08/22/16 09:44	08/23/16 09:53	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	08/22/16 09:44	08/23/16 09:53	7440-41-7	
Boron	**32.6**	ug/L	10.0	2.0	1	08/22/16 09:44	08/24/16 23:48	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	08/22/16 09:44	08/23/16 09:53	7440-43-9	
Calcium	**145000**	ug/L	250	73.6	1	08/22/16 09:44	08/23/16 09:53	7440-70-2	
Chromium	**2.9**	ug/L	1.0	0.39	1	08/22/16 09:44	08/23/16 09:53	7440-47-3	
Cobalt	**0.050J**	ug/L	1.0	0.036	1	08/22/16 09:44	08/23/16 09:53	7440-48-4	1q
Lead	**0.14J**	ug/L	1.0	0.040	1	08/22/16 09:44	08/23/16 09:53	7439-92-1	2q
Lithium	**9.0**	ug/L	1.0	0.11	1	08/22/16 09:44	08/23/16 09:53	7439-93-2	
Molybdenum	**0.32J**	ug/L	1.0	0.070	1	08/22/16 09:44	08/23/16 09:53	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	08/22/16 09:44	08/23/16 09:53	7782-49-2	4q
Thallium	**<0.14**	ug/L	1.0	0.14	1	08/22/16 09:44	08/23/16 09:53	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	08/16/16 13:00	08/17/16 10:46	7439-97-6	
Field Data	Analytical Method:								
Field pH	**6.10**	Std. Units			1		08/09/16 12:05		
Field Specific Conductance	**1697**	umhos/cm			1		08/09/16 12:05		
Oxygen, Dissolved	**1.0**	mg/L			1		08/09/16 12:05	7782-44-7	
REDOX	**140**	mV			1		08/09/16 12:05		
Turbidity	**3.64**	NTU			1		08/09/16 12:05		
Static Water Level	**605.74**	feet			1		08/09/16 12:05		
Temperature, Water (C)	**13.9**	deg C			1		08/09/16 12:05		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**974**	mg/L	20.0	8.7	1		08/16/16 16:17		
9040 pH	Analytical Method: EPA 9040								
pH	**7.0**	Std. Units	0.10	0.010	1		08/16/16 10:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**215**	mg/L	40.0	20.0	10		08/25/16 17:17	16887-00-6	
Fluoride	**<0.20**	mg/L	0.40	0.20	1		08/25/16 17:06	16984-48-8	
Sulfate	**25.4**	mg/L	4.0	2.0	1		08/25/16 17:06	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Sample: EGS MW 301 **Lab ID: 40136690002** Collected: 08/09/16 09:40 Received: 08/12/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	08/22/16 09:44	08/23/16 09:59	7440-36-0	
Arsenic	**2.3**	ug/L	1.0	0.099	1	08/22/16 09:44	08/23/16 09:59	7440-38-2	
Barium	**30.5**	ug/L	1.0	0.062	1	08/22/16 09:44	08/23/16 09:59	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	08/22/16 09:44	08/23/16 09:59	7440-41-7	
Boron	**8450**	ug/L	200	39.9	20	08/22/16 09:44	08/24/16 23:55	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	08/22/16 09:44	08/23/16 09:59	7440-43-9	
Calcium	**84000**	ug/L	250	73.6	1	08/22/16 09:44	08/23/16 09:59	7440-70-2	
Chromium	**<0.39**	ug/L	1.0	0.39	1	08/22/16 09:44	08/23/16 09:59	7440-47-3	
Cobalt	**0.38J**	ug/L	1.0	0.036	1	08/22/16 09:44	08/23/16 09:59	7440-48-4	1q
Lead	**<0.040**	ug/L	1.0	0.040	1	08/22/16 09:44	08/23/16 09:59	7439-92-1	2q
Lithium	**15.6**	ug/L	1.0	0.11	1	08/22/16 09:44	08/23/16 09:59	7439-93-2	
Molybdenum	**2160**	ug/L	1.0	0.070	1	08/22/16 09:44	08/23/16 09:59	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	08/22/16 09:44	08/23/16 09:59	7782-49-2	4q
Thallium	**<0.14**	ug/L	1.0	0.14	1	08/22/16 09:44	08/23/16 09:59	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	08/16/16 13:00	08/17/16 10:49	7439-97-6	
Field Data	Analytical Method:								
Field pH	**6.47**	Std. Units			1		08/09/16 09:40		
Field Specific Conductance	**1230**	umhos/cm			1		08/09/16 09:40		
Oxygen, Dissolved	**0.1**	mg/L			1		08/09/16 09:40	7782-44-7	
REDOX	**-31**	mV			1		08/09/16 09:40		
Turbidity	**2.42**	NTU			1		08/09/16 09:40		
Static Water Level	**598.00**	feet			1		08/09/16 09:40		
Temperature, Water (C)	**10.5**	deg C			1		08/09/16 09:40		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**862**	mg/L	20.0	8.7	1		08/16/16 16:17		
9040 pH	Analytical Method: EPA 9040								
pH	**7.4**	Std. Units	0.10	0.010	1		08/16/16 10:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**13.7**	mg/L	4.0	2.0	1		08/25/16 14:47	16887-00-6	
Fluoride	**0.33J**	mg/L	0.40	0.20	1		08/25/16 14:47	16984-48-8	
Sulfate	**368**	mg/L	40.0	20.0	10		08/26/16 02:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Sample: EGS MW 302 **Lab ID: 40136690003** Collected: 08/09/16 11:10 Received: 08/12/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	08/22/16 09:44	08/23/16 10:06	7440-36-0	
Arsenic	**10.2**	ug/L	1.0	0.099	1	08/22/16 09:44	08/23/16 10:06	7440-38-2	
Barium	**66.7**	ug/L	1.0	0.062	1	08/22/16 09:44	08/23/16 10:06	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	08/22/16 09:44	08/23/16 10:06	7440-41-7	
Boron	**2000**	ug/L	100	20.0	10	08/22/16 09:44	08/25/16 00:01	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	08/22/16 09:44	08/23/16 10:06	7440-43-9	
Calcium	**75900**	ug/L	250	73.6	1	08/22/16 09:44	08/23/16 10:06	7440-70-2	
Chromium	**3.5**	ug/L	1.0	0.39	1	08/22/16 09:44	08/23/16 10:06	7440-47-3	
Cobalt	**1.1**	ug/L	1.0	0.036	1	08/22/16 09:44	08/23/16 10:06	7440-48-4	
Lead	**0.84J**	ug/L	1.0	0.040	1	08/22/16 09:44	08/23/16 10:06	7439-92-1	
Lithium	**55.4**	ug/L	1.0	0.11	1	08/22/16 09:44	08/23/16 10:06	7439-93-2	
Molybdenum	**652**	ug/L	1.0	0.070	1	08/22/16 09:44	08/23/16 10:06	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	08/22/16 09:44	08/23/16 10:06	7782-49-2	4q
Thallium	**<0.14**	ug/L	1.0	0.14	1	08/22/16 09:44	08/23/16 10:06	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	08/16/16 13:00	08/17/16 10:51	7439-97-6	
Field Data	Analytical Method:								
Field pH	**6.55**	Std. Units			1		08/09/16 11:10		
Field Specific Conductance	**539**	umhos/cm			1		08/09/16 11:10		
Oxygen, Dissolved	**0.1**	mg/L			1		08/09/16 11:10	7782-44-7	
REDOX	**-123**	mV			1		08/09/16 11:10		
Turbidity	**108.3**	NTU			1		08/09/16 11:10		
Static Water Level	**595.53**	feet			1		08/09/16 11:10		
Temperature, Water (C)	**13.2**	deg C			1		08/09/16 11:10		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**396**	mg/L	20.0	8.7	1		08/16/16 16:18		
9040 pH	Analytical Method: EPA 9040								
pH	**7.7**	Std. Units	0.10	0.010	1		08/16/16 10:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**18.0**	mg/L	4.0	2.0	1		08/25/16 14:59	16887-00-6	
Fluoride	**0.80**	mg/L	0.40	0.20	1		08/25/16 14:59	16984-48-8	
Sulfate	**80.7**	mg/L	20.0	10.0	5		08/26/16 02:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Sample: EGS MW 303 **Lab ID: 40136690004** Collected: 08/09/16 10:30 Received: 08/12/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	08/22/16 09:44	08/23/16 10:13	7440-36-0	
Arsenic	**10.7**	ug/L	1.0	0.099	1	08/22/16 09:44	08/23/16 10:13	7440-38-2	
Barium	**195**	ug/L	1.0	0.062	1	08/22/16 09:44	08/23/16 10:13	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	08/22/16 09:44	08/23/16 10:13	7440-41-7	
Boron	**3860**	ug/L	100	20.0	10	08/22/16 09:44	08/25/16 00:08	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	08/22/16 09:44	08/23/16 10:13	7440-43-9	
Calcium	**145000**	ug/L	250	73.6	1	08/22/16 09:44	08/23/16 10:13	7440-70-2	
Chromium	**2.0**	ug/L	1.0	0.39	1	08/22/16 09:44	08/23/16 10:13	7440-47-3	
Cobalt	**5.0**	ug/L	1.0	0.036	1	08/22/16 09:44	08/23/16 10:13	7440-48-4	
Lead	**0.35J**	ug/L	1.0	0.040	1	08/22/16 09:44	08/23/16 10:13	7439-92-1	2q
Lithium	**10.4**	ug/L	1.0	0.11	1	08/22/16 09:44	08/23/16 10:13	7439-93-2	
Molybdenum	**12.7**	ug/L	1.0	0.070	1	08/22/16 09:44	08/23/16 10:13	7439-98-7	
Selenium	**0.31J**	ug/L	1.0	0.21	1	08/22/16 09:44	08/23/16 10:13	7782-49-2	4q
Thallium	**<0.14**	ug/L	1.0	0.14	1	08/22/16 09:44	08/23/16 10:13	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	08/16/16 13:00	08/17/16 10:53	7439-97-6	
Field Data	Analytical Method:								
Field pH	**6.09**	Std. Units			1		08/09/16 10:30		
Field Specific Conductance	**1220**	umhos/cm			1		08/09/16 10:30		
Oxygen, Dissolved	**0.1**	mg/L			1		08/09/16 10:30	7782-44-7	
REDOX	**-81**	mV			1		08/09/16 10:30		
Turbidity	**48.39**	NTU			1		08/09/16 10:30		
Static Water Level	**587.72**	feet			1		08/09/16 10:30		
Temperature, Water (C)	**11.9**	deg C			1		08/09/16 10:30		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**732**	mg/L	20.0	8.7	1		08/16/16 16:18		
9040 pH	Analytical Method: EPA 9040								
pH	**6.9**	Std. Units	0.10	0.010	1		08/16/16 10:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**22.8**	mg/L	4.0	2.0	1		08/25/16 15:11	16887-00-6	
Fluoride	**<0.20**	mg/L	0.40	0.20	1		08/25/16 15:11	16984-48-8	
Sulfate	**2.4J**	mg/L	4.0	2.0	1		08/25/16 15:11	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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(920)469-2436

ANALYTICAL RESULTS

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Sample: FIELD BLANK **Lab ID: 40136690005** Collected: 08/09/16 11:20 Received: 08/12/16 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	08/22/16 09:44	08/23/16 07:16	7440-36-0	
Arsenic	**<0.099**	ug/L	1.0	0.099	1	08/22/16 09:44	08/23/16 07:16	7440-38-2	3q
Barium	**0.075J**	ug/L	1.0	0.062	1	08/22/16 09:44	08/23/16 07:16	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	08/22/16 09:44	08/23/16 07:16	7440-41-7	
Boron	**<2.0**	ug/L	10.0	2.0	1	08/22/16 09:44	08/24/16 21:59	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	08/22/16 09:44	08/23/16 07:16	7440-43-9	
Calcium	**94.4J**	ug/L	250	73.6	1	08/22/16 09:44	08/23/16 07:16	7440-70-2	
Chromium	**<0.39**	ug/L	1.0	0.39	1	08/22/16 09:44	08/23/16 07:16	7440-47-3	
Cobalt	**<0.036**	ug/L	1.0	0.036	1	08/22/16 09:44	08/23/16 07:16	7440-48-4	1q
Lead	**<0.040**	ug/L	1.0	0.040	1	08/22/16 09:44	08/23/16 07:16	7439-92-1	2q
Lithium	**<0.11**	ug/L	1.0	0.11	1	08/22/16 09:44	08/23/16 07:16	7439-93-2	
Molybdenum	**<0.070**	ug/L	1.0	0.070	1	08/22/16 09:44	08/23/16 07:16	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	08/22/16 09:44	08/23/16 07:16	7782-49-2	4q
Thallium	**<0.14**	ug/L	1.0	0.14	1	08/22/16 09:44	08/23/16 07:16	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	08/16/16 13:00	08/17/16 10:56	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**<8.7**	mg/L	20.0	8.7	1		08/16/16 16:19		
9040 pH	Analytical Method: EPA 9040								
pH	**6.2**	Std. Units	0.10	0.010	1		08/16/16 10:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**<2.0**	mg/L	4.0	2.0	1		08/25/16 15:22	16887-00-6	
Fluoride	**<0.20**	mg/L	0.40	0.20	1		08/25/16 15:22	16984-48-8	
Sulfate	**<2.0**	mg/L	4.0	2.0	1		08/25/16 15:22	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, Inc.
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QUALITY CONTROL DATA

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

QC Batch: 232431 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40136690001, 40136690002, 40136690003, 40136690004, 40136690005

METHOD BLANK: 1378105 Matrix: Water
Associated Lab Samples: 40136690001, 40136690002, 40136690003, 40136690004, 40136690005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	08/17/16 10:21	

LABORATORY CONTROL SAMPLE: 1378106

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	98	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1378107 1378108

Parameter	Units	40136688001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.20	5	5	4.8	5.2	93	103	85-115	9	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

QC Batch: 232930 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40136690001, 40136690002, 40136690003, 40136690004, 40136690005

METHOD BLANK: 1380803 Matrix: Water
Associated Lab Samples: 40136690001, 40136690002, 40136690003, 40136690004, 40136690005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	<0.073	1.0	08/23/16 07:10	
Arsenic	ug/L	<0.099	1.0	08/23/16 07:10	
Barium	ug/L	<0.062	1.0	08/23/16 07:10	
Beryllium	ug/L	<0.13	1.0	08/23/16 07:10	
Boron	ug/L	<2.0	10.0	08/24/16 21:53	
Cadmium	ug/L	<0.089	1.0	08/23/16 07:10	
Calcium	ug/L	<73.6	250	08/23/16 07:10	
Chromium	ug/L	<0.39	1.0	08/23/16 07:10	
Cobalt	ug/L	<0.036	1.0	08/23/16 07:10	
Lead	ug/L	<0.040	1.0	08/23/16 07:10	
Lithium	ug/L	<0.11	1.0	08/23/16 07:10	
Molybdenum	ug/L	<0.070	1.0	08/23/16 07:10	
Selenium	ug/L	<0.21	1.0	08/23/16 07:10	
Thallium	ug/L	<0.14	1.0	08/23/16 07:10	

LABORATORY CONTROL SAMPLE: 1380804

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	513	103	80-120	
Arsenic	ug/L	500	509	102	80-120	
Barium	ug/L	500	501	100	80-120	
Beryllium	ug/L	500	521	104	80-120	
Boron	ug/L	500	500	100	80-120	
Cadmium	ug/L	500	528	106	80-120	
Calcium	ug/L	5000	5490	110	80-120	
Chromium	ug/L	500	500	100	80-120	
Cobalt	ug/L	500	484	97	80-120	
Lead	ug/L	500	478	96	80-120	
Lithium	ug/L	500	494	99	80-120	
Molybdenum	ug/L	500	522	104	80-120	
Selenium	ug/L	500	537	107	80-120	
Thallium	ug/L	500	465	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380805 1380806

Parameter	Units	40136543001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.073	500	500	522	524	104	105	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380805 1380806

Parameter	Units	40136543001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	0.12J	500	500	512	517	102	103	75-125	1	20	
Barium	ug/L	45.7	500	500	555	560	102	103	75-125	1	20	
Beryllium	ug/L	0.19J	500	500	535	540	107	108	75-125	1	20	
Boron	ug/L	12.3	500	500	517	518	101	101	75-125	0	20	
Cadmium	ug/L	<0.089	500	500	533	537	107	107	75-125	1	20	
Calcium	ug/L	21000	5000	5000	24900	25300	77	85	75-125	2	20	
Chromium	ug/L	0.54J	500	500	506	511	101	102	75-125	1	20	
Cobalt	ug/L	0.14J	500	500	488	494	98	99	75-125	1	20	
Lead	ug/L	0.048J	500	500	478	481	96	96	75-125	1	20	
Lithium	ug/L	0.80J	500	500	508	512	101	102	75-125	1	20	
Molybdenum	ug/L	0.59J	500	500	527	532	105	106	75-125	1	20	
Selenium	ug/L	<0.21	500	500	535	540	107	108	75-125	1	20	
Thallium	ug/L	0.62J	500	500	466	471	93	94	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

QC Batch: 232503 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40136690001, 40136690002, 40136690003, 40136690004, 40136690005

METHOD BLANK: 1378385 Matrix: Water
Associated Lab Samples: 40136690001, 40136690002, 40136690003, 40136690004, 40136690005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	08/16/16 16:12	

LABORATORY CONTROL SAMPLE: 1378386

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	586	596	102	80-120	

SAMPLE DUPLICATE: 1378387

Parameter	Units	40136558002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	912	920	1	5	

SAMPLE DUPLICATE: 1378388

Parameter	Units	40136690002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	862	876	2	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

QC Batch: 232455 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40136690001, 40136690002, 40136690003, 40136690004, 40136690005

SAMPLE DUPLICATE: 1378257

Parameter	Units	40136623001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	6.7	6.8	1	20	H6

SAMPLE DUPLICATE: 1378258

Parameter	Units	40136691001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.6	7.6	1	20	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

QC Batch: 232782 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40136690002, 40136690003, 40136690004, 40136690005

METHOD BLANK: 1379892 Matrix: Water
Associated Lab Samples: 40136690002, 40136690003, 40136690004, 40136690005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<2.0	4.0	08/25/16 13:27	
Fluoride	mg/L	<0.20	0.40	08/25/16 13:27	
Sulfate	mg/L	<2.0	4.0	08/25/16 13:27	

LABORATORY CONTROL SAMPLE: 1379893

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	18.7	94	90-110	
Fluoride	mg/L	2	2.2	108	90-110	
Sulfate	mg/L	20	19.2	96	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1379896 1379897

Parameter	Units	40136770001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	344	400	400	756	751	103	102	90-110	1	20	
Fluoride	mg/L	<4.0	40	40	44.9	45.3	112	113	90-110	1	20	M0
Sulfate	mg/L	176	400	400	571	570	99	99	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1380979 1380980

Parameter	Units	40136837001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	126	200	200	323	323	98	98	90-110	0	20	
Fluoride	mg/L	<2.0	20	20	22.3	22.5	108	109	90-110	1	20	
Sulfate	mg/L	129	200	200	330	329	100	100	90-110	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

QC Batch: 233232
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40136690001

METHOD BLANK: 1382111 Matrix: Water
Associated Lab Samples: 40136690001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<2.0	4.0	08/25/16 09:58	
Fluoride	mg/L	<0.20	0.40	08/25/16 09:58	
Sulfate	mg/L	<2.0	4.0	08/25/16 09:58	

LABORATORY CONTROL SAMPLE: 1382112

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	18.3	92	90-110	
Fluoride	mg/L	2	2.0	99	90-110	
Sulfate	mg/L	20	18.7	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382113 1382114

Parameter	Units	40136329005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	<2.0	20	20	19.4	19.9	88	90	90-110	2	20	M0
Fluoride	mg/L	<0.20	2	2	2.1	2.1	103	106	90-110	4	20	
Sulfate	mg/L	4.7	20	20	23.6	24.0	95	97	90-110	2	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1382115 1382116

Parameter	Units	40136889001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	759	400	400	1110	1090	87	84	90-110	1	20	M0
Fluoride	mg/L	<4.0	40	40	41.4	42.1	103	105	90-110	2	20	
Sulfate	mg/L	607	400	400	973	1070	92	117	90-110	10	20	M0

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Sample: 2R-OW **Lab ID: 40136690001** Collected: 08/09/16 12:05 Received: 08/12/16 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.0836 ± 0.820 (1.33) C:NA T:81%**	pCi/L	09/06/16 23:02	13982-63-3	
Radium-228	EPA 904.0	**0.348 ± 0.358 (0.732) C:74% T:87%**	pCi/L	09/02/16 12:26	15262-20-1	
Total Radium	Total Radium Calculation	**0.432 ± 1.18 (2.06)**	pCi/L	09/08/16 12:34	7440-14-4	

Sample: EGS MW 301 **Lab ID: 40136690002** Collected: 08/09/16 09:40 Received: 08/12/16 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**-0.170 ± 0.883 (1.48) C:NA T:75%**	pCi/L	09/06/16 23:02	13982-63-3	
Radium-228	EPA 904.0	**0.456 ± 0.368 (0.715) C:73% T:85%**	pCi/L	09/02/16 12:26	15262-20-1	
Total Radium	Total Radium Calculation	**0.456 ± 1.25 (2.20)**	pCi/L	09/08/16 12:34	7440-14-4	

Sample: EGS MW 302 **Lab ID: 40136690003** Collected: 08/09/16 11:10 Received: 08/12/16 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**-0.153 ± 0.795 (1.34) C:NA T:76%**	pCi/L	09/06/16 23:03	13982-63-3	
Radium-228	EPA 904.0	**0.0999 ± 0.400 (0.896) C:71% T:81%**	pCi/L	09/02/16 12:27	15262-20-1	
Total Radium	Total Radium Calculation	**0.0999 ± 1.20 (2.24)**	pCi/L	09/08/16 12:34	7440-14-4	

Sample: EGS MW 303 **Lab ID: 40136690004** Collected: 08/09/16 10:30 Received: 08/12/16 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.651 ± 0.662 (0.864) C:NA T:73%**	pCi/L	09/06/16 23:23	13982-63-3	
Radium-228	EPA 904.0	**0.567 ± 0.520 (1.05) C:64% T:77%**	pCi/L	09/02/16 12:27	15262-20-1	
Total Radium	Total Radium Calculation	**1.22 ± 1.18 (1.91)**	pCi/L	09/08/16 12:34	7440-14-4	

Sample: FIELD BLANK **Lab ID: 40136690005** Collected: 08/09/16 11:20 Received: 08/12/16 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**-0.167 ± 0.519 (1.01) C:NA T:78%**	pCi/L	09/06/16 23:22	13982-63-3	
Radium-228	EPA 904.0	**0.465 ± 0.424 (0.850) C:68% T:81%**	pCi/L	09/02/16 12:26	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Sample: FIELD BLANK **Lab ID: 40136690005** Collected: 08/09/16 11:20 Received: 08/12/16 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**0.465 ± 0.943 (1.86)**	pCi/L	09/08/16 12:34	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

QC Batch: 231295 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 40136690001, 40136690002, 40136690003, 40136690004, 40136690005

METHOD BLANK: 1133690 Matrix: Water
Associated Lab Samples: 40136690001, 40136690002, 40136690003, 40136690004, 40136690005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0980 ± 0.192 (0.303) C:NA T:85%	pCi/L	09/06/16 23:01	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

QC Batch: 231296 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 40136690001, 40136690002, 40136690003, 40136690004, 40136690005

METHOD BLANK: 1133691 Matrix: Water
Associated Lab Samples: 40136690001, 40136690002, 40136690003, 40136690004, 40136690005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.131 ± 0.325 (0.717) C:76% T:75%	pCi/L	09/02/16 12:26	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

DEFINITIONS

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

ND - Not Detected at or above LOD.

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

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1q	Analyte was measured in the associated method blank at -0.053 ug/L.
2q	Analyte was measured in the associated method blank at -0.061 ug/L.
3q	Analyte was measured in the associated method blank at -0.166 ug/L.
4q	Analyte was measured in the associated method blank at -0.218 ug/L.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216069.00 WPL EDGEWATER CLOS
Pace Project No.: 40136690

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40136690001	**2R-OW**	EPA 3010	232930	EPA 6020	233007
40136690002	**EGS MW 301**	EPA 3010	232930	EPA 6020	233007
40136690003	**EGS MW 302**	EPA 3010	232930	EPA 6020	233007
40136690004	**EGS MW 303**	EPA 3010	232930	EPA 6020	233007
40136690005	**FIELD BLANK**	EPA 3010	232930	EPA 6020	233007
40136690001	**2R-OW**	EPA 7470	232431	EPA 7470	232500
40136690002	**EGS MW 301**	EPA 7470	232431	EPA 7470	232500
40136690003	**EGS MW 302**	EPA 7470	232431	EPA 7470	232500
40136690004	**EGS MW 303**	EPA 7470	232431	EPA 7470	232500
40136690005	**FIELD BLANK**	EPA 7470	232431	EPA 7470	232500
40136690001	**2R-OW**				
40136690002	**EGS MW 301**				
40136690003	**EGS MW 302**				
40136690004	**EGS MW 303**				
40136690001	**2R-OW**	EPA 903.1	231295		
40136690002	**EGS MW 301**	EPA 903.1	231295		
40136690003	**EGS MW 302**	EPA 903.1	231295		
40136690004	**EGS MW 303**	EPA 903.1	231295		
40136690005	**FIELD BLANK**	EPA 903.1	231295		
40136690001	**2R-OW**	EPA 904.0	231296		
40136690002	**EGS MW 301**	EPA 904.0	231296		
40136690003	**EGS MW 302**	EPA 904.0	231296		
40136690004	**EGS MW 303**	EPA 904.0	231296		
40136690005	**FIELD BLANK**	EPA 904.0	231296		
40136690001	**2R-OW**	Total Radium Calculation	232528		
40136690002	**EGS MW 301**	Total Radium Calculation	232528		
40136690003	**EGS MW 302**	Total Radium Calculation	232528		
40136690004	**EGS MW 303**	Total Radium Calculation	232528		
40136690005	**FIELD BLANK**	Total Radium Calculation	232528		
40136690001	**2R-OW**	SM 2540C	232503		
40136690002	**EGS MW 301**	SM 2540C	232503		
40136690003	**EGS MW 302**	SM 2540C	232503		
40136690004	**EGS MW 303**	SM 2540C	232503		
40136690005	**FIELD BLANK**	SM 2540C	232503		
40136690001	**2R-OW**	EPA 9040	232455		
40136690002	**EGS MW 301**	EPA 9040	232455		
40136690003	**EGS MW 302**	EPA 9040	232455		
40136690004	**EGS MW 303**	EPA 9040	232455		
40136690005	**FIELD BLANK**	EPA 9040	232455		
40136690001	**2R-OW**	EPA 300.0	233232		
40136690002	**EGS MW 301**	EPA 300.0	232782		
40136690003	**EGS MW 302**	EPA 300.0	232782		
40136690004	**EGS MW 303**	EPA 300.0	232782		
40136690005	**FIELD BLANK**	EPA 300.0	232782		

REPORT OF LABORATORY ANALYSIS

SCW

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

Pace Analytical®
www.pacelabs.com

CHAIN OF COUSTODY

40136690

(Please Print Clearly)

Company Name:	SCS Engineers
Branch/Location:	Madison WI
Project Contact:	Meg Blodgett
Phone:	608-216-7362
Project Number:	25216069.00
Project Name:	WPL Edgewater Closed As Fill
Project State:	WI
Sampled By (Print):	Gary Sterkel
Sampled By (Sign):	Gary Sterkel
PO #:	
Regulatory Program:	

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

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	SCS Engineers
Invoice To Address:	2830 Dairy Dr Madison WI 53718
Invoice To Phone:	

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

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

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

				FILTERED? (YES/NO) Y/N	N	N	N	N	N	N	N		
				PRESERVATION (CODE)* Pick Letter	A	A	D	D	D	D	D		
PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	Chloride Fluoride Sulfate TDS	pH	Radium 226	Radium 228	B, Cd Sb, As, Ba, Be Ca Cr	Co, Pb Li, Mo, Si, Ti	Mercury	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only) / Profile #
001	2-OW	8/9/16	1205	GW	X	X	X	X	X	X	X	2-500mlp D	4-250mlp AA DD
002	EGS MW 301	8/9/16	0940	GW	X	X	X	X	X	X	X	↓	↓
003	EGS MW 302	8/9/16	1110	GW	X	X	X	X	X	X	X	↓	↓
004	EGS MW 303	8/9/16	1030	GW	X	X	X	X	X	X	X	↓	↓
005	Field Blank	8/9/16	1120	[illegible]	X	X	X	X	X	X	X	↓	↓

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

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Gary Sterkel	8/11/16 0800	Mary Jarmin	8/11/16 9:25
Mary Jarmin	8/11/16 1700		
CS Logistics	8/12/16 1000	[signature] pace	8/12/16 1000

PACE Project No. 40136690

Receipt Temp = ROI °C

Sample Receipt pH
OK / Adjusted

Cooler Custody Seal
Present / Not Present
Intact / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/06

Sample Condition Upon Receipt

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

Project #: **WO# : 40136690**

Client Name: SCS Engineers

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

Tracking #:

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

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** Wet Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROT /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☐ no

Person examining contents:
Date: 8/12/16
Initials: BH

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐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 ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr): BH 8/12/16	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC: 8/12/16	☑Yes ☐No ☐N/A	12. 001-ID 2R-OW. Time matched. 002-004-EGS after MW #
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☑ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed BH / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution: ~~Client returned 4-500mlP 4-250mlA 4-250mlP~~ BH 8/12/16

Project Manager Review: JJ for DM **Date:** 8-12-16

F-GB-C-031-Rev.03 (9April2015) SCUR Form

A4 Round 4 Background Sampling, Analytical Laboratory Report

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

November 22, 2016

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Dear Meghan Blodgett:
Enclosed are the analytical results for sample(s) received by the laboratory on October 22, 2016. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Dan Milewsky
dan.milewsky@pacelabs.com
Project Manager

Enclosures

cc: Tom Karwoski, SCS ENGINEERS
Jeff Maxted, ALLIANT ENERGY
Marc Morandi, ALLIANT ENERGY

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

CERTIFICATIONS

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Green Bay Certification IDs

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40140699001	**EGS 2R-OW**	Water	10/20/16 11:56	10/22/16 07:30
40140699002	**EGS MW-301**	Water	10/20/16 10:56	10/22/16 07:30
40140699003	**EGS MW-302**	Water	10/20/16 10:26	10/22/16 07:30
40140699004	**EGS MW-303**	Water	10/20/16 09:26	10/22/16 07:30
40140699005	**FIELD BLANK**	Water	10/20/16 12:00	10/22/16 07:30

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40140699001	**EGS 2R-OW**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	JMN	3	PASI-G
40140699002	**EGS MW-301**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	JMN	3	PASI-G
40140699003	**EGS MW-302**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	JMN	3	PASI-G
40140699004	**EGS MW-303**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AMH	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	JMN	3	PASI-G
40140699005	**FIELD BLANK**	EPA 6020	SDW	14	PASI-G

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

SAMPLE ANALYTE COUNT

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	AJT	1	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	JMN	3	PASI-G

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

ANALYTICAL RESULTS

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Sample: EGS 2R-OW **Lab ID: 40140699001** Collected: 10/20/16 11:56 Received: 10/22/16 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	11/01/16 09:52	11/02/16 22:30	7440-36-0	
Arsenic	**0.39J**	ug/L	1.0	0.099	1	11/01/16 09:52	11/02/16 22:30	7440-38-2	1q
Barium	**189**	ug/L	1.0	0.062	1	11/01/16 09:52	11/02/16 22:30	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	11/01/16 09:52	11/02/16 22:30	7440-41-7	
Boron	**43.1**	ug/L	10.0	2.0	1	11/01/16 09:52	11/03/16 11:34	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	11/01/16 09:52	11/02/16 22:30	7440-43-9	
Calcium	**155000**	ug/L	250	73.6	1	11/01/16 09:52	11/02/16 22:30	7440-70-2	
Chromium	**1.7**	ug/L	1.0	0.39	1	11/01/16 09:52	11/02/16 22:30	7440-47-3	
Cobalt	**0.21J**	ug/L	1.0	0.036	1	11/01/16 09:52	11/02/16 22:30	7440-48-4	
Lead	**0.074J**	ug/L	1.0	0.040	1	11/01/16 09:52	11/02/16 22:30	7439-92-1	
Lithium	**8.2**	ug/L	1.0	0.11	1	11/01/16 09:52	11/02/16 22:30	7439-93-2	
Molybdenum	**0.25J**	ug/L	1.0	0.070	1	11/01/16 09:52	11/02/16 22:30	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	11/01/16 09:52	11/02/16 22:30	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	11/01/16 09:52	11/02/16 22:30	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	10/26/16 13:25	10/27/16 10:45	7439-97-6	
Field Data	Analytical Method:								
Field pH	**6.98**	Std. Units			1		10/20/16 11:56		
Field Specific Conductance	**1533**	umhos/cm			1		10/20/16 11:56		
Oxygen, Dissolved	**0.6**	mg/L			1		10/20/16 11:56	7782-44-7	
REDOX	**117**	mV			1		10/20/16 11:56		
Turbidity	**3.32**	NTU			1		10/20/16 11:56		
Static Water Level	**607.27**	feet			1		10/20/16 11:56		
Temperature, Water (C)	**14.1**	deg C			1		10/20/16 11:56		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**944**	mg/L	20.0	8.7	1		10/27/16 17:39		
9040 pH	Analytical Method: EPA 9040								
pH	**7.4**	Std. Units	0.10	0.010	1		10/25/16 13:05		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**217**	mg/L	10.0	2.5	5		11/16/16 14:42	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		11/15/16 17:52	16984-48-8	
Sulfate	**21.6**	mg/L	3.0	1.0	1		11/15/16 17:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Sample: EGS MW-301 **Lab ID: 40140699002** Collected: 10/20/16 10:56 Received: 10/22/16 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.083J**	ug/L	1.0	0.073	1	11/01/16 09:52	11/02/16 22:37	7440-36-0	
Arsenic	**4.2**	ug/L	1.0	0.099	1	11/01/16 09:52	11/02/16 22:37	7440-38-2	
Barium	**31.4**	ug/L	1.0	0.062	1	11/01/16 09:52	11/02/16 22:37	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	11/01/16 09:52	11/02/16 22:37	7440-41-7	
Boron	**8620**	ug/L	100	20.0	10	11/01/16 09:52	11/03/16 11:41	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	11/01/16 09:52	11/02/16 22:37	7440-43-9	
Calcium	**89400**	ug/L	250	73.6	1	11/01/16 09:52	11/02/16 22:37	7440-70-2	
Chromium	**0.86J**	ug/L	1.0	0.39	1	11/01/16 09:52	11/02/16 22:37	7440-47-3	
Cobalt	**0.39J**	ug/L	1.0	0.036	1	11/01/16 09:52	11/02/16 22:37	7440-48-4	
Lead	**0.29J**	ug/L	1.0	0.040	1	11/01/16 09:52	11/02/16 22:37	7439-92-1	
Lithium	**15.8**	ug/L	1.0	0.11	1	11/01/16 09:52	11/02/16 22:37	7439-93-2	
Molybdenum	**2300**	ug/L	1.0	0.070	1	11/01/16 09:52	11/02/16 22:37	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	11/01/16 09:52	11/02/16 22:37	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	11/01/16 09:52	11/02/16 22:37	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	10/26/16 13:25	10/27/16 10:47	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.68**	Std. Units			1		10/20/16 10:56		
Field Specific Conductance	**1214**	umhos/cm			1		10/20/16 10:56		
Oxygen, Dissolved	**0.2**	mg/L			1		10/20/16 10:56	7782-44-7	
REDOX	**-24**	mV			1		10/20/16 10:56		
Turbidity	**46.07**	NTU			1		10/20/16 10:56		
Static Water Level	**598.5**	feet			1		10/20/16 10:56		
Temperature, Water (C)	**10.8**	deg C			1		10/20/16 10:56		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**838**	mg/L	20.0	8.7	1		10/27/16 17:39		
9040 pH	Analytical Method: EPA 9040								
pH	**7.5**	Std. Units	0.10	0.010	1		10/25/16 13:05		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**13.9**	mg/L	2.0	0.50	1		11/15/16 18:05	16887-00-6	
Fluoride	**0.34**	mg/L	0.30	0.10	1		11/15/16 18:05	16984-48-8	
Sulfate	**369**	mg/L	30.0	10.0	10		11/16/16 14:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Sample: EGS MW-302 **Lab ID: 40140699003** Collected: 10/20/16 10:26 Received: 10/22/16 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	11/01/16 09:52	11/02/16 22:44	7440-36-0	
Arsenic	**8.4**	ug/L	1.0	0.099	1	11/01/16 09:52	11/02/16 22:44	7440-38-2	
Barium	**57.2**	ug/L	1.0	0.062	1	11/01/16 09:52	11/02/16 22:44	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	11/01/16 09:52	11/02/16 22:44	7440-41-7	
Boron	**2150**	ug/L	10.0	2.0	1	11/01/16 09:52	11/03/16 11:48	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	11/01/16 09:52	11/02/16 22:44	7440-43-9	
Calcium	**72100**	ug/L	250	73.6	1	11/01/16 09:52	11/02/16 22:44	7440-70-2	
Chromium	**2.5**	ug/L	1.0	0.39	1	11/01/16 09:52	11/02/16 22:44	7440-47-3	
Cobalt	**0.84J**	ug/L	1.0	0.036	1	11/01/16 09:52	11/02/16 22:44	7440-48-4	
Lead	**0.71J**	ug/L	1.0	0.040	1	11/01/16 09:52	11/02/16 22:44	7439-92-1	
Lithium	**51.8**	ug/L	1.0	0.11	1	11/01/16 09:52	11/02/16 22:44	7439-93-2	
Molybdenum	**685**	ug/L	1.0	0.070	1	11/01/16 09:52	11/02/16 22:44	7439-98-7	
Selenium	**0.22J**	ug/L	1.0	0.21	1	11/01/16 09:52	11/02/16 22:44	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	11/01/16 09:52	11/02/16 22:44	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	10/26/16 13:25	10/27/16 10:50	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.89**	Std. Units			1		10/20/16 10:26		
Field Specific Conductance	**525**	umhos/cm			1		10/20/16 10:26		
Oxygen, Dissolved	**1.0**	mg/L			1		10/20/16 10:26	7782-44-7	
REDOX	**-111**	mV			1		10/20/16 10:26		
Turbidity	**62.99**	NTU			1		10/20/16 10:26		
Static Water Level	**595.46**	feet			1		10/20/16 10:26		
Temperature, Water (C)	**11.2**	deg C			1		10/20/16 10:26		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**348**	mg/L	20.0	8.7	1		10/27/16 17:39		
9040 pH	Analytical Method: EPA 9040								
pH	**7.8**	Std. Units	0.10	0.010	1		10/31/16 11:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**19.5**	mg/L	2.0	0.50	1		11/15/16 18:17	16887-00-6	
Fluoride	**0.80**	mg/L	0.30	0.10	1		11/15/16 18:17	16984-48-8	
Sulfate	**77.2**	mg/L	15.0	5.0	5		11/16/16 15:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Sample: EGS MW-303 **Lab ID: 40140699004** Collected: 10/20/16 09:26 Received: 10/22/16 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	11/01/16 09:52	11/02/16 22:50	7440-36-0	
Arsenic	**18.1**	ug/L	1.0	0.099	1	11/01/16 09:52	11/02/16 22:50	7440-38-2	
Barium	**180**	ug/L	1.0	0.062	1	11/01/16 09:52	11/02/16 22:50	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	11/01/16 09:52	11/02/16 22:50	7440-41-7	
Boron	**3740**	ug/L	10.0	2.0	1	11/01/16 09:52	11/03/16 11:54	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	11/01/16 09:52	11/02/16 22:50	7440-43-9	
Calcium	**147000**	ug/L	250	73.6	1	11/01/16 09:52	11/02/16 22:50	7440-70-2	
Chromium	**1.8**	ug/L	1.0	0.39	1	11/01/16 09:52	11/02/16 22:50	7440-47-3	
Cobalt	**4.4**	ug/L	1.0	0.036	1	11/01/16 09:52	11/02/16 22:50	7440-48-4	
Lead	**0.21J**	ug/L	1.0	0.040	1	11/01/16 09:52	11/02/16 22:50	7439-92-1	
Lithium	**8.9**	ug/L	1.0	0.11	1	11/01/16 09:52	11/02/16 22:50	7439-93-2	
Molybdenum	**9.0**	ug/L	1.0	0.070	1	11/01/16 09:52	11/02/16 22:50	7439-98-7	
Selenium	**0.55J**	ug/L	1.0	0.21	1	11/01/16 09:52	11/02/16 22:50	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	11/01/16 09:52	11/02/16 22:50	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	10/26/16 13:25	10/27/16 10:52	7439-97-6	
Field Data	Analytical Method:								
Field pH	**6.94**	Std. Units			1		10/20/16 09:26		
Field Specific Conductance	**1313**	umhos/cm			1		10/20/16 09:26		
Oxygen, Dissolved	**0**	mg/L			1		10/20/16 09:26	7782-44-7	
REDOX	**-102**	mV			1		10/20/16 09:26		
Turbidity	**16.45**	NTU			1		10/20/16 09:26		
Static Water Level	**588.37**	feet			1		10/20/16 09:26		
Temperature, Water (C)	**10.7**	deg C			1		10/20/16 09:26		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**744**	mg/L	20.0	8.7	1		10/27/16 17:40		
9040 pH	Analytical Method: EPA 9040								
pH	**7.2**	Std. Units	0.10	0.010	1		10/31/16 11:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**26.0**	mg/L	10.0	2.5	5		11/15/16 18:30	16887-00-6	
Fluoride	**<0.50**	mg/L	1.5	0.50	5		11/15/16 18:30	16984-48-8	D3
Sulfate	**5.6J**	mg/L	15.0	5.0	5		11/15/16 18:30	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Sample: FIELD BLANK **Lab ID: 40140699005** Collected: 10/20/16 12:00 Received: 10/22/16 07:30 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	11/01/16 09:52	11/02/16 19:47	7440-36-0	
Arsenic	**<0.099**	ug/L	1.0	0.099	1	11/01/16 09:52	11/02/16 19:47	7440-38-2	1q
Barium	**0.28J**	ug/L	1.0	0.062	1	11/01/16 09:52	11/02/16 19:47	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	11/01/16 09:52	11/02/16 19:47	7440-41-7	
Boron	**<2.0**	ug/L	10.0	2.0	1	11/01/16 09:52	11/02/16 19:47	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	11/01/16 09:52	11/02/16 19:47	7440-43-9	
Calcium	**<73.6**	ug/L	250	73.6	1	11/01/16 09:52	11/02/16 19:47	7440-70-2	
Chromium	**<0.39**	ug/L	1.0	0.39	1	11/01/16 09:52	11/02/16 19:47	7440-47-3	
Cobalt	**<0.036**	ug/L	1.0	0.036	1	11/01/16 09:52	11/02/16 19:47	7440-48-4	
Lead	**<0.040**	ug/L	1.0	0.040	1	11/01/16 09:52	11/02/16 19:47	7439-92-1	
Lithium	**<0.11**	ug/L	1.0	0.11	1	11/01/16 09:52	11/02/16 19:47	7439-93-2	
Molybdenum	**<0.070**	ug/L	1.0	0.070	1	11/01/16 09:52	11/02/16 19:47	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	11/01/16 09:52	11/02/16 19:47	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	11/01/16 09:52	11/02/16 19:47	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	10/26/16 13:25	10/27/16 10:54	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**<8.7**	mg/L	20.0	8.7	1		10/27/16 17:40		
9040 pH	Analytical Method: EPA 9040								
pH	**7.1**	Std. Units	0.10	0.010	1		10/31/16 11:10		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**<0.50**	mg/L	2.0	0.50	1		11/15/16 18:43	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		11/15/16 18:43	16984-48-8	
Sulfate	**<1.0**	mg/L	3.0	1.0	1		11/15/16 18:43	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

QC Batch: 239379 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

METHOD BLANK: 1418208 Matrix: Water
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	10/27/16 09:50	

LABORATORY CONTROL SAMPLE: 1418209

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1418210 1418211

Parameter	Units	40140697001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.13	5	5	5.4	5.2	107	104	85-115	3	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

QC Batch: 239895 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

METHOD BLANK: 1421008 Matrix: Water
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	<0.073	1.0	11/02/16 19:27	
Arsenic	ug/L	<0.099	1.0	11/02/16 19:27	
Barium	ug/L	<0.062	1.0	11/02/16 19:27	
Beryllium	ug/L	<0.13	1.0	11/02/16 19:27	
Boron	ug/L	<2.0	10.0	11/02/16 19:27	
Cadmium	ug/L	<0.089	1.0	11/02/16 19:27	
Calcium	ug/L	<73.6	250	11/02/16 19:27	
Chromium	ug/L	<0.39	1.0	11/02/16 19:27	
Cobalt	ug/L	<0.036	1.0	11/02/16 19:27	
Lead	ug/L	<0.040	1.0	11/02/16 19:27	
Lithium	ug/L	<0.11	1.0	11/02/16 19:27	
Molybdenum	ug/L	<0.070	1.0	11/02/16 19:27	
Selenium	ug/L	<0.21	1.0	11/02/16 19:27	
Thallium	ug/L	<0.14	1.0	11/02/16 19:27	

LABORATORY CONTROL SAMPLE: 1421009

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	512	102	80-120	
Arsenic	ug/L	500	487	97	80-120	
Barium	ug/L	500	487	97	80-120	
Beryllium	ug/L	500	477	95	80-120	
Boron	ug/L	500	444	89	80-120	
Cadmium	ug/L	500	508	102	80-120	
Calcium	ug/L	5000	5280	106	80-120	
Chromium	ug/L	500	488	98	80-120	
Cobalt	ug/L	500	485	97	80-120	
Lead	ug/L	500	491	98	80-120	
Lithium	ug/L	500	438	88	80-120	
Molybdenum	ug/L	500	508	102	80-120	
Selenium	ug/L	500	512	102	80-120	
Thallium	ug/L	500	477	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1421010 1421011

Parameter	Units	40140684001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	0.078J	500	500	515	526	103	105	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1421010 1421011

Parameter	Units	40140684001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	1.3	500	500	506	512	101	102	75-125	1	20	
Barium	ug/L	78.9	500	500	586	586	102	101	75-125	0	20	
Beryllium	ug/L	<0.13	500	500	481	487	96	97	75-125	1	20	
Boron	ug/L	828	500	500	1330	1280	100	90	75-125	4	20	
Cadmium	ug/L	<0.089	500	500	502	507	100	101	75-125	1	20	
Calcium	ug/L	137000	5000	5000	142000	142000	92	86	75-125	0	20	
Chromium	ug/L	0.46J	500	500	492	489	98	98	75-125	1	20	
Cobalt	ug/L	0.37J	500	500	487	483	97	97	75-125	1	20	
Lead	ug/L	0.42J	500	500	497	492	99	98	75-125	1	20	
Lithium	ug/L	37.4	500	500	501	497	93	92	75-125	1	20	
Molybdenum	ug/L	15.0	500	500	546	553	106	108	75-125	1	20	
Selenium	ug/L	<0.21	500	500	515	527	103	105	75-125	2	20	
Thallium	ug/L	<0.14	500	500	488	483	98	97	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

QC Batch: 239583 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

METHOD BLANK: 1419205 Matrix: Water
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	10/27/16 17:36	

LABORATORY CONTROL SAMPLE: 1419206

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	640	616	96	80-120	

SAMPLE DUPLICATE: 1419207

Parameter	Units	40140678001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	110	108	2	5	

SAMPLE DUPLICATE: 1419208

Parameter	Units	40140743001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	96.0	100	4	5	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

QC Batch: 239247 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40140699001, 40140699002

SAMPLE DUPLICATE: 1417459

Parameter	Units	40140688003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.7	7.8	1	20	H6

SAMPLE DUPLICATE: 1417460

Parameter	Units	40140219017 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.5	7.5	0	20	H6

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

QC Batch: 239820 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40140699003, 40140699004, 40140699005

SAMPLE DUPLICATE: 1420658

Parameter	Units	40140770001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.7	7.8	1	20	H6

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

QC Batch: 241291 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

METHOD BLANK: 1430535 Matrix: Water
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	2.0	11/15/16 11:36	
Fluoride	mg/L	<0.10	0.30	11/15/16 11:36	
Sulfate	mg/L	<1.0	3.0	11/15/16 11:36	

LABORATORY CONTROL SAMPLE: 1430536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.5	107	90-110	
Fluoride	mg/L	2	2.1	103	90-110	
Sulfate	mg/L	20	21.3	106	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1430537 1430538

Parameter	Units	40140650001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	180	1000	1000	1230	1230	105	105	90-110	0	15	
Fluoride	mg/L	<5.0	100	100	102	103	102	103	90-110	1	15	
Sulfate	mg/L	50.7J	1000	1000	1050	1060	100	101	90-110	1	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1430539 1430540

Parameter	Units	40141145001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	265	200	200	485	476	110	105	90-110	2	15	
Fluoride	mg/L	8.0	10	10	17.7	17.8	97	99	90-110	1	15	
Sulfate	mg/L	144	100	100	245	247	101	102	90-110	1	15	

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REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Sample: EGS 2R-OW **Lab ID: 40140699001** Collected: 10/20/16 11:56 Received: 10/22/16 07:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.193 ± 0.881 (1.42) C:NA T:92%**	pCi/L	11/16/16 21:58	13982-63-3	
Radium-228	EPA 904.0	**0.703 ± 0.510 (0.999) C:61% T:83%**	pCi/L	11/16/16 12:08	15262-20-1	
Total Radium	Total Radium Calculation	**0.896 ± 1.39 (2.42)**	pCi/L	11/17/16 14:37	7440-14-4	

Sample: EGS MW-301 **Lab ID: 40140699002** Collected: 10/20/16 10:56 Received: 10/22/16 07:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.193 ± 0.882 (0.524) C:NA T:80%**	pCi/L	11/16/16 21:58	13982-63-3	
Radium-228	EPA 904.0	**0.536 ± 0.543 (1.12) C:64% T:79%**	pCi/L	11/16/16 12:38	15262-20-1	
Total Radium	Total Radium Calculation	**0.729 ± 1.43 (1.64)**	pCi/L	11/17/16 14:37	7440-14-4	

Sample: EGS MW-302 **Lab ID: 40140699003** Collected: 10/20/16 10:26 Received: 10/22/16 07:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.331 ± 0.757 (1.22) C:NA T:89%**	pCi/L	11/16/16 21:59	13982-63-3	
Radium-228	EPA 904.0	**0.440 ± 0.439 (0.907) C:67% T:82%**	pCi/L	11/16/16 12:08	15262-20-1	
Total Radium	Total Radium Calculation	**0.771 ± 1.20 (2.13)**	pCi/L	11/17/16 14:37	7440-14-4	

Sample: EGS MW-303 **Lab ID: 40140699004** Collected: 10/20/16 09:26 Received: 10/22/16 07:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.521 ± 1.02 (1.87) C:NA T:88%**	pCi/L	11/16/16 21:59	13982-63-3	
Radium-228	EPA 904.0	**0.962 ± 0.487 (0.890) C:85% T:86%**	pCi/L	11/16/16 12:08	15262-20-1	
Total Radium	Total Radium Calculation	**1.48 ± 1.51 (2.76)**	pCi/L	11/17/16 14:37	7440-14-4	

Sample: FIELD BLANK **Lab ID: 40140699005** Collected: 10/20/16 12:00 Received: 10/22/16 07:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.341 ± 0.779 (1.26) C:NA T:96%**	pCi/L	11/16/16 21:59	13982-63-3	
Radium-228	EPA 904.0	**0.791 ± 0.557 (1.08) C:58% T:80%**	pCi/L	11/16/16 12:29	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Sample: FIELD BLANK **Lab ID: 40140699005** Collected: 10/20/16 12:00 Received: 10/22/16 07:30 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.13 ± 1.34 (2.34)**	pCi/L	11/17/16 14:37	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

QC Batch: 239752 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

METHOD BLANK: 1177963 Matrix: Water
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.0714 ± 0.326 (0.526) C:NA T:93%	pCi/L	11/16/16 21:58	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

QC Batch: 239706 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

METHOD BLANK: 1177854 Matrix: Water
Associated Lab Samples: 40140699001, 40140699002, 40140699003, 40140699004, 40140699005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	-0.222 ± 0.385 (0.945) C:67% T:79%	pCi/L	11/16/16 12:30	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALIFIERS

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

DEFINITIONS

Act - Activity
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)
(MDC) - Minimum Detectable Concentration
Trac - Tracer Recovery (%)
Carr - Carrier Recovery (%)
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above LOD.
J - Estimated concentration at or above the LOD and below the LOQ.
LOD - Limit of Detection adjusted for dilution factor and percent moisture.
LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1q	Analyte was measured in the associated method blank at -0.102 ug/L.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H6	Analysis initiated outside of the 15 minute EPA required holding time.

Pace Analytical Services, LLC
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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216069.00 EDGWTR CLOSED CCR
Pace Project No.: 40140699

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40140699001	EGS 2R-OW	EPA 3010	239895	EPA 6020	239983
40140699002	EGS MW-301	EPA 3010	239895	EPA 6020	239983
40140699003	EGS MW-302	EPA 3010	239895	EPA 6020	239983
40140699004	EGS MW-303	EPA 3010	239895	EPA 6020	239983
40140699005	FIELD BLANK	EPA 3010	239895	EPA 6020	239983
40140699001	EGS 2R-OW	EPA 7470	239379	EPA 7470	239408
40140699002	EGS MW-301	EPA 7470	239379	EPA 7470	239408
40140699003	EGS MW-302	EPA 7470	239379	EPA 7470	239408
40140699004	EGS MW-303	EPA 7470	239379	EPA 7470	239408
40140699005	FIELD BLANK	EPA 7470	239379	EPA 7470	239408
40140699001	EGS 2R-OW				
40140699002	EGS MW-301				
40140699003	EGS MW-302				
40140699004	EGS MW-303				
40140699001	EGS 2R-OW	EPA 903.1	239752		
40140699002	EGS MW-301	EPA 903.1	239752		
40140699003	EGS MW-302	EPA 903.1	239752		
40140699004	EGS MW-303	EPA 903.1	239752		
40140699005	FIELD BLANK	EPA 903.1	239752		
40140699001	EGS 2R-OW	EPA 904.0	239706		
40140699002	EGS MW-301	EPA 904.0	239706		
40140699003	EGS MW-302	EPA 904.0	239706		
40140699004	EGS MW-303	EPA 904.0	239706		
40140699005	FIELD BLANK	EPA 904.0	239706		
40140699001	EGS 2R-OW	Total Radium Calculation	240713		
40140699002	EGS MW-301	Total Radium Calculation	240713		
40140699003	EGS MW-302	Total Radium Calculation	240713		
40140699004	EGS MW-303	Total Radium Calculation	240713		
40140699005	FIELD BLANK	Total Radium Calculation	240713		
40140699001	EGS 2R-OW	SM 2540C	239583		
40140699002	EGS MW-301	SM 2540C	239583		
40140699003	EGS MW-302	SM 2540C	239583		
40140699004	EGS MW-303	SM 2540C	239583		
40140699005	FIELD BLANK	SM 2540C	239583		
40140699001	EGS 2R-OW	EPA 9040	239247		
40140699002	EGS MW-301	EPA 9040	239247		
40140699003	EGS MW-302	EPA 9040	239820		
40140699004	EGS MW-303	EPA 9040	239820		
40140699005	FIELD BLANK	EPA 9040	239820		
40140699001	EGS 2R-OW	EPA 300.0	241291		
40140699002	EGS MW-301	EPA 300.0	241291		
40140699003	EGS MW-302	EPA 300.0	241291		
40140699004	EGS MW-303	EPA 300.0	241291		
40140699005	FIELD BLANK	EPA 300.0	241291		

REPORT OF LABORATORY ANALYSIS

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

Pace Analytical®
www.pacelabs.com

mm

401406999

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	SCS Engineers
Branch/Location:	Madison WI
Project Contact:	Meg Blodgett
Phone:	608-216-7362
Project Number:	25216069.00
Project Name:	Edgewater Closed Ash Fill
Project State:	WI
Sampled By (Print):	Gary Stevkel
Sampled By (Sign):	Gary Stevkel
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	SCS Engineers
Invoice To Address:	2830 Dairy Dr Madison WI 53718
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: Chloride Fluoride Sulfate TDS	pH	Radium 226	Radium 228	B, Cd, Sb, As, Ba, Be, Cr, Co, Pb, Li, Mo, Sl, Tl	Mercury	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N		N	N	N	N	N	N	N		
					Pick Letter		A	A	D	D	D	D	D		
001	EGS 2R-OW	10/20/16	1156	W			X	X	X	X	X	X	X	2-500ml pD	4-250ml pDDAA
002	EGS MW-301	10/20/16	1056	W			X	X	X	X	X	X	X		
003	EGS MW-302	10/20/16	1026	W			X	X	X	X	X	X	X		
004	EGS MW-303	10/20/16	0926	W			X	X	X	X	X	X	X		
005	Field Blank	10/20/16	1200	W			X	X	X	X	X	X	X		

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

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Gary Stevkel	10/21/16 8:45	Mary Fanning	10/21/16 8:45
Mary Fanning	10/21/16 1530		
SCS Logistics	10/22/16 0730	PACE	10/22/16 0730

PACE Project No.
401406999

Receipt Temp = 10.1 °C

Sample Receipt pH
(OK) Adjusted

Cooler Custody Seal
(Present) / Not Present
(Intact) / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Pace Analytical™

Sample Condition Upon Receipt

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

Client Name: SCS

Project # **WO# : 40140699**

40140699

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics

Tracking #:

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

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

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROI /Corr: — **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

Person examining contents:
Date: 10/22/16
Initials: BD

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

Client Notification/ Resolution:
Person Contacted: Date/Time:
Comments/ Resolution:

If checked, see attached form for additional comments ☐

Project Manager Review: [signature] **Date:** 10/22/16

A5 Round 5 Background Sampling, Analytical Laboratory Report

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

February 20, 2017

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Dear Meghan Blodgett:
Enclosed are the analytical results for sample(s) received by the laboratory on January 26, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

Tod Noltemeyer for
Dan Milewsky
dan.milewsky@pacelabs.com
Project Manager

Enclosures

cc: Tom Karwoski, SCS ENGINEERS
Jeff Maxted, ALLIANT ENERGY
Marc Morandi, ALLIANT ENERGY

Pace Analytical Services, LLC
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CERTIFICATIONS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Green Bay Certification IDs

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40144902001	**EGS MW 302**	Water	01/24/17 09:57	01/26/17 10:00
40144902002	**EGS MW 303**	Water	01/24/17 11:09	01/26/17 10:00
40144902003	**EGS 2ROW**	Water	01/24/17 12:48	01/26/17 10:00
40144902004	**FIELD BLANK**	Water	01/24/17 09:40	01/26/17 10:00
40144902005	**EGS MW 301**	Water	01/23/17 14:51	01/26/17 10:00

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SAMPLE ANALYTE COUNT

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40144902001	**EGS MW 302**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			JLJ	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40144902002	**EGS MW 303**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			JLJ	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40144902003	**EGS 2ROW**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			JLJ	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40144902004	**FIELD BLANK**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40144902005	**EGS MW 301**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
			JLJ	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Sample: EGS MW 302 **Lab ID: 40144902001** Collected: 01/24/17 09:57 Received: 01/26/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.86J**	ug/L	5.0	0.36	5	01/31/17 08:20	02/01/17 04:17	7440-36-0	D3
Arsenic	**10.9**	ug/L	5.0	0.50	5	01/31/17 08:20	02/01/17 04:17	7440-38-2	
Barium	**90.1**	ug/L	5.0	0.31	5	01/31/17 08:20	02/01/17 04:17	7440-39-3	
Beryllium	**0.78J**	ug/L	5.0	0.63	5	01/31/17 08:20	02/01/17 04:17	7440-41-7	D3
Boron	**2000**	ug/L	50.0	10	5	01/31/17 08:20	02/01/17 12:15	7440-42-8	
Cadmium	**0.49J**	ug/L	5.0	0.44	5	01/31/17 08:20	02/01/17 04:17	7440-43-9	D3
Calcium	**87400**	ug/L	1250	368	5	01/31/17 08:20	02/01/17 04:17	7440-70-2	
Chromium	**7.1**	ug/L	5.0	2.0	5	01/31/17 08:20	02/01/17 04:17	7440-47-3	
Cobalt	**2.6J**	ug/L	5.0	0.18	5	01/31/17 08:20	02/01/17 04:17	7440-48-4	D3
Lead	**2.3J**	ug/L	5.0	0.20	5	01/31/17 08:20	02/01/17 04:17	7439-92-1	D3
Lithium	**54.8**	ug/L	5.0	0.54	5	01/31/17 08:20	02/01/17 04:17	7439-93-2	
Molybdenum	**674**	ug/L	5.0	0.35	5	01/31/17 08:20	02/01/17 04:17	7439-98-7	
Selenium	**<1.0**	ug/L	5.0	1.0	5	01/31/17 08:20	02/01/17 12:15	7782-49-2	D3
Thallium	**1.6J**	ug/L	5.0	0.71	5	01/31/17 08:20	02/01/17 04:17	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	02/07/17 10:10	02/08/17 10:07	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.98**	Std. Units			1		01/24/17 09:57		
Field Specific Conductance	**519**	umhos/cm			1		01/24/17 09:57		
Oxygen, Dissolved	**0.1**	mg/L			1		01/24/17 09:57	7782-44-7	
REDOX	**-87**	mV			1		01/24/17 09:57		
Turbidity	**161.1**	NTU			1		01/24/17 09:57		
Static Water Level	**596.3**	feet			1		01/24/17 09:57		
Temperature, Water (C)	**9.3**	deg C			1		01/24/17 09:57		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**328**	mg/L	20.0	8.7	1		01/26/17 15:16		
9040 pH	Analytical Method: EPA 9040								
pH	**7.7**	Std. Units	0.10	0.010	1		01/30/17 10:45		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**18.6**	mg/L	10.0	2.5	5		02/07/17 13:25	16887-00-6	
Fluoride	**0.89J**	mg/L	1.5	0.50	5		02/07/17 13:25	16984-48-8	D3
Sulfate	**71.1**	mg/L	15.0	5.0	5		02/07/17 13:25	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Sample: EGS MW 303 **Lab ID: 40144902002** Collected: 01/24/17 11:09 Received: 01/26/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	01/31/17 08:20	02/01/17 04:30	7440-36-0	
Arsenic	**25.3**	ug/L	1.0	0.099	1	01/31/17 08:20	02/01/17 04:30	7440-38-2	
Barium	**186**	ug/L	1.0	0.062	1	01/31/17 08:20	02/01/17 04:30	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	01/31/17 08:20	02/01/17 04:30	7440-41-7	
Boron	**4210**	ug/L	50.0	10	5	01/31/17 08:20	02/01/17 12:28	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	01/31/17 08:20	02/01/17 04:30	7440-43-9	
Calcium	**147000**	ug/L	250	73.6	1	01/31/17 08:20	02/01/17 04:30	7440-70-2	
Chromium	**1.4**	ug/L	1.0	0.39	1	01/31/17 08:20	02/01/17 04:30	7440-47-3	
Cobalt	**4.3**	ug/L	1.0	0.036	1	01/31/17 08:20	02/01/17 04:30	7440-48-4	
Lead	**0.19J**	ug/L	1.0	0.040	1	01/31/17 08:20	02/01/17 04:30	7439-92-1	
Lithium	**8.3**	ug/L	1.0	0.11	1	01/31/17 08:20	02/01/17 04:30	7439-93-2	
Molybdenum	**7.7**	ug/L	1.0	0.070	1	01/31/17 08:20	02/01/17 04:30	7439-98-7	
Selenium	**0.71J**	ug/L	1.0	0.21	1	01/31/17 08:20	02/01/17 14:38	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	01/31/17 08:20	02/01/17 04:30	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	02/07/17 10:10	02/08/17 10:09	7439-97-6	
Field Data	Analytical Method:								
Field pH	**6.94**	Std. Units			1		01/24/17 11:09		
Field Specific Conductance	**1335**	umhos/cm			1		01/24/17 11:09		
Oxygen, Dissolved	**0.0**	mg/L			1		01/24/17 11:09	7782-44-7	
REDOX	**-89**	mV			1		01/24/17 11:09		
Turbidity	**12.58**	NTU			1		01/24/17 11:09		
Static Water Level	**588.84**	feet			1		01/24/17 11:09		
Temperature, Water (C)	**10.5**	deg C			1		01/24/17 11:09		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**738**	mg/L	20.0	8.7	1		01/26/17 15:17		
9040 pH	Analytical Method: EPA 9040								
pH	**7.0**	Std. Units	0.10	0.010	1		01/30/17 10:45		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**26.2**	mg/L	10.0	2.5	5		02/07/17 13:37	16887-00-6	
Fluoride	**<0.50**	mg/L	1.5	0.50	5		02/07/17 13:37	16984-48-8	D3
Sulfate	**<5.0**	mg/L	15.0	5.0	5		02/07/17 13:37	14808-79-8	D3

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Sample: EGS 2ROW **Lab ID: 40144902003** Collected: 01/24/17 12:48 Received: 01/26/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.073J**	ug/L	1.0	0.073	1	01/31/17 08:20	02/01/17 04:37	7440-36-0	
Arsenic	**0.65J**	ug/L	1.0	0.099	1	01/31/17 08:20	02/01/17 04:37	7440-38-2	
Barium	**158**	ug/L	1.0	0.062	1	01/31/17 08:20	02/01/17 04:37	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	01/31/17 08:20	02/01/17 04:37	7440-41-7	
Boron	**31.2**	ug/L	10.0	2.0	1	01/31/17 08:20	02/01/17 12:35	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	01/31/17 08:20	02/01/17 04:37	7440-43-9	
Calcium	**152000**	ug/L	250	73.6	1	01/31/17 08:20	02/01/17 04:37	7440-70-2	
Chromium	**2.6**	ug/L	1.0	0.39	1	01/31/17 08:20	02/01/17 04:37	7440-47-3	
Cobalt	**0.22J**	ug/L	1.0	0.036	1	01/31/17 08:20	02/01/17 04:37	7440-48-4	
Lead	**0.38J**	ug/L	1.0	0.040	1	01/31/17 08:20	02/01/17 04:37	7439-92-1	
Lithium	**8.2**	ug/L	1.0	0.11	1	01/31/17 08:20	02/01/17 04:37	7439-93-2	
Molybdenum	**0.28J**	ug/L	1.0	0.070	1	01/31/17 08:20	02/01/17 04:37	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	01/31/17 08:20	02/01/17 12:35	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	01/31/17 08:20	02/01/17 04:37	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	02/07/17 10:10	02/08/17 10:16	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.15**	Std. Units			1		01/24/17 12:48		
Field Specific Conductance	**1579**	umhos/cm			1		01/24/17 12:48		
Oxygen, Dissolved	**1.0**	mg/L			1		01/24/17 12:48	7782-44-7	
REDOX	**87**	mV			1		01/24/17 12:48		
Turbidity	**11.71**	NTU			1		01/24/17 12:48		
Static Water Level	**609.64**	feet			1		01/24/17 12:48		
Temperature, Water (C)	**7.5**	deg C			1		01/24/17 12:48		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**854**	mg/L	20.0	8.7	1		01/26/17 15:17		
9040 pH	Analytical Method: EPA 9040								
pH	**7.4**	Std. Units	0.10	0.010	1		01/30/17 11:15		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**201**	mg/L	20.0	5.0	10		02/07/17 19:35	16887-00-6	M0
Fluoride	**<0.10**	mg/L	0.30	0.10	1		02/07/17 13:49	16984-48-8	
Sulfate	**23.9**	mg/L	3.0	1.0	1		02/07/17 13:49	14808-79-8	M0

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Sample: FIELD BLANK **Lab ID: 40144902004** Collected: 01/24/17 09:40 Received: 01/26/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	01/31/17 08:20	02/01/17 02:48	7440-36-0	
Arsenic	**<0.099**	ug/L	1.0	0.099	1	01/31/17 08:20	02/01/17 02:48	7440-38-2	
Barium	**<0.062**	ug/L	1.0	0.062	1	01/31/17 08:20	02/01/17 02:48	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	01/31/17 08:20	02/01/17 02:48	7440-41-7	
Boron	**<2.0**	ug/L	10.0	2.0	1	01/31/17 08:20	02/01/17 11:13	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	01/31/17 08:20	02/01/17 02:48	7440-43-9	
Calcium	**<73.6**	ug/L	250	73.6	1	01/31/17 08:20	02/01/17 02:48	7440-70-2	
Chromium	**<0.39**	ug/L	1.0	0.39	1	01/31/17 08:20	02/01/17 02:48	7440-47-3	
Cobalt	**<0.036**	ug/L	1.0	0.036	1	01/31/17 08:20	02/01/17 02:48	7440-48-4	
Lead	**<0.040**	ug/L	1.0	0.040	1	01/31/17 08:20	02/01/17 02:48	7439-92-1	
Lithium	**<0.11**	ug/L	1.0	0.11	1	01/31/17 08:20	02/01/17 02:48	7439-93-2	
Molybdenum	**<0.070**	ug/L	1.0	0.070	1	01/31/17 08:20	02/01/17 02:48	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	01/31/17 08:20	02/01/17 11:13	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	01/31/17 08:20	02/01/17 02:48	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	02/07/17 10:10	02/08/17 10:18	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**<8.7**	mg/L	20.0	8.7	1		01/26/17 15:18		
9040 pH	Analytical Method: EPA 9040								
pH	**7.2**	Std. Units	0.10	0.010	1		01/30/17 11:15		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**<0.50**	mg/L	2.0	0.50	1		02/07/17 14:25	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		02/07/17 14:25	16984-48-8	
Sulfate	**<1.0**	mg/L	3.0	1.0	1		02/07/17 14:25	14808-79-8	

Sample: EGS MW 301 **Lab ID: 40144902005** Collected: 01/23/17 14:51 Received: 01/26/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.20J**	ug/L	1.0	0.073	1	01/31/17 08:20	02/01/17 03:36	7440-36-0	
Arsenic	**1.8**	ug/L	1.0	0.099	1	01/31/17 08:20	02/01/17 03:36	7440-38-2	
Barium	**32.2**	ug/L	1.0	0.062	1	01/31/17 08:20	02/01/17 03:36	7440-39-3	
Beryllium	**0.28J**	ug/L	1.0	0.13	1	01/31/17 08:20	02/01/17 03:36	7440-41-7	
Boron	**9280**	ug/L	100	20.0	10	01/31/17 08:20	02/01/17 11:34	7440-42-8	P6
Cadmium	**0.17J**	ug/L	1.0	0.089	1	01/31/17 08:20	02/01/17 03:36	7440-43-9	
Calcium	**89200**	ug/L	2500	736	10	01/31/17 08:20	02/01/17 03:09	7440-70-2	P6
Chromium	**1.1**	ug/L	1.0	0.39	1	01/31/17 08:20	02/01/17 03:36	7440-47-3	
Cobalt	**0.24J**	ug/L	1.0	0.036	1	01/31/17 08:20	02/01/17 03:36	7440-48-4	
Lead	**0.47J**	ug/L	1.0	0.040	1	01/31/17 08:20	02/01/17 03:36	7439-92-1	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

ANALYTICAL RESULTS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Sample: EGS MW 301 **Lab ID: 40144902005** Collected: 01/23/17 14:51 Received: 01/26/17 10:00 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Lithium	**16.3**	ug/L	1.0	0.11	1	01/31/17 08:20	02/01/17 03:36	7439-93-2	
Molybdenum	**2210**	ug/L	10.0	0.70	10	01/31/17 08:20	02/01/17 03:09	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	01/31/17 08:20	02/01/17 14:10	7782-49-2	
Thallium	**0.22J**	ug/L	1.0	0.14	1	01/31/17 08:20	02/01/17 03:36	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	02/07/17 10:10	02/08/17 10:21	7439-97-6	
Field Data	Analytical Method:								
Field pH	**8.03**	Std. Units			1		01/23/17 14:51		
Field Specific Conductance	**1198**	umhos/cm			1		01/23/17 14:51		
Oxygen, Dissolved	**7.4**	mg/L			1		01/23/17 14:51	7782-44-7	
REDOX	**173**	mV			1		01/23/17 14:51		
Turbidity	**21.84**	NTU			1		01/23/17 14:51		
Static Water Level	**597.1**	feet			1		01/23/17 14:51		
Temperature, Water (C)	**8.8**	deg C			1		01/23/17 14:51		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**826**	mg/L	20.0	8.7	1		01/26/17 15:18		
9040 pH	Analytical Method: EPA 9040								
pH	**7.9**	Std. Units	0.10	0.010	1		01/30/17 11:15		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**13.8**	mg/L	2.0	0.50	1		02/07/17 14:37	16887-00-6	
Fluoride	**0.42**	mg/L	0.30	0.10	1		02/07/17 14:37	16984-48-8	
Sulfate	**372**	mg/L	30.0	10.0	10		02/07/17 17:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

QC Batch: 247782 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

METHOD BLANK: 1464492 Matrix: Water
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	02/08/17 09:34	

LABORATORY CONTROL SAMPLE: 1464493

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	99	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1464494 1464495

Parameter	Units	40144847001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.13	5	5	4.6	4.7	93	93	85-115	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

QC Batch: 247370 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

METHOD BLANK: 1461749 Matrix: Water
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	<0.073	1.0	02/01/17 02:42	
Arsenic	ug/L	<0.099	1.0	02/01/17 02:42	
Barium	ug/L	<0.062	1.0	02/01/17 02:42	
Beryllium	ug/L	<0.13	1.0	02/01/17 02:42	
Boron	ug/L	<2.0	10.0	02/01/17 11:06	
Cadmium	ug/L	<0.089	1.0	02/01/17 02:42	
Calcium	ug/L	<73.6	250	02/01/17 02:42	
Chromium	ug/L	<0.39	1.0	02/01/17 02:42	
Cobalt	ug/L	<0.036	1.0	02/01/17 02:42	
Lead	ug/L	<0.040	1.0	02/01/17 02:42	
Lithium	ug/L	<0.11	1.0	02/01/17 02:42	
Molybdenum	ug/L	<0.070	1.0	02/01/17 02:42	
Selenium	ug/L	<0.21	1.0	02/01/17 11:06	
Thallium	ug/L	<0.14	1.0	02/01/17 02:42	

LABORATORY CONTROL SAMPLE: 1461750

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	533	107	80-120	
Arsenic	ug/L	500	509	102	80-120	
Barium	ug/L	500	534	107	80-120	
Beryllium	ug/L	500	523	105	80-120	
Boron	ug/L	500	522	104	80-120	
Cadmium	ug/L	500	514	103	80-120	
Calcium	ug/L	5000	5050	101	80-120	
Chromium	ug/L	500	509	102	80-120	
Cobalt	ug/L	500	504	101	80-120	
Lead	ug/L	500	528	106	80-120	
Lithium	ug/L	500	510	102	80-120	
Molybdenum	ug/L	500	529	106	80-120	
Selenium	ug/L	500	550	110	80-120	
Thallium	ug/L	500	512	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1461751 1461752

Parameter	Units	40144902005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	0.20J	500	500	548	547	110	109	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1461751 1461752

Parameter	Units	40144902005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	1.8	500	500	535	534	107	107	75-125	0	20	
Barium	ug/L	32.2	500	500	586	592	111	112	75-125	1	20	
Beryllium	ug/L	0.28J	500	500	478	490	95	98	75-125	3	20	
Boron	ug/L	9280	500	500	9490	9990	41	141	75-125	5	20	P6
Cadmium	ug/L	0.17J	500	500	510	512	102	102	75-125	0	20	
Calcium	ug/L	89200	5000	5000	90000	95700	16	131	75-125	6	20	P6
Chromium	ug/L	1.1	500	500	500	508	100	101	75-125	2	20	
Cobalt	ug/L	0.24J	500	500	495	503	99	101	75-125	2	20	
Lead	ug/L	0.47J	500	500	507	498	101	100	75-125	2	20	
Lithium	ug/L	16.3	500	500	498	510	96	99	75-125	2	20	
Molybdenum	ug/L	2210	500	500	2680	2790	93	116	75-125	4	20	
Selenium	ug/L	<0.21	500	500	560	552	112	110	75-125	1	20	
Thallium	ug/L	0.22J	500	500	502	493	100	99	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

QC Batch: 247165 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

METHOD BLANK: 1460906 Matrix: Water
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	01/26/17 15:10	

LABORATORY CONTROL SAMPLE: 1460907

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	586	562	96	80-120	

SAMPLE DUPLICATE: 1460908

Parameter	Units	40144884001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	572	578	1	5	

SAMPLE DUPLICATE: 1460909

Parameter	Units	40144901001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	254	254	0	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

QC Batch: 247324 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

SAMPLE DUPLICATE: 1461625

Parameter	Units	40144884001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	10.7	10.8	0	20	H6

SAMPLE DUPLICATE: 1461626

Parameter	Units	40144814001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	8.0	8.0	0	20	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

QC Batch: 247277 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

METHOD BLANK: 1461484 Matrix: Water
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	2.0	02/07/17 10:48	
Fluoride	mg/L	<0.10	0.30	02/07/17 10:48	
Sulfate	mg/L	<1.0	3.0	02/07/17 10:48	

LABORATORY CONTROL SAMPLE: 1461485

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	18.5	93	90-110	
Fluoride	mg/L	2	1.9	93	90-110	
Sulfate	mg/L	20	18.4	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1461486 1461487

Parameter	Units	40144902003 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	201	200	200	421	423	110	111	90-110	0	15	M0
Fluoride	mg/L	<0.10	2	2	2.2	2.1	107	102	90-110	5	15	
Sulfate	mg/L	23.9	20	20	46.4	44.6	112	103	90-110	4	15	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1464216 1464217

Parameter	Units	40145002012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.7J	20	20	21.9	22.3	101	103	90-110	2	15	
Fluoride	mg/L	0.15J	2	2	2.2	2.2	102	105	90-110	2	15	
Sulfate	mg/L	8.2	20	20	29.0	29.5	104	107	90-110	2	15	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Sample: EGS MW 302 **Lab ID: 40144902001** Collected: 01/24/17 09:57 Received: 01/26/17 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.370 ± 0.299 (0.167) C:NA T:94%**	pCi/L	02/17/17 20:35	13982-63-3	
Radium-228	EPA 904.0	**1.53 ± 0.945 (1.77) C:72% T:36%**	pCi/L	02/17/17 11:53	15262-20-1	
Total Radium	Total Radium Calculation	**1.90 ± 1.24 (1.94)**	pCi/L	02/17/17 21:58	7440-14-4	

Sample: EGS MW 303 **Lab ID: 40144902002** Collected: 01/24/17 11:09 Received: 01/26/17 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.386 ± 0.420 (0.661) C:NA T:97%**	pCi/L	02/17/17 20:35	13982-63-3	
Radium-228	EPA 904.0	**0.772 ± 0.482 (0.917) C:68% T:86%**	pCi/L	02/17/17 11:53	15262-20-1	
Total Radium	Total Radium Calculation	**1.16 ± 0.902 (1.58)**	pCi/L	02/17/17 21:58	7440-14-4	

Sample: EGS 2ROW **Lab ID: 40144902003** Collected: 01/24/17 12:48 Received: 01/26/17 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.000 ± 0.267 (0.431) C:NA T:95%**	pCi/L	02/17/17 20:35	13982-63-3	
Radium-228	EPA 904.0	**0.627 ± 0.430 (0.825) C:69% T:80%**	pCi/L	02/17/17 11:53	15262-20-1	
Total Radium	Total Radium Calculation	**0.627 ± 0.697 (1.26)**	pCi/L	02/17/17 21:58	7440-14-4	

Sample: FIELD BLANK **Lab ID: 40144902004** Collected: 01/24/17 09:40 Received: 01/26/17 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.000 ± 0.326 (0.707) C:NA T:96%**	pCi/L	02/17/17 21:00	13982-63-3	
Radium-228	EPA 904.0	**0.430 ± 0.506 (1.07) C:65% T:75%**	pCi/L	02/17/17 12:45	15262-20-1	
Total Radium	Total Radium Calculation	**0.430 ± 0.832 (1.78)**	pCi/L	02/17/17 21:58	7440-14-4	

Sample: EGS MW 301 **Lab ID: 40144902005** Collected: 01/23/17 14:51 Received: 01/26/17 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.136 ± 0.377 (0.732) C:NA T:87%**	pCi/L	02/17/17 21:00	13982-63-3	
Radium-228	EPA 904.0	**0.951 ± 0.511 (0.890) C:66% T:77%**	pCi/L	02/17/17 13:13	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Sample: EGS MW 301 **Lab ID: 40144902005** Collected: 01/23/17 14:51 Received: 01/26/17 10:00 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.09 ± 0.888 (1.62)**	pCi/L	02/17/17 21:58	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

QC Batch: 248472 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

METHOD BLANK: 1222215 Matrix: Water
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.634 ± 0.383 (0.683) C:67% T:77%	pCi/L	02/17/17 11:55	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

QC Batch: 248471 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

METHOD BLANK: 1222214 Matrix: Water
Associated Lab Samples: 40144902001, 40144902002, 40144902003, 40144902004, 40144902005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.118 ± 0.269 (0.633) C:NA T:103%	pCi/L	02/17/17 20:10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

DEFINITIONS

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

ND - Not Detected at or above LOD.

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

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40144902

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40144902001	**EGS MW 302**	EPA 3010	247370	EPA 6020	247419
40144902002	**EGS MW 303**	EPA 3010	247370	EPA 6020	247419
40144902003	**EGS 2ROW**	EPA 3010	247370	EPA 6020	247419
40144902004	**FIELD BLANK**	EPA 3010	247370	EPA 6020	247419
40144902005	**EGS MW 301**	EPA 3010	247370	EPA 6020	247419
40144902001	**EGS MW 302**	EPA 7470	247782	EPA 7470	247816
40144902002	**EGS MW 303**	EPA 7470	247782	EPA 7470	247816
40144902003	**EGS 2ROW**	EPA 7470	247782	EPA 7470	247816
40144902004	**FIELD BLANK**	EPA 7470	247782	EPA 7470	247816
40144902005	**EGS MW 301**	EPA 7470	247782	EPA 7470	247816
40144902001	**EGS MW 302**				
40144902002	**EGS MW 303**				
40144902003	**EGS 2ROW**				
40144902005	**EGS MW 301**				
40144902001	**EGS MW 302**	EPA 903.1	248471		
40144902002	**EGS MW 303**	EPA 903.1	248471		
40144902003	**EGS 2ROW**	EPA 903.1	248471		
40144902004	**FIELD BLANK**	EPA 903.1	248471		
40144902005	**EGS MW 301**	EPA 903.1	248471		
40144902001	**EGS MW 302**	EPA 904.0	248472		
40144902002	**EGS MW 303**	EPA 904.0	248472		
40144902003	**EGS 2ROW**	EPA 904.0	248472		
40144902004	**FIELD BLANK**	EPA 904.0	248472		
40144902005	**EGS MW 301**	EPA 904.0	248472		
40144902001	**EGS MW 302**	Total Radium Calculation	249710		
40144902002	**EGS MW 303**	Total Radium Calculation	249710		
40144902003	**EGS 2ROW**	Total Radium Calculation	249710		
40144902004	**FIELD BLANK**	Total Radium Calculation	249710		
40144902005	**EGS MW 301**	Total Radium Calculation	249710		
40144902001	**EGS MW 302**	SM 2540C	247165		
40144902002	**EGS MW 303**	SM 2540C	247165		
40144902003	**EGS 2ROW**	SM 2540C	247165		
40144902004	**FIELD BLANK**	SM 2540C	247165		
40144902005	**EGS MW 301**	SM 2540C	247165		
40144902001	**EGS MW 302**	EPA 9040	247324		
40144902002	**EGS MW 303**	EPA 9040	247324		
40144902003	**EGS 2ROW**	EPA 9040	247324		
40144902004	**FIELD BLANK**	EPA 9040	247324		
40144902005	**EGS MW 301**	EPA 9040	247324		
40144902001	**EGS MW 302**	EPA 300.0	247277		
40144902002	**EGS MW 303**	EPA 300.0	247277		
40144902003	**EGS 2ROW**	EPA 300.0	247277		
40144902004	**FIELD BLANK**	EPA 300.0	247277		
40144902005	**EGS MW 301**	EPA 300.0	247277		

REPORT OF LABORATORY ANALYSIS

CHAIN OF CUSTODY

Pace Analytical® www.pacelabs.com

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

40144902

(Please Print Clearly)

Company Name:	SCS Engineers
Branch/Location:	Madison WI
Project Contact:	Meg Blodgett
Phone:	608 216 7362
Project Number:	25216068.00
Project Name:	Edgewater Closed
Project State:	Wisconsin
Sampled By (Print):	ZACH WATSON
Sampled By (Sign):	[signature]
PO #:	
Regulatory Program:	

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	Tom Karwoski
Invoice To Company:	SCS Engineers
Invoice To Address:	2830 Dairy Dr Madison WI
Invoice To Phone:	

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

NV

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

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

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

				FILTERED? (YES/NO) Y/N	N	N	N	N	N	N	N		
				PRESERVATION (CODE)* Pick Letter	A	D	D	D	D	D	A		
PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	TDS Cl F SO4	B, Ca, Sb, Ar, Ba, Be, Cd, Cr, Co	Pb, Li, Mo, Se, Ti	Mercury	Radium 226	Radium 228	pH	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
001	EGS MW302	1.24.17	0957	GW	X	X	X	X	X	X	X	3-250mLP ~~DAD~~ AAD	4-500mLP D
002	EGS MW303	1.24.17	1109	GW	X	X	X	X	X	X	X	↓	↓
003	EGS 2ROW	1.24.17	1248	GW	X	X	X	X	X	X	X		
004	Field Blank	1.24.17	0940	W	X	X	X	X	X	X	X		
005	EGS MW301	1/23/17	1451	GW	X	X	X	X	X	X	X		

Profile #

KJ 1/26/17

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
[signature]	1.25.17 8:00	Mary Fannin	1/25/17 11:15
Mary Fannin	1/25/17 1430		
CS Logistics	1/26/17 1000	Zach Schraum Pace	1/26/17 1000

PACE Project No. 40144902

Receipt Temp = R01 °C

Sample Receipt pH
(OK) / Adjusted

Cooler Custody Seal
(Present) / Not Present
(Intact) / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

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

Project #: WO# : 40144902

Client Name: SCS

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace ☑ Other: CS Logistics

Tracking #:

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

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

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: R01 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents: Date: 1/26/17 Initials: KF

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐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 ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6. TDS KF 1/26/17
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☑No ☐N/A	12. No "EGS" in ID on sample.
-Includes date/time/ID/Analysis Matrix: W	1-26-17 MW	1-26-17 MW
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☑ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed KF / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: JKH DM **Date:** 1-26-17

A6 Round 6 Background Sampling, Analytical Laboratory Report

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

May 09, 2017

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Dear Meghan Blodgett:
Enclosed are the analytical results for sample(s) received by the laboratory on April 08, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

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

Enclosures

cc: Tom Karwoski, SCS ENGINEERS
Jeff Maxted, ALLIANT ENERGY
Marc Morandi, ALLIANT ENERGY

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

CERTIFICATIONS

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

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

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

SAMPLE SUMMARY

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40148008001	**MW 301**	Water	04/06/17 12:00	04/08/17 08:15
40148008002	**MW 302**	Water	04/06/17 10:00	04/08/17 08:15
40148008003	**MW 303**	Water	04/06/17 11:00	04/08/17 08:15
40148008004	**2ROW**	Water	04/06/17 13:10	04/08/17 08:15
40148008005	**FIELD BLANK**	Water	04/06/17 10:10	04/08/17 08:15

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Green Bay, WI 54302
(920)469-2436

SAMPLE ANALYTE COUNT

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40148008001	**MW 301**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			RMW	7	PASI-G
		EPA 903.1	KAC	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40148008002	**MW 302**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			RMW	7	PASI-G
		EPA 903.1	KAC	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40148008003	**MW 303**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			RMW	7	PASI-G
		EPA 903.1	KAC	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40148008004	**2ROW**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			RMW	7	PASI-G
		EPA 903.1	KAC	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40148008005	**FIELD BLANK**	EPA 6020	SDW	14	PASI-G

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		EPA 7470	AJT	1	PASI-G
		EPA 903.1	KAC	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G

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

ANALYTICAL RESULTS

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Sample: MW 301 **Lab ID: 40148008001** Collected: 04/06/17 12:00 Received: 04/08/17 08:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.15**	ug/L	2.0	0.15	2	04/11/17 10:12	04/11/17 21:13	7440-36-0	3q,D3
Arsenic	**2.8**	ug/L	2.0	0.20	2	04/11/17 10:12	04/11/17 21:13	7440-38-2	
Barium	**53.8**	ug/L	2.0	0.12	2	04/11/17 10:12	04/11/17 21:13	7440-39-3	
Beryllium	**<0.25**	ug/L	2.0	0.25	2	04/11/17 10:12	04/11/17 21:13	7440-41-7	D3
Boron	**8370**	ug/L	20.0	4.0	2	04/11/17 10:12	04/11/17 21:13	7440-42-8	
Cadmium	**<0.18**	ug/L	2.0	0.18	2	04/11/17 10:12	04/11/17 21:13	7440-43-9	D3
Calcium	**98800**	ug/L	500	147	2	04/11/17 10:12	04/11/17 21:13	7440-70-2	
Chromium	**6.4**	ug/L	2.0	0.79	2	04/11/17 10:12	04/11/17 21:13	7440-47-3	
Cobalt	**1.5J**	ug/L	2.0	0.073	2	04/11/17 10:12	04/11/17 21:13	7440-48-4	D3
Lead	**2.1**	ug/L	2.0	0.081	2	04/11/17 10:12	04/11/17 21:13	7439-92-1	
Lithium	**20.6**	ug/L	2.0	0.21	2	04/11/17 10:12	04/11/17 21:13	7439-93-2	
Molybdenum	**2090**	ug/L	2.0	0.14	2	04/11/17 10:12	04/11/17 21:13	7439-98-7	
Selenium	**<0.42**	ug/L	2.0	0.42	2	04/11/17 10:12	04/11/17 21:13	7782-49-2	D3
Thallium	**<0.29**	ug/L	2.0	0.29	2	04/11/17 10:12	04/11/17 21:13	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	04/18/17 09:00	04/18/17 13:19	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.98**	Std. Units			1		04/06/17 12:00		
Field Specific Conductance	**1213**	umhos/cm			1		04/06/17 12:00		
Oxygen, Dissolved	**5.5**	mg/L			1		04/06/17 12:00	7782-44-7	
REDOX	**51**	mV			1		04/06/17 12:00		
Turbidity	**168.6**	NTU			1		04/06/17 12:00		
Static Water Level	**600.04**	feet			1		04/06/17 12:00		
Temperature, Water (C)	**8.9**	deg C			1		04/06/17 12:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**838**	mg/L	20.0	8.7	1		04/11/17 17:32		
9040 pH	Analytical Method: EPA 9040								
pH	**7.9**	Std. Units	0.10	0.010	1		04/11/17 10:00		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**12.7**	mg/L	2.0	0.50	1		04/19/17 17:49	16887-00-6	
Fluoride	**0.21J**	mg/L	0.30	0.10	1		04/19/17 17:49	16984-48-8	
Sulfate	**367**	mg/L	30.0	10.0	10		04/20/17 12:19	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Sample: MW 302 **Lab ID: 40148008002** Collected: 04/06/17 10:00 Received: 04/08/17 08:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.36**	ug/L	5.0	0.36	5	04/11/17 10:12	04/11/17 21:20	7440-36-0	3q,D3
Arsenic	**9.6**	ug/L	5.0	0.50	5	04/11/17 10:12	04/11/17 21:20	7440-38-2	
Barium	**104**	ug/L	5.0	0.31	5	04/11/17 10:12	04/11/17 21:20	7440-39-3	
Beryllium	**<0.63**	ug/L	5.0	0.63	5	04/11/17 10:12	04/11/17 21:20	7440-41-7	D3
Boron	**1970**	ug/L	50.0	10	5	04/11/17 10:12	04/11/17 21:20	7440-42-8	
Cadmium	**<0.44**	ug/L	5.0	0.44	5	04/11/17 10:12	04/11/17 21:20	7440-43-9	D3
Calcium	**114000**	ug/L	1250	368	5	04/11/17 10:12	04/11/17 21:20	7440-70-2	
Chromium	**10**	ug/L	5.0	2.0	5	04/11/17 10:12	04/11/17 21:20	7440-47-3	
Cobalt	**3.2J**	ug/L	5.0	0.18	5	04/11/17 10:12	04/11/17 21:20	7440-48-4	D3
Lead	**5.2**	ug/L	5.0	0.20	5	04/11/17 10:12	04/11/17 21:20	7439-92-1	
Lithium	**58.7**	ug/L	5.0	0.54	5	04/11/17 10:12	04/11/17 21:20	7439-93-2	
Molybdenum	**654**	ug/L	5.0	0.35	5	04/11/17 10:12	04/11/17 21:20	7439-98-7	
Selenium	**<1.0**	ug/L	5.0	1.0	5	04/11/17 10:12	04/11/17 21:20	7782-49-2	D3
Thallium	**<0.71**	ug/L	5.0	0.71	5	04/11/17 10:12	04/11/17 21:20	7440-28-0	D3
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	04/18/17 09:00	04/18/17 13:21	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.99**	Std. Units			1		04/06/17 10:00		
Field Specific Conductance	**552**	umhos/cm			1		04/06/17 10:00		
Oxygen, Dissolved	**0.0**	mg/L			1		04/06/17 10:00	7782-44-7	
REDOX	**-517**	mV			1		04/06/17 10:00		
Turbidity	**367.5**	NTU			1		04/06/17 10:00		
Static Water Level	**593.57**	feet			1		04/06/17 10:00		
Temperature, Water (C)	**9.6**	deg C			1		04/06/17 10:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**358**	mg/L	20.0	8.7	1		04/11/17 17:32		
9040 pH	Analytical Method: EPA 9040								
pH	**7.9**	Std. Units	0.10	0.010	1		04/11/17 10:00		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**18.9**	mg/L	2.0	0.50	1		04/19/17 17:59	16887-00-6	
Fluoride	**0.76**	mg/L	0.30	0.10	1		04/19/17 17:59	16984-48-8	
Sulfate	**85.8**	mg/L	15.0	5.0	5		04/19/17 16:14	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Sample: MW 303 **Lab ID: 40148008003** Collected: 04/06/17 11:00 Received: 04/08/17 08:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	04/11/17 10:12	04/11/17 21:27	7440-36-0	3q
Arsenic	**21.8**	ug/L	1.0	0.099	1	04/11/17 10:12	04/11/17 21:27	7440-38-2	
Barium	**142**	ug/L	1.0	0.062	1	04/11/17 10:12	04/11/17 21:27	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	04/11/17 10:12	04/11/17 21:27	7440-41-7	
Boron	**4170**	ug/L	10.0	2.0	1	04/11/17 10:12	04/11/17 21:27	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	04/11/17 10:12	04/11/17 21:27	7440-43-9	
Calcium	**135000**	ug/L	250	73.6	1	04/11/17 10:12	04/11/17 21:27	7440-70-2	
Chromium	**1.5**	ug/L	1.0	0.39	1	04/11/17 10:12	04/11/17 21:27	7440-47-3	
Cobalt	**3.0**	ug/L	1.0	0.036	1	04/11/17 10:12	04/11/17 21:27	7440-48-4	
Lead	**0.16J**	ug/L	1.0	0.040	1	04/11/17 10:12	04/11/17 21:27	7439-92-1	1q
Lithium	**8.3**	ug/L	1.0	0.11	1	04/11/17 10:12	04/11/17 21:27	7439-93-2	
Molybdenum	**5.1**	ug/L	1.0	0.070	1	04/11/17 10:12	04/11/17 21:27	7439-98-7	
Selenium	**0.38J**	ug/L	1.0	0.21	1	04/11/17 10:12	04/11/17 21:27	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	04/11/17 10:12	04/11/17 21:27	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	04/18/17 09:00	04/18/17 13:24	7439-97-6	
Field Data	Analytical Method:								
Field pH	**6.88**	Std. Units			1		04/06/17 11:00		
Field Specific Conductance	**1320**	umhos/cm			1		04/06/17 11:00		
Oxygen, Dissolved	**0.0**	mg/L			1		04/06/17 11:00	7782-44-7	
REDOX	**-20**	mV			1		04/06/17 11:00		
Turbidity	**9.61**	NTU			1		04/06/17 11:00		
Static Water Level	**589.04**	feet			1		04/06/17 11:00		
Temperature, Water (C)	**10**	deg C			1		04/06/17 11:00		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**700**	mg/L	20.0	8.7	1		04/11/17 17:33		
9040 pH	Analytical Method: EPA 9040								
pH	**6.8**	Std. Units	0.10	0.010	1		04/11/17 10:00		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**22.7**	mg/L	10.0	2.5	5		04/19/17 18:10	16887-00-6	
Fluoride	**<0.50**	mg/L	1.5	0.50	5		04/19/17 18:10	16984-48-8	D3
Sulfate	**<5.0**	mg/L	15.0	5.0	5		04/19/17 18:10	14808-79-8	D3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

ANALYTICAL RESULTS

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Sample: 2ROW **Lab ID: 40148008004** Collected: 04/06/17 13:10 Received: 04/08/17 08:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	04/11/17 10:12	04/11/17 21:34	7440-36-0	3q
Arsenic	**0.35J**	ug/L	1.0	0.099	1	04/11/17 10:12	04/11/17 21:34	7440-38-2	
Barium	**150**	ug/L	1.0	0.062	1	04/11/17 10:12	04/11/17 21:34	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	04/11/17 10:12	04/11/17 21:34	7440-41-7	
Boron	**70.6**	ug/L	10.0	2.0	1	04/11/17 10:12	04/11/17 21:34	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	04/11/17 10:12	04/11/17 21:34	7440-43-9	
Calcium	**143000**	ug/L	250	73.6	1	04/11/17 10:12	04/11/17 21:34	7440-70-2	
Chromium	**2.2**	ug/L	1.0	0.39	1	04/11/17 10:12	04/11/17 21:34	7440-47-3	
Cobalt	**0.28J**	ug/L	1.0	0.036	1	04/11/17 10:12	04/11/17 21:34	7440-48-4	2q
Lead	**0.48J**	ug/L	1.0	0.040	1	04/11/17 10:12	04/11/17 21:34	7439-92-1	
Lithium	**5.3**	ug/L	1.0	0.11	1	04/11/17 10:12	04/11/17 21:34	7439-93-2	
Molybdenum	**0.50J**	ug/L	1.0	0.070	1	04/11/17 10:12	04/11/17 21:34	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	04/11/17 10:12	04/11/17 21:34	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	04/11/17 10:12	04/11/17 21:34	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	04/18/17 09:00	04/18/17 13:26	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.01**	Std. Units			1		04/06/17 13:10		
Field Specific Conductance	**1387**	umhos/cm			1		04/06/17 13:10		
Oxygen, Dissolved	**0.5**	mg/L			1		04/06/17 13:10	7782-44-7	
REDOX	**120**	mV			1		04/06/17 13:10		
Turbidity	**16.46**	NTU			1		04/06/17 13:10		
Static Water Level	**609.27**	feet			1		04/06/17 13:10		
Temperature, Water (C)	**7**	deg C			1		04/06/17 13:10		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**750**	mg/L	20.0	8.7	1		04/11/17 17:33		
9040 pH	Analytical Method: EPA 9040								
pH	**7.1**	Std. Units	0.10	0.010	1		04/11/17 10:15		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**102**	mg/L	40.0	10.0	20		04/20/17 12:40	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		04/19/17 18:21	16984-48-8	
Sulfate	**17.6**	mg/L	3.0	1.0	1		04/19/17 18:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

ANALYTICAL RESULTS

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Sample: FIELD BLANK **Lab ID: 40148008005** Collected: 04/06/17 10:10 Received: 04/08/17 08:15 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.073**	ug/L	1.0	0.073	1	04/11/17 10:12	04/11/17 18:58	7440-36-0	3q
Arsenic	**<0.099**	ug/L	1.0	0.099	1	04/11/17 10:12	04/11/17 18:58	7440-38-2	
Barium	**<0.062**	ug/L	1.0	0.062	1	04/11/17 10:12	04/11/17 18:58	7440-39-3	
Beryllium	**<0.13**	ug/L	1.0	0.13	1	04/11/17 10:12	04/11/17 18:58	7440-41-7	
Boron	**<2.0**	ug/L	10.0	2.0	1	04/11/17 10:12	04/11/17 18:58	7440-42-8	
Cadmium	**<0.089**	ug/L	1.0	0.089	1	04/11/17 10:12	04/11/17 18:58	7440-43-9	
Calcium	**<73.6**	ug/L	250	73.6	1	04/11/17 10:12	04/11/17 18:58	7440-70-2	
Chromium	**0.59J**	ug/L	1.0	0.39	1	04/11/17 10:12	04/11/17 18:58	7440-47-3	
Cobalt	**<0.036**	ug/L	1.0	0.036	1	04/11/17 10:12	04/11/17 18:58	7440-48-4	2q
Lead	**<0.040**	ug/L	1.0	0.040	1	04/11/17 10:12	04/11/17 18:58	7439-92-1	1q
Lithium	**<0.11**	ug/L	1.0	0.11	1	04/11/17 10:12	04/11/17 18:58	7439-93-2	
Molybdenum	**<0.070**	ug/L	1.0	0.070	1	04/11/17 10:12	04/11/17 18:58	7439-98-7	
Selenium	**<0.21**	ug/L	1.0	0.21	1	04/11/17 10:12	04/11/17 18:58	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	04/11/17 10:12	04/11/17 18:58	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	04/18/17 09:00	04/18/17 13:28	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**<8.7**	mg/L	20.0	8.7	1		04/11/17 17:33		
9040 pH	Analytical Method: EPA 9040								
pH	**6.2**	Std. Units	0.10	0.010	1		04/11/17 10:15		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**<0.50**	mg/L	2.0	0.50	1		04/19/17 18:31	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		04/19/17 18:31	16984-48-8	
Sulfate	**<1.0**	mg/L	3.0	1.0	1		04/19/17 18:31	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

QC Batch: 252957 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

METHOD BLANK: 1492612 Matrix: Water
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	04/18/17 12:44	

LABORATORY CONTROL SAMPLE: 1492613

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

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1492614 1492615

Parameter	Units	40147923001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.20	5	5	4.6	4.8	93	96	85-115	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

QC Batch: 252358 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

METHOD BLANK: 1489185 Matrix: Water
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	<0.073	1.0	04/11/17 18:44	
Arsenic	ug/L	<0.099	1.0	04/11/17 18:44	
Barium	ug/L	<0.062	1.0	04/11/17 18:44	
Beryllium	ug/L	<0.13	1.0	04/11/17 18:44	
Boron	ug/L	<2.0	10.0	04/11/17 18:44	
Cadmium	ug/L	<0.089	1.0	04/11/17 18:44	
Calcium	ug/L	<73.6	250	04/11/17 18:44	
Chromium	ug/L	<0.39	1.0	04/11/17 18:44	
Cobalt	ug/L	<0.036	1.0	04/11/17 18:44	
Lead	ug/L	<0.040	1.0	04/11/17 18:44	
Lithium	ug/L	<0.11	1.0	04/11/17 18:44	
Molybdenum	ug/L	<0.070	1.0	04/11/17 18:44	
Selenium	ug/L	<0.21	1.0	04/11/17 18:44	
Thallium	ug/L	<0.14	1.0	04/11/17 18:44	

LABORATORY CONTROL SAMPLE: 1489186

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	525	105	80-120	
Arsenic	ug/L	500	494	99	80-120	
Barium	ug/L	500	510	102	80-120	
Beryllium	ug/L	500	482	96	80-120	
Boron	ug/L	500	463	93	80-120	
Cadmium	ug/L	500	526	105	80-120	
Calcium	ug/L	5000	4850	97	80-120	
Chromium	ug/L	500	495	99	80-120	
Cobalt	ug/L	500	498	100	80-120	
Lead	ug/L	500	479	96	80-120	
Lithium	ug/L	500	477	95	80-120	
Molybdenum	ug/L	500	516	103	80-120	
Selenium	ug/L	500	533	107	80-120	
Thallium	ug/L	500	479	96	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1489187 1489188

Parameter	Units	40148006005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.073	500	500	536	536	107	107	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1489187 1489188

Parameter	Units	40148006005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	10.9	500	500	522	515	102	101	75-125	1	20	
Barium	ug/L	73.7	500	500	604	605	106	106	75-125	0	20	
Beryllium	ug/L	<0.13	500	500	533	543	107	109	75-125	2	20	
Boron	ug/L	96.9	500	500	618	641	104	109	75-125	4	20	
Cadmium	ug/L	<0.089	500	500	536	533	107	107	75-125	0	20	
Calcium	ug/L	24800	5000	5000	28700	30600	78	116	75-125	6	20	
Chromium	ug/L	<0.39	500	500	511	511	102	102	75-125	0	20	
Cobalt	ug/L	0.047J	500	500	510	509	102	102	75-125	0	20	
Lead	ug/L	0.080J	500	500	503	504	101	101	75-125	0	20	
Lithium	ug/L	9.2	500	500	544	556	107	109	75-125	2	20	
Molybdenum	ug/L	3.6	500	500	537	540	107	107	75-125	0	20	
Selenium	ug/L	<0.21	500	500	545	539	109	108	75-125	1	20	
Thallium	ug/L	<0.14	500	500	506	507	101	101	75-125	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

QC Batch: 252449 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

METHOD BLANK: 1489513 Matrix: Water
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	04/11/17 17:28	

LABORATORY CONTROL SAMPLE: 1489514

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	557	566	102	80-120	

SAMPLE DUPLICATE: 1489515

Parameter	Units	40148025001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	3020	3090	2	5	

SAMPLE DUPLICATE: 1489516

Parameter	Units	40147971004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	446	462	4	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

QC Batch: 252371 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

SAMPLE DUPLICATE: 1489216

Parameter	Units	40148025001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	6.9	6.9	0	20	H6

SAMPLE DUPLICATE: 1489217

Parameter	Units	40148002011 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	8.0	8.1	1	20	H6

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

QC Batch: 252813 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

METHOD BLANK: 1491644 Matrix: Water
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	2.0	04/19/17 10:16	
Fluoride	mg/L	<0.10	0.30	04/19/17 10:16	
Sulfate	mg/L	<1.0	3.0	04/19/17 10:16	

LABORATORY CONTROL SAMPLE: 1491645

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.0	100	90-110	
Fluoride	mg/L	2	2.0	101	90-110	
Sulfate	mg/L	20	19.9	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1491646 1491647

Parameter	Units	40148107002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	486	400	400	895	890	102	101	90-110	1	15	
Fluoride	mg/L	<2.0	40	40	42.1	42.6	105	106	90-110	1	15	
Sulfate	mg/L	73.2	400	400	489	490	104	104	90-110	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1491648 1491649

Parameter	Units	40148006006 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	20.4	20	20	41.0	41.2	103	104	90-110	1	15	
Fluoride	mg/L	0.59	2	2	2.6	2.6	102	102	90-110	0	15	
Sulfate	mg/L	131	100	100	234	235	104	104	90-110	0	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.

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Sample: MW 301 **Lab ID: 40148008001** Collected: 04/06/17 12:00 Received: 04/08/17 08:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.734 ± 0.516 (0.658) C:NA T:93%**	pCi/L	05/02/17 12:50	13982-63-3	
Radium-228	EPA 904.0	**0.774 ± 0.373 (0.598) C:80% T:72%**	pCi/L	05/02/17 12:38	15262-20-1	
Total Radium	Total Radium Calculation	**1.51 ± 0.889 (1.26)**	pCi/L	05/09/17 12:01	7440-14-4	

Sample: MW 302 **Lab ID: 40148008002** Collected: 04/06/17 10:00 Received: 04/08/17 08:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.371 ± 0.387 (0.546) C:NA T:81%**	pCi/L	05/02/17 12:50	13982-63-3	
Radium-228	EPA 904.0	**0.813 ± 0.432 (0.750) C:80% T:67%**	pCi/L	05/02/17 12:36	15262-20-1	
Total Radium	Total Radium Calculation	**1.18 ± 0.819 (1.30)**	pCi/L	05/09/17 12:01	7440-14-4	

Sample: MW 303 **Lab ID: 40148008003** Collected: 04/06/17 11:00 Received: 04/08/17 08:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.123 ± 0.381 (0.738) C:NA T:97%**	pCi/L	05/02/17 12:50	13982-63-3	
Radium-228	EPA 904.0	**1.19 ± 0.410 (0.526) C:81% T:84%**	pCi/L	05/02/17 12:36	15262-20-1	
Total Radium	Total Radium Calculation	**1.31 ± 0.791 (1.26)**	pCi/L	05/09/17 12:01	7440-14-4	

Sample: 2ROW **Lab ID: 40148008004** Collected: 04/06/17 13:10 Received: 04/08/17 08:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.418 ± 0.434 (0.646) C:NA T:82%**	pCi/L	05/02/17 13:04	13982-63-3	
Radium-228	EPA 904.0	**0.605 ± 0.369 (0.680) C:78% T:81%**	pCi/L	05/02/17 12:36	15262-20-1	
Total Radium	Total Radium Calculation	**1.02 ± 0.803 (1.33)**	pCi/L	05/09/17 12:01	7440-14-4	

Sample: FIELD BLANK **Lab ID: 40148008005** Collected: 04/06/17 10:10 Received: 04/08/17 08:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.630 ± 0.441 (0.532) C:NA T:97%**	pCi/L	05/02/17 13:04	13982-63-3	
Radium-228	EPA 904.0	**0.554 ± 0.399 (0.771) C:80% T:72%**	pCi/L	05/02/17 12:36	15262-20-1	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Sample: FIELD BLANK **Lab ID: 40148008005** Collected: 04/06/17 10:10 Received: 04/08/17 08:15 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Total Radium	Total Radium Calculation	**1.18 ± 0.840 (1.30)**	pCi/L	05/09/17 12:01	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

QC Batch: 255883 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

METHOD BLANK: 1260103 Matrix: Water
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.0523 ± 0.311 (0.715) C:79% T:78%	pCi/L	05/02/17 12:37	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

QC Batch: 255882 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

METHOD BLANK: 1260102 Matrix: Water
Associated Lab Samples: 40148008001, 40148008002, 40148008003, 40148008004, 40148008005

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.277 ± 0.334 (0.509) C:NA T:88%	pCi/L	05/02/17 12:38	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

DEFINITIONS

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

ND - Not Detected at or above LOD.

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

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

1q	Analyte was measured in the associated method blank at -0.042 ug/L.
2q	Analyte was measured in the associated method blank at -0.051 ug/L.
3q	Analyte was measured in the associated method blank at -0.089 ug/L.
D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H6	Analysis initiated outside of the 15 minute EPA required holding time.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216068 CCR EDGEWATER CLOSED
Pace Project No.: 40148008

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40148008001	**MW 301**	EPA 3010	252358	EPA 6020	252445
40148008002	**MW 302**	EPA 3010	252358	EPA 6020	252445
40148008003	**MW 303**	EPA 3010	252358	EPA 6020	252445
40148008004	**2ROW**	EPA 3010	252358	EPA 6020	252445
40148008005	**FIELD BLANK**	EPA 3010	252358	EPA 6020	252445
40148008001	**MW 301**	EPA 7470	252957	EPA 7470	253025
40148008002	**MW 302**	EPA 7470	252957	EPA 7470	253025
40148008003	**MW 303**	EPA 7470	252957	EPA 7470	253025
40148008004	**2ROW**	EPA 7470	252957	EPA 7470	253025
40148008005	**FIELD BLANK**	EPA 7470	252957	EPA 7470	253025
40148008001	**MW 301**				
40148008002	**MW 302**				
40148008003	**MW 303**				
40148008004	**2ROW**				
40148008001	**MW 301**	EPA 903.1	255882		
40148008002	**MW 302**	EPA 903.1	255882		
40148008003	**MW 303**	EPA 903.1	255882		
40148008004	**2ROW**	EPA 903.1	255882		
40148008005	**FIELD BLANK**	EPA 903.1	255882		
40148008001	**MW 301**	EPA 904.0	255883		
40148008002	**MW 302**	EPA 904.0	255883		
40148008003	**MW 303**	EPA 904.0	255883		
40148008004	**2ROW**	EPA 904.0	255883		
40148008005	**FIELD BLANK**	EPA 904.0	255883		
40148008001	**MW 301**	Total Radium Calculation	257879		
40148008002	**MW 302**	Total Radium Calculation	257879		
40148008003	**MW 303**	Total Radium Calculation	257879		
40148008004	**2ROW**	Total Radium Calculation	257879		
40148008005	**FIELD BLANK**	Total Radium Calculation	257879		
40148008001	**MW 301**	SM 2540C	252449		
40148008002	**MW 302**	SM 2540C	252449		
40148008003	**MW 303**	SM 2540C	252449		
40148008004	**2ROW**	SM 2540C	252449		
40148008005	**FIELD BLANK**	SM 2540C	252449		
40148008001	**MW 301**	EPA 9040	252371		
40148008002	**MW 302**	EPA 9040	252371		
40148008003	**MW 303**	EPA 9040	252371		
40148008004	**2ROW**	EPA 9040	252371		
40148008005	**FIELD BLANK**	EPA 9040	252371		
40148008001	**MW 301**	EPA 300.0	252813		
40148008002	**MW 302**	EPA 300.0	252813		
40148008003	**MW 303**	EPA 300.0	252813		
40148008004	**2ROW**	EPA 300.0	252813		
40148008005	**FIELD BLANK**	EPA 300.0	252813		

REPORT OF LABORATORY ANALYSIS

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

40148008

Pace Analytical®
www.pacelabs.com

CHAIN OF CUSTODY

(Please Print Clearly)	
Company Name:	SCS Engineers
Branch/Location:	Madison
Project Contact:	Meghan Blodgett
Phone:	608 216 7362
Project Number:	25216068
Project Name:	CCR Edgewater
Project State:	WI
Sampled By (Print):	ZACH WATSON
Sampled By (Sign):	
PO #:	Regulatory Program:

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

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

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	pH (A)	Mercury (D)	Metals (D)	TDS, Cl, F, SO4 (A)	Radium 226/228 (D)	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)
001	MW301	4.6	1200	GW	N	A	X	X	X	X	X	2-1LpD 4-1L250mLpAADD	KJ 4/8/17
002	MW302	4.6	1000		N	D	X	X	X	X	X		
003	MW303	4.6	1100		N	D	X	X	X	X	X		
004	2ROW	4.6	1310		N	A	X	X	X	X	X		
005	Field Blank	4.6	1010	W	N	D	X	X	X	X	X		

Profile #

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
ZACH WATSON	4/7/17 15:00		
CS Logistics	4/8/17 0815	Kate Schramm Rael	4/8/17 0815

PACE Project No.: 40148008
Receipt Temp = 2.01 °C
Sample Receipt pH: OK / Adjusted
Cooler Custody Seal: Present / Not Present
Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

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

Project #: WO#: 40148008

40148008

Client Name: SCS Engineers

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace ☐ Other: CS Logistics

Tracking #: 232.040717

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

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☑ None ☐ Other

Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: R01 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

Person examining contents:
Date: 4/8/17
Initials: KH

Temp should be above freezing to 6°C for all sample except Biota.
Frozen Biota Samples should be received ≤ 0°C.

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

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: RMW for DM **Date:** 4/8/17

A7 Round 7 Background Sampling, Analytical Laboratory Report

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

July 19, 2017

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

Dear Meghan Blodgett:
Enclosed are the analytical results for sample(s) received by the laboratory on June 08, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

Report revised to include calcium and not copper

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

Sincerely,

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

Enclosures

cc: Tom Karwoski, SCS ENGINEERS
Jeff Maxted, ALLIANT ENERGY
Marc Morandi, ALLIANT ENERGY

REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

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

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

SAMPLE SUMMARY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151280001	**IMW-303**	Water	06/06/17 14:24	06/08/17 14:56
40151280002	**2R-OW**	Water	06/06/17 15:01	06/08/17 14:56

Pace Analytical Services, LLC
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SAMPLE ANALYTE COUNT

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40151280001	**IMW-303**	EPA 6020	DS1, SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			RMW	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40151280002	**2R-OW**	EPA 6020	DS1, SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			RMW	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G

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ANALYTICAL RESULTS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

Sample: IMW-303 **Lab ID: 40151280001** Collected: 06/06/17 14:24 Received: 06/08/17 14:56 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.32J**	ug/L	1.0	0.15	1	06/12/17 10:10	06/13/17 18:11	7440-36-0	
Arsenic	**25.2**	ug/L	1.0	0.28	1	06/12/17 10:10	06/13/17 18:11	7440-38-2	
Barium	**143**	ug/L	1.1	0.34	1	06/12/17 10:10	06/13/17 18:11	7440-39-3	
Beryllium	**0.33J**	ug/L	1.0	0.18	1	06/12/17 10:10	06/13/17 18:11	7440-41-7	
Boron	**4570**	ug/L	110	33.0	10	06/12/17 10:10	06/14/17 22:02	7440-42-8	
Cadmium	**0.17J**	ug/L	1.0	0.081	1	06/12/17 10:10	06/13/17 18:11	7440-43-9	
Calcium	**154000**	ug/L	2500	698	10	06/12/17 10:10	06/14/17 22:02	7440-70-2	P6
Chromium	**2.1J**	ug/L	3.4	1.0	1	06/12/17 10:10	06/13/17 18:11	7440-47-3	
Cobalt	**3.4**	ug/L	1.0	0.085	1	06/12/17 10:10	06/13/17 18:11	7440-48-4	
Lead	**0.56J**	ug/L	1.0	0.20	1	06/12/17 10:10	06/13/17 18:11	7439-92-1	
Lithium	**9.3**	ug/L	1.0	0.14	1	06/12/17 10:10	06/13/17 18:11	7439-93-2	
Molybdenum	**4.5**	ug/L	1.5	0.44	1	06/12/17 10:10	06/13/17 18:11	7439-98-7	
Selenium	**0.50J**	ug/L	1.1	0.32	1	06/12/17 10:10	06/13/17 18:11	7782-49-2	
Thallium	**0.36J**	ug/L	1.0	0.14	1	06/12/17 10:10	06/13/17 18:11	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	06/14/17 12:25	06/15/17 10:26	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.00**	Std. Units			1		06/06/17 14:24		
Field Specific Conductance	**1112**	umhos/cm			1		06/06/17 14:24		
Oxygen, Dissolved	**0.8**	mg/L			1		06/06/17 14:24	7782-44-7	
REDOX	**-58**	mV			1		06/06/17 14:24		
Turbidity	**186.4**	NTU			1		06/06/17 14:24		
Static Water Level	**588.44**	feet			1		06/06/17 14:24		
Temperature, Water (C)	**10.2**	deg C			1		06/06/17 14:24		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**714**	mg/L	20.0	8.7	1		06/12/17 15:02		
9040 pH	Analytical Method: EPA 9040								
pH	**6.9**	Std. Units	0.10	0.010	1		06/12/17 11:20		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**25.4**	mg/L	10.0	2.5	5		06/20/17 17:08	16887-00-6	
Fluoride	**<0.50**	mg/L	1.5	0.50	5		06/20/17 17:08	16984-48-8	D3
Sulfate	**<5.0**	mg/L	15.0	5.0	5		06/20/17 17:08	14808-79-8	D3

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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ANALYTICAL RESULTS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

Sample: 2R-OW **Lab ID: 40151280002** Collected: 06/06/17 15:01 Received: 06/08/17 14:56 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.32J**	ug/L	1.0	0.15	1	06/12/17 10:10	06/13/17 18:52	7440-36-0	
Arsenic	**0.71J**	ug/L	1.0	0.28	1	06/12/17 10:10	06/13/17 18:52	7440-38-2	
Barium	**172**	ug/L	1.1	0.34	1	06/12/17 10:10	06/13/17 18:52	7440-39-3	
Beryllium	**<0.18**	ug/L	1.0	0.18	1	06/12/17 10:10	06/13/17 18:52	7440-41-7	
Boron	**45.2**	ug/L	11.0	3.3	1	06/12/17 10:10	06/14/17 22:43	7440-42-8	
Cadmium	**0.20J**	ug/L	1.0	0.081	1	06/12/17 10:10	06/13/17 18:52	7440-43-9	
Calcium	**145000**	ug/L	250	69.8	1	06/12/17 10:10	06/14/17 22:43	7440-70-2	
Chromium	**1.6J**	ug/L	3.4	1.0	1	06/12/17 10:10	06/13/17 18:52	7440-47-3	
Cobalt	**0.70J**	ug/L	1.0	0.085	1	06/12/17 10:10	06/13/17 18:52	7440-48-4	
Lead	**0.40J**	ug/L	1.0	0.20	1	06/12/17 10:10	06/13/17 18:52	7439-92-1	
Lithium	**6.2**	ug/L	1.0	0.14	1	06/12/17 10:10	06/13/17 18:52	7439-93-2	
Molybdenum	**0.54J**	ug/L	1.5	0.44	1	06/12/17 10:10	06/13/17 18:52	7439-98-7	
Selenium	**0.34J**	ug/L	1.1	0.32	1	06/12/17 10:10	06/13/17 18:52	7782-49-2	
Thallium	**0.45J**	ug/L	1.0	0.14	1	06/12/17 10:10	06/13/17 18:52	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	06/14/17 12:25	06/15/17 10:28	7439-97-6	
Field Data	Analytical Method:								
Field pH	**6.86**	Std. Units			1		06/06/17 15:01		
Field Specific Conductance	**1294**	umhos/cm			1		06/06/17 15:01		
Oxygen, Dissolved	**0.1**	mg/L			1		06/06/17 15:01	7782-44-7	
REDOX	**-20**	mV			1		06/06/17 15:01		
Turbidity	**0.55**	NTU			1		06/06/17 15:01		
Static Water Level	**607.63**	feet			1		06/06/17 15:01		
Temperature, Water (C)	**10.1**	deg C			1		06/06/17 15:01		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**744**	mg/L	20.0	8.7	1		06/12/17 15:02		
9040 pH	Analytical Method: EPA 9040								
pH	**6.9**	Std. Units	0.10	0.010	1		06/12/17 11:20		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**115**	mg/L	10.0	2.5	5		06/21/17 11:41	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		06/20/17 18:37	16984-48-8	
Sulfate	**17.8**	mg/L	3.0	1.0	1		06/20/17 18:37	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

QC Batch: 258544 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40151280001, 40151280002

METHOD BLANK: 1523182 Matrix: Water
Associated Lab Samples: 40151280001, 40151280002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	06/15/17 09:58	

LABORATORY CONTROL SAMPLE: 1523183

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.6	92	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1523184 1523185

Parameter	Units	40151531020 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.13	5	5	4.6	4.6	91	92	85-115	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

QC Batch: 258263 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40151280001, 40151280002

METHOD BLANK: 1521787 Matrix: Water
Associated Lab Samples: 40151280001, 40151280002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	<0.15	1.0	06/13/17 17:11	
Arsenic	ug/L	<0.28	1.0	06/13/17 17:11	
Barium	ug/L	<0.34	1.1	06/13/17 17:11	
Beryllium	ug/L	<0.18	1.0	06/13/17 17:11	
Boron	ug/L	<3.3	11.0	06/14/17 21:28	
Cadmium	ug/L	<0.081	1.0	06/13/17 17:11	
Calcium	ug/L	<69.8	250	06/14/17 21:28	
Chromium	ug/L	<1.0	3.4	06/13/17 17:11	
Cobalt	ug/L	<0.085	1.0	06/13/17 17:11	
Lead	ug/L	<0.20	1.0	06/13/17 17:11	
Lithium	ug/L	<0.14	1.0	06/13/17 17:11	
Molybdenum	ug/L	<0.44	1.5	06/13/17 17:11	
Selenium	ug/L	<0.32	1.1	06/13/17 17:11	
Thallium	ug/L	<0.14	1.0	06/13/17 17:11	

LABORATORY CONTROL SAMPLE: 1521788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	520	104	80-120	
Arsenic	ug/L	500	510	102	80-120	
Barium	ug/L	500	526	105	80-120	
Beryllium	ug/L	500	515	103	80-120	
Boron	ug/L	500	499	100	80-120	
Cadmium	ug/L	500	525	105	80-120	
Calcium	ug/L	5000	5150	103	80-120	
Chromium	ug/L	500	514	103	80-120	
Cobalt	ug/L	500	515	103	80-120	
Lead	ug/L	500	535	107	80-120	
Lithium	ug/L	500	521	104	80-120	
Molybdenum	ug/L	500	525	105	80-120	
Selenium	ug/L	500	551	110	80-120	
Thallium	ug/L	500	572	114	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1521789 1521790

Parameter	Units	40151280001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	0.32J	500	500	518	505	103	101	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1521789 1521790

Parameter	Units	40151280001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	25.2	500	500	551	545	105	104	75-125	1	20	
Barium	ug/L	143	500	500	673	666	106	105	75-125	1	20	
Beryllium	ug/L	0.33J	500	500	495	478	99	95	75-125	3	20	
Boron	ug/L	4570	500	500	5110	5090	107	103	75-125	0	20	
Cadmium	ug/L	0.17J	500	500	518	508	104	102	75-125	2	20	
Calcium	ug/L	154000	5000	5000	156000	158000	56	84	75-125	1	20	P6
Chromium	ug/L	2.1J	500	500	523	514	104	102	75-125	2	20	
Cobalt	ug/L	3.4	500	500	521	519	104	103	75-125	0	20	
Lead	ug/L	0.56J	500	500	536	525	107	105	75-125	2	20	
Lithium	ug/L	9.3	500	500	522	505	103	99	75-125	3	20	
Molybdenum	ug/L	4.5	500	500	541	531	107	105	75-125	2	20	
Selenium	ug/L	0.50J	500	500	571	561	114	112	75-125	2	20	
Thallium	ug/L	0.36J	500	500	578	561	115	112	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

QC Batch: 258309 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40151280001, 40151280002

METHOD BLANK: 1521898 Matrix: Water
Associated Lab Samples: 40151280001, 40151280002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	06/12/17 14:59	

LABORATORY CONTROL SAMPLE: 1521899

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	585	580	99	80-120	

SAMPLE DUPLICATE: 1521900

Parameter	Units	40151159008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	492	496	1	5	

SAMPLE DUPLICATE: 1521901

Parameter	Units	40151149001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	302	280	8	5	R1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

QC Batch: 258305 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40151280001, 40151280002

SAMPLE DUPLICATE: 1521894

Parameter	Units	40151064002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	6.4	6.4	1	20	H6

SAMPLE DUPLICATE: 1521895

Parameter	Units	40151084001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.3	7.3	0	20	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

QC Batch: 259103 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40151280001, 40151280002

METHOD BLANK: 1526431 Matrix: Water
Associated Lab Samples: 40151280001, 40151280002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	2.0	06/20/17 16:14	
Fluoride	mg/L	<0.10	0.30	06/20/17 16:14	
Sulfate	mg/L	<1.0	3.0	06/20/17 16:14	

LABORATORY CONTROL SAMPLE: 1526432

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.5	97	90-110	
Fluoride	mg/L	2	1.9	96	90-110	
Sulfate	mg/L	20	19.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1526433 1526434

Parameter	Units	40151274002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	302	400	400	738	756	109	114	90-110	2	15	M0
Fluoride	mg/L	<2.0	40	40	42.5	45.1	106	113	90-110	6	15	M0
Sulfate	mg/L	40.9J	400	400	461	485	105	111	90-110	5	15	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1526435 1526436

Parameter	Units	40151013002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.6J	20	20	24.5	22.0	114	102	90-110	11	15	M0
Fluoride	mg/L	<0.10	2	2	2.3	2.1	116	104	90-110	11	15	M0
Sulfate	mg/L	31.5	20	20	55.2	49.3	118	89	90-110	11	15	M0

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REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

Sample: IMW-303 **Lab ID: 40151280001** Collected: 06/06/17 14:24 Received: 06/08/17 14:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.276 ± 0.289 (0.407) C:NA T:98%**	pCi/L	06/22/17 12:14	13982-63-3	
Radium-228	EPA 904.0	**0.926 ± 0.489 (0.848) C:78% T:90%**	pCi/L	06/26/17 18:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.20 ± 0.778 (1.26)**	pCi/L	06/28/17 14:21	7440-14-4	

Sample: 2R-OW **Lab ID: 40151280002** Collected: 06/06/17 15:01 Received: 06/08/17 14:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.531 ± 0.352 (0.160) C:NA T:96%**	pCi/L	06/22/17 12:14	13982-63-3	
Radium-228	EPA 904.0	**1.05 ± 0.522 (0.895) C:81% T:88%**	pCi/L	06/26/17 18:49	15262-20-1	
Total Radium	Total Radium Calculation	**1.58 ± 0.874 (1.06)**	pCi/L	06/28/17 14:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

QC Batch: 261745 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 40151280001, 40151280002

METHOD BLANK: 1288791 Matrix: Water
Associated Lab Samples: 40151280001, 40151280002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.398 ± 0.404 (0.612) C:NA T:94%	pCi/L	06/22/17 11:01	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

QC Batch: 261765 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 40151280001, 40151280002

METHOD BLANK: 1288847 Matrix: Water
Associated Lab Samples: 40151280001, 40151280002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.383 ± 0.440 (0.926) C:77% T:71%	pCi/L	06/26/17 15:45	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

DEFINITIONS

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

ND - Not Detected at or above LOD.

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

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151280

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151280001	**IMW-303**	EPA 3010	258263	EPA 6020	258358
40151280002	**2R-OW**	EPA 3010	258263	EPA 6020	258358
40151280001	**IMW-303**	EPA 7470	258544	EPA 7470	258575
40151280002	**2R-OW**	EPA 7470	258544	EPA 7470	258575
40151280001	**IMW-303**				
40151280002	**2R-OW**				
40151280001	**IMW-303**	EPA 903.1	261745		
40151280002	**2R-OW**	EPA 903.1	261745		
40151280001	**IMW-303**	EPA 904.0	261765		
40151280002	**2R-OW**	EPA 904.0	261765		
40151280001	**IMW-303**	Total Radium Calculation	263482		
40151280002	**2R-OW**	Total Radium Calculation	263482		
40151280001	**IMW-303**	SM 2540C	258309		
40151280002	**2R-OW**	SM 2540C	258309		
40151280001	**IMW-303**	EPA 9040	258305		
40151280002	**2R-OW**	EPA 9040	258305		
40151280001	**IMW-303**	EPA 300.0	259103		
40151280002	**2R-OW**	EPA 300.0	259103		

(Please Print Clearly)	
Company Name:	SCS Engineers
Branch/Location:	Madison WI
Project Contact:	Meg Blodgett
Phone:	(608) 216-7362
Project Number:	25216068.00
Project Name:	Edgewater closed
Project State:	WI
Sampled By (Print):	Charlie Bills
Sampled By (Sign):	Charlie A Bi
PO #:	Regulatory Program:

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

Page 1 of

40151280

CHAIN OF CUSTODY

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

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	SCS Engineers
Invoice To Address:	2830 Dairy Dr. Madison WI
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO) Y/N	PRESERVATION (CODE)* Pick Letter	Analyses Requested: TDS, Cl, F, SO4	B, Ca, Sb, As, Ba, Be, Cd, Cr, Co	Pb, Li, Mo, Sr, Ti	Mercury	Radium 226	Radium 228	pH	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					N	A	D	D	D	D	D	D	A			
001	I-4 MW-303	6/6/17	1424	GW			X	X	X	X	X	X	X		3-250ml HNO3 2-1Lp	
002	I-4 2R-OW	6/6/17	1501	GW			X	X	X	X	X	X	X			

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Charlie A Bi	6/8/17 0800	Mary Fannin	6/8/17 8:35
Mary Fannin	6/8/17 1315	Rachel Voss Pace	6/8/17 1315
Rachel Voss Pace	6/8/17 1456	Pace	6/8/17 1456

PACE Project No.: 40151280
Receipt Temp = R01 °C
Sample Receipt pH: OK / Adjusted
Cooler Custody Seal: Present / (Not Present) Intact / (Not Intact)

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

Sample Condition Upon Receipt

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

Project #: WO#: 40151280

Client Name: SCS

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: _____

Tracking #: _____

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

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

Packing Material: ☐ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used NA **Type of Ice:** Wet Blue Dry None ☐ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: /Corr: R01 **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☐ no

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

Person examining contents:
Date: 6/8/17
Initials: AMB

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐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 ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☑Yes ☐No ☐N/A	8.
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☐Yes ☑No ☐N/A	12. ID does not have "I-4" AMB 6/8/17
-Includes date/time/ID/Analysis Matrix: WW		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☐ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☑Yes ☐No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed: AM2 / Lab Std #ID of preservative / Date/ Time:
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: AL for DMM **Date:** 6/8/17

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

June 28, 2017

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

Dear Meghan Blodgett:
Enclosed are the analytical results for sample(s) received by the laboratory on June 08, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

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

Enclosures

cc: Tom Karwoski, SCS ENGINEERS
Jeff Maxted, ALLIANT ENERGY
Marc Morandi, ALLIANT ENERGY

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CERTIFICATIONS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

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

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SAMPLE SUMMARY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40151299001	**MW-301**	Water	06/06/17 13:46	06/08/17 14:56
40151299002	**MW-302**	Water	06/06/17 13:36	06/08/17 14:56
40151299003	**FIELD BLANK**	Water	06/06/17 14:30	06/08/17 14:56

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SAMPLE ANALYTE COUNT

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40151299001	**MW-301**	EPA 6020	DS1, SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			RMW	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40151299002	**MW-302**	EPA 6020	DS1, SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			RMW	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40151299003	**FIELD BLANK**	EPA 6020	DS1, SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	CMC	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G

REPORT OF LABORATORY ANALYSIS

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

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

Sample: MW-301 **Lab ID: 40151299001** Collected: 06/06/17 13:46 Received: 06/08/17 14:56 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.33J**	ug/L	1.0	0.15	1	06/12/17 10:10	06/13/17 19:05	7440-36-0	
Arsenic	**1.9**	ug/L	1.0	0.28	1	06/12/17 10:10	06/13/17 19:05	7440-38-2	
Barium	**30.3**	ug/L	1.1	0.34	1	06/12/17 10:10	06/13/17 19:05	7440-39-3	
Beryllium	**<0.18**	ug/L	1.0	0.18	1	06/12/17 10:10	06/13/17 19:05	7440-41-7	
Boron	**9160**	ug/L	110	33.0	10	06/12/17 10:10	06/14/17 22:56	7440-42-8	
Cadmium	**<0.081**	ug/L	1.0	0.081	1	06/12/17 10:10	06/13/17 19:05	7440-43-9	
Calcium	**94900**	ug/L	2500	698	10	06/12/17 10:10	06/14/17 22:56	7440-70-2	
Chromium	**<1.0**	ug/L	3.4	1.0	1	06/12/17 10:10	06/13/17 19:05	7440-47-3	
Cobalt	**0.24J**	ug/L	1.0	0.085	1	06/12/17 10:10	06/13/17 19:05	7440-48-4	
Lead	**0.28J**	ug/L	1.0	0.20	1	06/12/17 10:10	06/13/17 19:05	7439-92-1	
Lithium	**17.0**	ug/L	1.0	0.14	1	06/12/17 10:10	06/13/17 19:05	7439-93-2	
Molybdenum	**2460**	ug/L	1.5	0.44	1	06/12/17 10:10	06/13/17 19:05	7439-98-7	
Selenium	**<0.32**	ug/L	1.1	0.32	1	06/12/17 10:10	06/13/17 19:05	7782-49-2	
Thallium	**0.17J**	ug/L	1.0	0.14	1	06/12/17 10:10	06/13/17 19:05	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	06/19/17 07:40	06/19/17 13:28	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.7**	Std. Units			1		06/06/17 13:46		
Field Specific Conductance	**1147**	umhos/cm			1		06/06/17 13:46		
Oxygen, Dissolved	**3**	mg/L			1		06/06/17 13:46	7782-44-7	
REDOX	**-15**	mV			1		06/06/17 13:46		
Turbidity	**16.11**	NTU			1		06/06/17 13:46		
Static Water Level	**598.77**	feet			1		06/06/17 13:46		
Temperature, Water (C)	**9.5**	deg C			1		06/06/17 13:46		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**804**	mg/L	20.0	8.7	1		06/12/17 15:02		
9040 pH	Analytical Method: EPA 9040								
pH	**7.7**	Std. Units	0.10	0.010	1		06/12/17 11:20		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**13.5**	mg/L	2.0	0.50	1		06/20/17 18:48	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		06/20/17 18:48	16984-48-8	
Sulfate	**362**	mg/L	30.0	10.0	10		06/21/17 11:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

Sample: MW-302 **Lab ID: 40151299002** Collected: 06/06/17 13:36 Received: 06/08/17 14:56 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.16J**	ug/L	1.0	0.15	1	06/12/17 10:10	06/13/17 19:12	7440-36-0	
Arsenic	**8.7**	ug/L	1.0	0.28	1	06/12/17 10:10	06/13/17 19:12	7440-38-2	
Barium	**58.4**	ug/L	1.1	0.34	1	06/12/17 10:10	06/13/17 19:12	7440-39-3	
Beryllium	**<0.18**	ug/L	1.0	0.18	1	06/12/17 10:10	06/13/17 19:12	7440-41-7	
Boron	**1970**	ug/L	55.0	16.5	5	06/12/17 10:10	06/14/17 23:03	7440-42-8	
Cadmium	**<0.081**	ug/L	1.0	0.081	1	06/12/17 10:10	06/13/17 19:12	7440-43-9	
Calcium	**72200**	ug/L	1250	349	5	06/12/17 10:10	06/14/17 23:03	7440-70-2	
Chromium	**6.6**	ug/L	3.4	1.0	1	06/12/17 10:10	06/13/17 19:12	7440-47-3	
Cobalt	**1.5**	ug/L	1.0	0.085	1	06/12/17 10:10	06/13/17 19:12	7440-48-4	
Lead	**0.70J**	ug/L	1.0	0.20	1	06/12/17 10:10	06/13/17 19:12	7439-92-1	
Lithium	**52.3**	ug/L	1.0	0.14	1	06/12/17 10:10	06/13/17 19:12	7439-93-2	
Molybdenum	**631**	ug/L	1.5	0.44	1	06/12/17 10:10	06/13/17 19:12	7439-98-7	
Selenium	**<0.32**	ug/L	1.1	0.32	1	06/12/17 10:10	06/13/17 19:12	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/12/17 10:10	06/13/17 19:12	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	06/19/17 07:40	06/19/17 13:30	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.84**	Std. Units			1		06/06/17 13:36		
Field Specific Conductance	**465**	umhos/cm			1		06/06/17 13:36		
Oxygen, Dissolved	**0.5**	mg/L			1		06/06/17 13:36	7782-44-7	
REDOX	**-40**	mV			1		06/06/17 13:36		
Turbidity	**94.92**	NTU			1		06/06/17 13:36		
Static Water Level	**595.86**	feet			1		06/06/17 13:36		
Temperature, Water (C)	**12.2**	deg C			1		06/06/17 13:36		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**350**	mg/L	20.0	8.7	1		06/12/17 15:03		
9040 pH	Analytical Method: EPA 9040								
pH	**7.5**	Std. Units	0.10	0.010	1		06/13/17 09:05		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**20.0**	mg/L	2.0	0.50	1		06/20/17 18:59	16887-00-6	
Fluoride	**0.90**	mg/L	0.30	0.10	1		06/20/17 18:59	16984-48-8	
Sulfate	**88.5**	mg/L	15.0	5.0	5		06/20/17 23:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

Sample: FIELD BLANK **Lab ID: 40151299003** Collected: 06/06/17 14:30 Received: 06/08/17 14:56 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.15**	ug/L	1.0	0.15	1	06/12/17 10:10	06/13/17 17:17	7440-36-0	
Arsenic	**<0.28**	ug/L	1.0	0.28	1	06/12/17 10:10	06/13/17 17:17	7440-38-2	
Barium	**<0.34**	ug/L	1.1	0.34	1	06/12/17 10:10	06/13/17 17:17	7440-39-3	
Beryllium	**<0.18**	ug/L	1.0	0.18	1	06/12/17 10:10	06/13/17 17:17	7440-41-7	
Boron	**<3.3**	ug/L	11.0	3.3	1	06/12/17 10:10	06/14/17 21:34	7440-42-8	
Cadmium	**<0.081**	ug/L	1.0	0.081	1	06/12/17 10:10	06/13/17 17:17	7440-43-9	
Calcium	**<69.8**	ug/L	250	69.8	1	06/12/17 10:10	06/14/17 21:34	7440-70-2	
Chromium	**<1.0**	ug/L	3.4	1.0	1	06/12/17 10:10	06/13/17 17:17	7440-47-3	
Cobalt	**<0.085**	ug/L	1.0	0.085	1	06/12/17 10:10	06/13/17 17:17	7440-48-4	
Lead	**<0.20**	ug/L	1.0	0.20	1	06/12/17 10:10	06/13/17 17:17	7439-92-1	
Lithium	**<0.14**	ug/L	1.0	0.14	1	06/12/17 10:10	06/13/17 17:17	7439-93-2	
Molybdenum	**<0.44**	ug/L	1.5	0.44	1	06/12/17 10:10	06/13/17 17:17	7439-98-7	
Selenium	**<0.32**	ug/L	1.1	0.32	1	06/12/17 10:10	06/13/17 17:17	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	06/12/17 10:10	06/13/17 17:17	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	06/19/17 07:40	06/19/17 13:33	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**<8.7**	mg/L	20.0	8.7	1		06/12/17 15:03		
9040 pH	Analytical Method: EPA 9040								
pH	**5.9**	Std. Units	0.10	0.010	1		06/13/17 09:05		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**<0.50**	mg/L	2.0	0.50	1		06/20/17 19:10	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		06/20/17 19:10	16984-48-8	
Sulfate	**<1.0**	mg/L	3.0	1.0	1		06/20/17 19:10	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

QC Batch: 258909 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40151299001, 40151299002, 40151299003

METHOD BLANK: 1525800 Matrix: Water
Associated Lab Samples: 40151299001, 40151299002, 40151299003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	06/19/17 13:07	

LABORATORY CONTROL SAMPLE: 1525801

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.9	97	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1525802 1525803

Parameter	Units	40151437001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.13	5	5	4.8	4.9	96	97	85-115	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

QC Batch: 258263 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40151299001, 40151299002, 40151299003

METHOD BLANK: 1521787 Matrix: Water
Associated Lab Samples: 40151299001, 40151299002, 40151299003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	<0.15	1.0	06/13/17 17:11	
Arsenic	ug/L	<0.28	1.0	06/13/17 17:11	
Barium	ug/L	<0.34	1.1	06/13/17 17:11	
Beryllium	ug/L	<0.18	1.0	06/13/17 17:11	
Boron	ug/L	<3.3	11.0	06/14/17 21:28	
Cadmium	ug/L	<0.081	1.0	06/13/17 17:11	
Calcium	ug/L	<69.8	250	06/14/17 21:28	
Chromium	ug/L	<1.0	3.4	06/13/17 17:11	
Cobalt	ug/L	<0.085	1.0	06/13/17 17:11	
Lead	ug/L	<0.20	1.0	06/13/17 17:11	
Lithium	ug/L	<0.14	1.0	06/13/17 17:11	
Molybdenum	ug/L	<0.44	1.5	06/13/17 17:11	
Selenium	ug/L	<0.32	1.1	06/13/17 17:11	
Thallium	ug/L	<0.14	1.0	06/13/17 17:11	

LABORATORY CONTROL SAMPLE: 1521788

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	520	104	80-120	
Arsenic	ug/L	500	510	102	80-120	
Barium	ug/L	500	526	105	80-120	
Beryllium	ug/L	500	515	103	80-120	
Boron	ug/L	500	499	100	80-120	
Cadmium	ug/L	500	525	105	80-120	
Calcium	ug/L	5000	5150	103	80-120	
Chromium	ug/L	500	514	103	80-120	
Cobalt	ug/L	500	515	103	80-120	
Lead	ug/L	500	535	107	80-120	
Lithium	ug/L	500	521	104	80-120	
Molybdenum	ug/L	500	525	105	80-120	
Selenium	ug/L	500	551	110	80-120	
Thallium	ug/L	500	572	114	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1521789 1521790

Parameter	Units	40151280001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	0.32J	500	500	518	505	103	101	75-125	2	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1521789 1521790

Parameter	Units	40151280001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	25.2	500	500	551	545	105	104	75-125	1	20	
Barium	ug/L	143	500	500	673	666	106	105	75-125	1	20	
Beryllium	ug/L	0.33J	500	500	495	478	99	95	75-125	3	20	
Boron	ug/L	4570	500	500	5110	5090	107	103	75-125	0	20	
Cadmium	ug/L	0.17J	500	500	518	508	104	102	75-125	2	20	
Calcium	ug/L	154000	5000	5000	156000	158000	56	84	75-125	1	20	P6
Chromium	ug/L	2.1J	500	500	523	514	104	102	75-125	2	20	
Cobalt	ug/L	3.4	500	500	521	519	104	103	75-125	0	20	
Lead	ug/L	0.56J	500	500	536	525	107	105	75-125	2	20	
Lithium	ug/L	9.3	500	500	522	505	103	99	75-125	3	20	
Molybdenum	ug/L	4.5	500	500	541	531	107	105	75-125	2	20	
Selenium	ug/L	0.50J	500	500	571	561	114	112	75-125	2	20	
Thallium	ug/L	0.36J	500	500	578	561	115	112	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

QC Batch: 258309 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40151299001, 40151299002, 40151299003

METHOD BLANK: 1521898 Matrix: Water
Associated Lab Samples: 40151299001, 40151299002, 40151299003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	06/12/17 14:59	

LABORATORY CONTROL SAMPLE: 1521899

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	585	580	99	80-120	

SAMPLE DUPLICATE: 1521900

Parameter	Units	40151159008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	492	496	1	5	

SAMPLE DUPLICATE: 1521901

Parameter	Units	40151149001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	302	280	8	5	R1

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

QC Batch: 258305 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40151299001

SAMPLE DUPLICATE: 1521894

Parameter	Units	40151064002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	6.4	6.4	1	20	H6

SAMPLE DUPLICATE: 1521895

Parameter	Units	40151084001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.3	7.3	0	20	H6

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

QC Batch: 258441 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40151299002, 40151299003

SAMPLE DUPLICATE: 1522424

Parameter	Units	40151299002 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.5	7.6	1	20	H6

SAMPLE DUPLICATE: 1522425

Parameter	Units	40151395001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	4.3	4.4	2	20	H6

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QUALITY CONTROL DATA

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

QC Batch: 259103 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40151299001, 40151299002, 40151299003

METHOD BLANK: 1526431 Matrix: Water
Associated Lab Samples: 40151299001, 40151299002, 40151299003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	2.0	06/20/17 16:14	
Fluoride	mg/L	<0.10	0.30	06/20/17 16:14	
Sulfate	mg/L	<1.0	3.0	06/20/17 16:14	

LABORATORY CONTROL SAMPLE: 1526432

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	19.5	97	90-110	
Fluoride	mg/L	2	1.9	96	90-110	
Sulfate	mg/L	20	19.5	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1526433 1526434

Parameter	Units	40151274002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	302	400	400	738	756	109	114	90-110	2	15	M0
Fluoride	mg/L	<2.0	40	40	42.5	45.1	106	113	90-110	6	15	M0
Sulfate	mg/L	40.9J	400	400	461	485	105	111	90-110	5	15	M0

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1526435 1526436

Parameter	Units	40151013002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	1.6J	20	20	24.5	22.0	114	102	90-110	11	15	M0
Fluoride	mg/L	<0.10	2	2	2.3	2.1	116	104	90-110	11	15	M0
Sulfate	mg/L	31.5	20	20	55.2	49.3	118	89	90-110	11	15	M0

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

Sample: MW-301 **Lab ID: 40151299001** Collected: 06/06/17 13:46 Received: 06/08/17 14:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.179 ± 0.511 (0.948) C:NA T:87%**	pCi/L	06/22/17 11:37	13982-63-3	
Radium-228	EPA 904.0	**0.315 ± 0.439 (0.944) C:78% T:83%**	pCi/L	06/26/17 15:49	15262-20-1	
Total Radium	Total Radium Calculation	**0.494 ± 0.950 (1.89)**	pCi/L	06/28/17 14:03	7440-14-4	

Sample: MW-302 **Lab ID: 40151299002** Collected: 06/06/17 13:36 Received: 06/08/17 14:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.706 ± 0.446 (0.504) C:NA T:94%**	pCi/L	06/22/17 11:37	13982-63-3	
Radium-228	EPA 904.0	**0.950 ± 0.503 (0.868) C:78% T:84%**	pCi/L	06/26/17 18:46	15262-20-1	
Total Radium	Total Radium Calculation	**1.66 ± 0.949 (1.37)**	pCi/L	06/28/17 14:21	7440-14-4	

Sample: FIELD BLANK **Lab ID: 40151299003** Collected: 06/06/17 14:30 Received: 06/08/17 14:56 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.178 ± 0.350 (0.639) C:NA T:92%**	pCi/L	06/22/17 11:37	13982-63-3	
Radium-228	EPA 904.0	**-0.134 ± 0.403 (0.983) C:80% T:80%**	pCi/L	06/26/17 18:46	15262-20-1	
Total Radium	Total Radium Calculation	**0.178 ± 0.753 (1.62)**	pCi/L	06/28/17 14:21	7440-14-4	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

QC Batch: 261745 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 40151299001, 40151299002, 40151299003

METHOD BLANK: 1288791 Matrix: Water
Associated Lab Samples: 40151299001, 40151299002, 40151299003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.398 ± 0.404 (0.612) C:NA T:94%	pCi/L	06/22/17 11:01	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

QC Batch: 261765 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 40151299001, 40151299002, 40151299003

METHOD BLANK: 1288847 Matrix: Water
Associated Lab Samples: 40151299001, 40151299002, 40151299003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.383 ± 0.440 (0.926) C:77% T:71%	pCi/L	06/26/17 15:45	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALIFIERS

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

DEFINITIONS

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

ND - Not Detected at or above LOD.

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

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

H6	Analysis initiated outside of the 15 minute EPA required holding time.
M0	Matrix spike recovery and/or matrix spike duplicate recovery was outside laboratory control limits.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216068.00 EDGEWATER CLOSED
Pace Project No.: 40151299

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40151299001	**MW-301**	EPA 3010	258263	EPA 6020	258358
40151299002	**MW-302**	EPA 3010	258263	EPA 6020	258358
40151299003	**FIELD BLANK**	EPA 3010	258263	EPA 6020	258358
40151299001	**MW-301**	EPA 7470	258909	EPA 7470	258932
40151299002	**MW-302**	EPA 7470	258909	EPA 7470	258932
40151299003	**FIELD BLANK**	EPA 7470	258909	EPA 7470	258932
40151299001	**MW-301**				
40151299002	**MW-302**				
40151299001	**MW-301**	EPA 903.1	261745		
40151299002	**MW-302**	EPA 903.1	261745		
40151299003	**FIELD BLANK**	EPA 903.1	261745		
40151299001	**MW-301**	EPA 904.0	261765		
40151299002	**MW-302**	EPA 904.0	261765		
40151299003	**FIELD BLANK**	EPA 904.0	261765		
40151299001	**MW-301**	Total Radium Calculation	263481		
40151299002	**MW-302**	Total Radium Calculation	263482		
40151299003	**FIELD BLANK**	Total Radium Calculation	263482		
40151299001	**MW-301**	SM 2540C	258309		
40151299002	**MW-302**	SM 2540C	258309		
40151299003	**FIELD BLANK**	SM 2540C	258309		
40151299001	**MW-301**	EPA 9040	258305		
40151299002	**MW-302**	EPA 9040	258441		
40151299003	**FIELD BLANK**	EPA 9040	258441		
40151299001	**MW-301**	EPA 300.0	259103		
40151299002	**MW-302**	EPA 300.0	259103		
40151299003	**FIELD BLANK**	EPA 300.0	259103		

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

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SSA

4015299

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	SCS Engineers
Branch/Location:	Madison WI
Project Contact:	Meg Blodgett
Phone:	(608) 216-7362
Project Number:	25216068.00
Project Name:	Edgewater Closed
Project State:	WI
Sampled By (Print):	Charles Bills
Sampled By (Sign):	Charles Bills
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	SCS Engineers
Invoice To Address:	2830 Dairy Dr Madison WI
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: TDS, Cl, F, SO4	B, Ca, Sb, Ar, Ba, Be, Cd, Cr, Co	Pb, Li, Mo, Sl, Tl	Mercury	Radium 226	Radium 228	pH	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
					Y/N	Pick Letter	N	N	N	N	N	N	N			
							A	D	D	D	D	D	A			
001	I-4 MW-301	6/6/17	1346	GW			X	X	X	X	X	X	X	2-1Lp D	3-250mLp AAP	
002	I-4 MW-302	6/6/17	1336	GW			X	X	X	X	X	X	X			
003	I-4 Field Blank	6/6/17	1430	GW			X	X	X	X	X	X	X			

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

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Charles Bills	6/8/17 0800	Mary Jammi	6/8/17 8:35
Mary Jammi	6/8/17 1315	Rachel Orvis Pace	6/8/17 1315
Rachel Orvis Pace	6/8/17 1456	Susan Kilgore	6/8/17 1456

PACE Project No. 4015299

Receipt Temp = 1.0 °C

Sample Receipt pH OK / Adjusted

Cooler Custody Seal Present / Not Present

Intact / Not Intact

Version 6.0 06/14/06

C019a(27Jun2006)

ORIGINAL

Sample Condition Upon Receipt

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

Pace Analytical™

Project # **WO# : 40151299**

40151299

Client Name: SCS

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☑ Pace Other: _____

Tracking #: _____

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

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

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other _____

Thermometer Used NA **Type of Ice:** Wet Blue Dry None ☑ Samples on ice, cooling process has begun

Cooler Temperature Uncorr: ROL /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

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

Person examining contents:
Date: 6-8-17
Initials: SW

Comments:

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

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

Project Manager Review: Rvw for Dm **Date:** 6/8/17

A8 Round 8 Background Sampling, Analytical Laboratory Report

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

August 25, 2017

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

Dear Meghan Blodgett:
Enclosed are the analytical results for sample(s) received by the laboratory on August 04, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

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

Enclosures

cc: Tom Karwoski, SCS ENGINEERS
Jeff Maxted, ALLIANT ENERGY
Marc Morandi, ALLIANT ENERGY

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

CERTIFICATIONS

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Green Bay Certification IDs

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40154466001	**MW 302 I4**	Water	08/02/17 10:31	08/04/17 10:10
40154466002	**MW 303 I4**	Water	08/02/17 09:41	08/04/17 10:10

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40154466001	**MW 302 I4**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AXL	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40154466002	**MW 303 I4**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AXL	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	JLW	1	PASI-PA
		Total Radium Calculation	RMK	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G

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

ANALYTICAL RESULTS

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

Sample: MW 302 I4 **Lab ID: 40154466001** Collected: 08/02/17 10:31 Received: 08/04/17 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.15**	ug/L	1.0	0.15	1	08/15/17 08:57	08/16/17 17:01	7440-36-0	
Arsenic	**9.0**	ug/L	1.0	0.28	1	08/15/17 08:57	08/16/17 17:01	7440-38-2	
Barium	**50.9**	ug/L	1.1	0.34	1	08/15/17 08:57	08/16/17 17:01	7440-39-3	
Beryllium	**<0.18**	ug/L	1.0	0.18	1	08/15/17 08:57	08/16/17 17:01	7440-41-7	
Boron	**1890**	ug/L	11.0	3.3	1	08/15/17 08:57	08/17/17 17:28	7440-42-8	
Cadmium	**<0.081**	ug/L	1.0	0.081	1	08/15/17 08:57	08/16/17 17:01	7440-43-9	
Calcium	**62600**	ug/L	2500	698	10	08/15/17 08:57	08/16/17 16:20	7440-70-2	P6
Chromium	**1.1J**	ug/L	3.4	1.0	1	08/15/17 08:57	08/16/17 17:01	7440-47-3	
Cobalt	**0.53J**	ug/L	1.0	0.085	1	08/15/17 08:57	08/16/17 17:01	7440-48-4	
Lead	**0.44J**	ug/L	1.0	0.20	1	08/15/17 08:57	08/16/17 17:01	7439-92-1	
Lithium	**52.2**	ug/L	1.0	0.14	1	08/15/17 08:57	08/16/17 17:01	7439-93-2	
Molybdenum	**649**	ug/L	1.5	0.44	1	08/15/17 08:57	08/16/17 17:01	7439-98-7	
Selenium	**<0.32**	ug/L	1.1	0.32	1	08/15/17 08:57	08/16/17 17:01	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	08/15/17 08:57	08/16/17 17:01	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	08/15/17 12:30	08/16/17 08:38	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.76**	Std. Units			1		08/14/17 15:32		
Field Specific Conductance	**532**	umhos/cm			1		08/14/17 15:32		
Oxygen, Dissolved	**0**	mg/L			1		08/14/17 15:32	7782-44-7	
REDOX	**-121**	mV			1		08/14/17 15:32		
Turbidity	**39.69**	NTU			1		08/14/17 15:32		
Elevation Water Level	**595.22**	feet			1		08/14/17 15:32		
Temperature, Water (C)	**12.6**	deg C			1		08/14/17 15:32		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**360**	mg/L	20.0	8.7	1		08/09/17 16:17		
9040 pH	Analytical Method: EPA 9040								
pH	**7.7**	Std. Units	0.10	0.010	1		08/07/17 11:15		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**19.3**	mg/L	2.0	0.50	1		08/15/17 20:46	16887-00-6	
Fluoride	**0.78**	mg/L	0.30	0.10	1		08/15/17 20:46	16984-48-8	
Sulfate	**80.2**	mg/L	15.0	5.0	5		08/16/17 15:36	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

Sample: MW 303 I4 **Lab ID: 40154466002** Collected: 08/02/17 09:41 Received: 08/04/17 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**0.25J**	ug/L	1.0	0.15	1	08/15/17 08:57	08/16/17 17:28	7440-36-0	
Arsenic	**21.9**	ug/L	1.0	0.28	1	08/15/17 08:57	08/16/17 17:28	7440-38-2	
Barium	**144**	ug/L	1.1	0.34	1	08/15/17 08:57	08/16/17 17:28	7440-39-3	
Beryllium	**0.21J**	ug/L	1.0	0.18	1	08/15/17 08:57	08/16/17 17:28	7440-41-7	
Boron	**3780**	ug/L	11.0	3.3	1	08/15/17 08:57	08/17/17 17:55	7440-42-8	
Cadmium	**0.14J**	ug/L	1.0	0.081	1	08/15/17 08:57	08/16/17 17:28	7440-43-9	
Calcium	**139000**	ug/L	250	69.8	1	08/15/17 08:57	08/16/17 17:28	7440-70-2	
Chromium	**1.7J**	ug/L	3.4	1.0	1	08/15/17 08:57	08/16/17 17:28	7440-47-3	
Cobalt	**3.2**	ug/L	1.0	0.085	1	08/15/17 08:57	08/16/17 17:28	7440-48-4	
Lead	**0.66J**	ug/L	1.0	0.20	1	08/15/17 08:57	08/16/17 17:28	7439-92-1	
Lithium	**10.7**	ug/L	1.0	0.14	1	08/15/17 08:57	08/16/17 17:28	7439-93-2	
Molybdenum	**5.9**	ug/L	1.5	0.44	1	08/15/17 08:57	08/16/17 17:28	7439-98-7	
Selenium	**0.60J**	ug/L	1.1	0.32	1	08/15/17 08:57	08/16/17 17:28	7782-49-2	
Thallium	**0.26J**	ug/L	1.0	0.14	1	08/15/17 08:57	08/16/17 17:28	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	08/15/17 12:30	08/16/17 08:40	7439-97-6	
Field Data	Analytical Method:								
Field pH	**6.94**	Std. Units			1		08/02/17 09:41		
Field Specific Conductance	**1218**	umhos/cm			1		08/02/17 09:41		
Oxygen, Dissolved	**0**	mg/L			1		08/02/17 09:41	7782-44-7	
REDOX	**-22**	mV			1		08/02/17 09:41		
Turbidity	**41.3**	NTU			1		08/02/17 09:41		
Elevation Water Level	**587.36**	feet			1		08/02/17 09:41		
Temperature, Water (C)	**10.4**	deg C			1		08/02/17 09:41		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**714**	mg/L	20.0	8.7	1		08/09/17 16:17		
9040 pH	Analytical Method: EPA 9040								
pH	**7.0**	Std. Units	0.10	0.010	1		08/07/17 11:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**23.2**	mg/L	10.0	2.5	5		08/15/17 20:56	16887-00-6	
Fluoride	**<0.50**	mg/L	1.5	0.50	5		08/15/17 20:56	16984-48-8	D3
Sulfate	**<5.0**	mg/L	15.0	5.0	5		08/15/17 20:56	14808-79-8	D3

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

QC Batch: 264633 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40154466001, 40154466002

METHOD BLANK: 1556920 Matrix: Water
Associated Lab Samples: 40154466001, 40154466002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	08/16/17 08:08	

LABORATORY CONTROL SAMPLE: 1556921

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.7	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1556922 1556923

Parameter	Units	40154460008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.13	5	5	4.5	4.6	89	91	85-115	2	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

QC Batch: 264594 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40154466001, 40154466002

METHOD BLANK: 1556761 Matrix: Water
Associated Lab Samples: 40154466001, 40154466002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	<0.15	1.0	08/16/17 15:53	
Arsenic	ug/L	<0.28	1.0	08/16/17 15:53	
Barium	ug/L	<0.34	1.1	08/16/17 15:53	
Beryllium	ug/L	<0.18	1.0	08/16/17 15:53	
Boron	ug/L	<3.3	11.0	08/16/17 15:53	
Cadmium	ug/L	<0.081	1.0	08/16/17 15:53	
Calcium	ug/L	<69.8	250	08/16/17 15:53	
Chromium	ug/L	<1.0	3.4	08/16/17 15:53	
Cobalt	ug/L	<0.085	1.0	08/16/17 15:53	
Lead	ug/L	<0.20	1.0	08/16/17 15:53	
Lithium	ug/L	<0.14	1.0	08/16/17 15:53	
Molybdenum	ug/L	<0.44	1.5	08/16/17 15:53	
Selenium	ug/L	<0.32	1.1	08/16/17 15:53	
Thallium	ug/L	<0.14	1.0	08/16/17 15:53	

LABORATORY CONTROL SAMPLE: 1556762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	520	104	80-120	
Arsenic	ug/L	500	505	101	80-120	
Barium	ug/L	500	517	103	80-120	
Beryllium	ug/L	500	524	105	80-120	
Boron	ug/L	500	499	100	80-120	
Cadmium	ug/L	500	530	106	80-120	
Calcium	ug/L	5000	5340	107	80-120	
Chromium	ug/L	500	502	100	80-120	
Cobalt	ug/L	500	505	101	80-120	
Lead	ug/L	500	500	100	80-120	
Lithium	ug/L	500	519	104	80-120	
Molybdenum	ug/L	500	519	104	80-120	
Selenium	ug/L	500	540	108	80-120	
Thallium	ug/L	500	493	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1556763 1556764

Parameter	Units	40154466001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.15	500	500	518	523	104	105	75-125	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.

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1556763 1556764

Parameter	Units	40154466001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	9.0	500	500	506	503	99	99	75-125	1	20	
Barium	ug/L	50.9	500	500	566	572	103	104	75-125	1	20	
Beryllium	ug/L	<0.18	500	500	516	519	103	104	75-125	0	20	
Boron	ug/L	1890	500	500	2350	2400	91	101	75-125	2	20	
Cadmium	ug/L	<0.081	500	500	519	524	104	105	75-125	1	20	
Calcium	ug/L	62600	5000	5000	71200	74000	171	228	75-125	4	20	P6
Chromium	ug/L	1.1J	500	500	495	495	99	99	75-125	0	20	
Cobalt	ug/L	0.53J	500	500	487	489	97	98	75-125	0	20	
Lead	ug/L	0.44J	500	500	513	502	103	100	75-125	2	20	
Lithium	ug/L	52.2	500	500	571	579	104	105	75-125	1	20	
Molybdenum	ug/L	649	500	500	1160	1170	102	104	75-125	1	20	
Selenium	ug/L	<0.32	500	500	527	526	105	105	75-125	0	20	
Thallium	ug/L	<0.14	500	500	512	499	102	100	75-125	3	20	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

QC Batch: 264062 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40154466001, 40154466002

METHOD BLANK: 1553871 Matrix: Water
Associated Lab Samples: 40154466001, 40154466002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	08/09/17 16:15	

LABORATORY CONTROL SAMPLE: 1553872

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	553	592	107	80-120	

SAMPLE DUPLICATE: 1553873

Parameter	Units	40154422001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	740	750	1	5	

SAMPLE DUPLICATE: 1553874

Parameter	Units	40154428001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	678	684	1	5	

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

QC Batch: 263761 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40154466001, 40154466002

SAMPLE DUPLICATE: 1552410

Parameter	Units	40154219001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.4	7.5	1	20	H6

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REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

QC Batch: 264190 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40154466001, 40154466002

METHOD BLANK: 1554662 Matrix: Water
Associated Lab Samples: 40154466001, 40154466002

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	2.0	08/15/17 18:25	
Fluoride	mg/L	<0.10	0.30	08/15/17 18:25	
Sulfate	mg/L	<1.0	3.0	08/15/17 18:25	

LABORATORY CONTROL SAMPLE: 1554663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.8	104	90-110	
Fluoride	mg/L	2	2.1	103	90-110	
Sulfate	mg/L	20	20.7	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1554664 1554665

Parameter	Units	40154446008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	0.92J	20	20	21.5	21.7	103	104	90-110	1	15	
Fluoride	mg/L	0.23J	2	2	2.3	2.3	102	103	90-110	1	15	
Sulfate	mg/L	51.8	100	100	154	155	103	103	90-110	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1554666 1554667

Parameter	Units	40154680001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	249	400	400	661	662	103	103	90-110	0	15	
Fluoride	mg/L	<2.0	40	40	41.7	42.3	104	106	90-110	1	15	
Sulfate	mg/L	<20.0	400	400	417	421	104	105	90-110	1	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.

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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(920)469-2436

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

Sample: MW 302 I4 **Lab ID: 40154466001** Collected: 08/02/17 10:31 Received: 08/04/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.474 ± 0.442 (0.582) C:NA T:90%**	pCi/L	08/14/17 23:22	13982-63-3	
Radium-228	EPA 904.0	**0.604 ± 0.435 (0.847) C:74% T:76%**	pCi/L	08/14/17 11:28	15262-20-1	
Total Radium	Total Radium Calculation	**1.08 ± 0.877 (1.43)**	pCi/L	08/25/17 15:48	7440-14-4	

Sample: MW 303 I4 **Lab ID: 40154466002** Collected: 08/02/17 09:41 Received: 08/04/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.772 ± 0.532 (0.568) C:NA T:93%**	pCi/L	08/14/17 23:22	13982-63-3	
Radium-228	EPA 904.0	**1.04 ± 0.412 (0.627) C:78% T:87%**	pCi/L	08/14/17 11:28	15262-20-1	
Total Radium	Total Radium Calculation	**1.81 ± 0.944 (1.20)**	pCi/L	08/25/17 15:48	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

QC Batch: 267927 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 40154466001, 40154466002

METHOD BLANK: 1318537 Matrix: Water
Associated Lab Samples: 40154466001, 40154466002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.180 ± 0.375 (0.827) C:80% T:72%	pCi/L	08/14/17 11:25	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

QC Batch: 267926 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 40154466001, 40154466002

METHOD BLANK: 1318536 Matrix: Water
Associated Lab Samples: 40154466001, 40154466002

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	0.303 ± 0.347 (0.205) C:NA T:94%	pCi/L	08/14/17 23:08	

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REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

DEFINITIONS

Act - Activity
Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)
(MDC) - Minimum Detectable Concentration
Trac - Tracer Recovery (%)
Carr - Carrier Recovery (%)
DF - Dilution Factor, if reported, represents the factor applied to the reported data due to dilution of the sample aliquot.
ND - Not Detected at or above LOD.
J - Estimated concentration at or above the LOD and below the LOQ.
LOD - Limit of Detection adjusted for dilution factor and percent moisture.
LOQ - Limit of Quantitation adjusted for dilution factor and percent moisture.
S - Surrogate
1,2-Diphenylhydrazine decomposes to and cannot be separated from Azobenzene using Method 8270. The result for each analyte is a combined concentration.
Consistent with EPA guidelines, unrounded data are displayed and have been used to calculate % recovery and RPD values.
LCS(D) - Laboratory Control Sample (Duplicate)
MS(D) - Matrix Spike (Duplicate)
DUP - Sample Duplicate
RPD - Relative Percent Difference
NC - Not Calculable.
SG - Silica Gel - Clean-Up
U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.
N-Nitrosodiphenylamine decomposes and cannot be separated from Diphenylamine using Method 8270. The result reported for each analyte is a combined concentration.
Pace Analytical is TNI accredited. Contact your Pace PM for the current list of accredited analytes.
TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154466

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40154466001	**MW 302 I4**	EPA 3010	264594	EPA 6020	264684
40154466002	**MW 303 I4**	EPA 3010	264594	EPA 6020	264684
40154466001	**MW 302 I4**	EPA 7470	264633	EPA 7470	264662
40154466002	**MW 303 I4**	EPA 7470	264633	EPA 7470	264662
40154466001	**MW 302 I4**				
40154466002	**MW 303 I4**				
40154466001	**MW 302 I4**	EPA 903.1	267926		
40154466002	**MW 303 I4**	EPA 903.1	267926		
40154466001	**MW 302 I4**	EPA 904.0	267927		
40154466002	**MW 303 I4**	EPA 904.0	267927		
40154466001	**MW 302 I4**	Total Radium Calculation	269604		
40154466002	**MW 303 I4**	Total Radium Calculation	269604		
40154466001	**MW 302 I4**	SM 2540C	264062		
40154466002	**MW 303 I4**	SM 2540C	264062		
40154466001	**MW 302 I4**	EPA 9040	263761		
40154466002	**MW 303 I4**	EPA 9040	263761		
40154466001	**MW 302 I4**	EPA 300.0	264190		
40154466002	**MW 303 I4**	EPA 300.0	264190		

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

Page 1 of

40154466

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	SCS Engineers
Branch/Location:	Madison WI
Project Contact:	Meg Blodgett
Phone:	608-216-7362
Project Number:	25216068.00
Project Name:	WPL Edgewater I-4
Project State:	WI
Sampled By (Print):	Gary Stenkel
Sampled By (Sign):	Gary Stenkel
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	
Invoice To Company:	SCS Engineers
Invoice To Address:	2830 Dairy Dr Madison WI 53718
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	Analyses Requested: Chloride, Fluoride, Sulfate, TDS	pH	Radium 226	Radium 228	B, Cd, Sb, As, Ba, Be, Cu, Cr	Mercury	Co, Pb, Li, Mo, Sl, Ti	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	PRESERVATION (CODE)*					A	A	D	D	D	D	D			
	Y/N					N	N	N	N	N	N	N			
001	MW 302 I4	8/2/17	1031	GW		X	X	X	X	X	X	X	2-1Lp^D 3-250mLp^HAD		
002	MW 303 I4	8/2/17	0941	GW		X	X	X	X	X	X	X			

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Gary Stenkel	8/3/17 0800	Mary Fanning	8/3/17 9:00
Mary Fanning	8/3/17 1415	[illegible]	8/4/17
CS Logistics	8/4/17 1010	Dave Bate Pace	8/4/17 1010

PACE Project No.: 40154466
Receipt Temp = 2.01 °C
Sample Receipt pH: OK / Adjusted
Cooler Custody Seal: Present / Not Present; Intact / Not Intact

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

Pace Analytical

Sample Condition Upon Receipt

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

Client Name: SCS Engineers

Project #: **WO#: 40154466**

40154466

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS logistics

Tracking #:

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

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

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

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

Cooler Temperature Uncorr: ROI /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

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

Person examining contents:
Date: 8/4/17
Initials: BB

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

Client Notification/ Resolution:

If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:
Client sent back 2-1Lp containers unused
1-250mLpD containers unused
2-250mLpA containers unused
BB 8/4/17

Project Manager Review: RMR for DM **Date:** 8/4/17

F-GB-C-031-Rev.04 (12Dec2016) SCUR.xls
Pace Analytical Services LLC. - Green Bay WI

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

August 28, 2017

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

Dear Meghan Blodgett:
Enclosed are the analytical results for sample(s) received by the laboratory on August 04, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

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

Enclosures

cc: Tom Karwoski, SCS ENGINEERS
Jeff Maxted, ALLIANT ENERGY
Marc Morandi, ALLIANT ENERGY

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

CERTIFICATIONS

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

Pennsylvania Certification IDs

1638 Roseytown Rd Suites 2,3&4, Greensburg, PA 15601
L-A-B DOD-ELAP Accreditation #: L2417
Alabama Certification #: 41590
Arizona Certification #: AZ0734
Arkansas Certification
California Certification #: 04222CA
Colorado Certification
Connecticut Certification #: PH-0694
Delaware Certification
Florida/TNI Certification #: E87683
Georgia Certification #: C040
Guam Certification
Hawaii Certification
Idaho Certification
Illinois Certification
Indiana Certification
Iowa Certification #: 391
Kansas/TNI Certification #: E-10358
Kentucky Certification #: 90133
Louisiana DHH/TNI Certification #: LA140008
Louisiana DEQ/TNI Certification #: 4086
Maine Certification #: PA00091
Maryland Certification #: 308
Massachusetts Certification #: M-PA1457
Michigan/PADEP Certification
Missouri Certification #: 235
Montana Certification #: Cert 0082
Nebraska Certification #: NE-05-29-14
Nevada Certification #: PA014572015-1
New Hampshire/TNI Certification #: 2976
New Jersey/TNI Certification #: PA 051
New Mexico Certification #: PA01457
New York/TNI Certification #: 10888
North Carolina Certification #: 42706
North Dakota Certification #: R-190
Oregon/TNI Certification #: PA200002
Pennsylvania/TNI Certification #: 65-00282
Puerto Rico Certification #: PA01457
Rhode Island Certification #: 65-00282
South Dakota Certification
Tennessee Certification #: TN2867
Texas/TNI Certification #: T104704188-14-8
Utah/TNI Certification #: PA014572015-5
USDA Soil Permit #: P330-14-00213
Vermont Dept. of Health: ID# VT-0282
Virgin Island/PADEP Certification
Virginia/VELAP Certification #: 460198
Washington Certification #: C868
West Virginia DEP Certification #: 143
West Virginia DHHR Certification #: 9964C
Wisconsin Certification
Wyoming Certification #: 8TMS-L

Green Bay Certification IDs

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

REPORT OF LABORATORY ANALYSIS

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

SAMPLE SUMMARY

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40154468001	**2R-OW I-4**	Water	08/01/17 15:36	08/04/17 10:10
40154468002	**MW 301 I-4**	Water	08/02/17 11:01	08/04/17 10:10
40154468003	**FIELD BLANK I-4**	Water	08/02/17 11:20	08/04/17 10:10

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
40154468001	**2R-OW I-4**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AXL	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40154468002	**MW 301 I-4**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
			AXL	7	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G
40154468003	**FIELD BLANK I-4**	EPA 6020	SDW	14	PASI-G
		EPA 7470	AJT	1	PASI-G
		EPA 903.1	WRR	1	PASI-PA
		EPA 904.0	VAL	1	PASI-PA
		Total Radium Calculation	JAL	1	PASI-PA
		SM 2540C	TMK	1	PASI-G
		EPA 9040	ALY	1	PASI-G
		EPA 300.0	HMB	3	PASI-G

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

Sample: 2R-OW I-4 **Lab ID: 40154468001** Collected: 08/01/17 15:36 Received: 08/04/17 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.15**	ug/L	1.0	0.15	1	08/15/17 08:57	08/16/17 17:42	7440-36-0	
Arsenic	**1.2**	ug/L	1.0	0.28	1	08/15/17 08:57	08/16/17 17:42	7440-38-2	
Barium	**154**	ug/L	1.1	0.34	1	08/15/17 08:57	08/16/17 17:42	7440-39-3	
Beryllium	**<0.18**	ug/L	1.0	0.18	1	08/15/17 08:57	08/16/17 17:42	7440-41-7	
Boron	**35.7**	ug/L	11.0	3.3	1	08/15/17 08:57	08/17/17 18:09	7440-42-8	
Cadmium	**<0.081**	ug/L	1.0	0.081	1	08/15/17 08:57	08/16/17 17:42	7440-43-9	
Calcium	**164000**	ug/L	250	69.8	1	08/15/17 08:57	08/16/17 17:42	7440-70-2	
Chromium	**4.3**	ug/L	3.4	1.0	1	08/15/17 08:57	08/16/17 17:42	7440-47-3	
Cobalt	**1.7**	ug/L	1.0	0.085	1	08/15/17 08:57	08/16/17 17:42	7440-48-4	
Lead	**1.2**	ug/L	1.0	0.20	1	08/15/17 08:57	08/16/17 17:42	7439-92-1	
Lithium	**15.1**	ug/L	1.0	0.14	1	08/15/17 08:57	08/16/17 17:42	7439-93-2	
Molybdenum	**0.44J**	ug/L	1.5	0.44	1	08/15/17 08:57	08/16/17 17:42	7439-98-7	
Selenium	**<0.32**	ug/L	1.1	0.32	1	08/15/17 08:57	08/16/17 17:42	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	08/15/17 08:57	08/16/17 17:42	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	08/15/17 12:30	08/16/17 08:43	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.00**	Std. Units			1		08/01/17 15:36		
Field Specific Conductance	**1651**	umhos/cm			1		08/01/17 15:36		
Oxygen, Dissolved	**0**	mg/L			1		08/01/17 15:36	7782-44-7	
REDOX	**-22**	mV			1		08/01/17 15:36		
Turbidity	**41.3**	NTU			1		08/01/17 15:36		
Elevation Water Level	**604.59**	feet			1		08/01/17 15:36		
Temperature, Water (C)	**13.0**	deg C			1		08/01/17 15:36		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1000**	mg/L	20.0	8.7	1		08/08/17 17:17		
9040 pH	Analytical Method: EPA 9040								
pH	**7.1**	Std. Units	0.10	0.010	1		08/08/17 10:05		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**272**	mg/L	10.0	2.5	5		08/16/17 15:47	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		08/15/17 21:07	16984-48-8	
Sulfate	**28.8**	mg/L	3.0	1.0	1		08/15/17 21:07	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

Sample: MW 301 I-4 **Lab ID: 40154468002** Collected: 08/02/17 11:01 Received: 08/04/17 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.15**	ug/L	1.0	0.15	1	08/15/17 08:57	08/16/17 17:48	7440-36-0	
Arsenic	**1.5**	ug/L	1.0	0.28	1	08/15/17 08:57	08/16/17 17:48	7440-38-2	
Barium	**28.2**	ug/L	1.1	0.34	1	08/15/17 08:57	08/16/17 17:48	7440-39-3	
Beryllium	**<0.18**	ug/L	1.0	0.18	1	08/15/17 08:57	08/16/17 17:48	7440-41-7	
Boron	**8610**	ug/L	55.0	16.5	5	08/15/17 08:57	08/17/17 18:16	7440-42-8	
Cadmium	**<0.081**	ug/L	1.0	0.081	1	08/15/17 08:57	08/16/17 17:48	7440-43-9	
Calcium	**83600**	ug/L	250	69.8	1	08/15/17 08:57	08/16/17 17:48	7440-70-2	
Chromium	**<1.0**	ug/L	3.4	1.0	1	08/15/17 08:57	08/16/17 17:48	7440-47-3	
Cobalt	**0.20J**	ug/L	1.0	0.085	1	08/15/17 08:57	08/16/17 17:48	7440-48-4	
Lead	**0.29J**	ug/L	1.0	0.20	1	08/15/17 08:57	08/16/17 17:48	7439-92-1	
Lithium	**15.8**	ug/L	1.0	0.14	1	08/15/17 08:57	08/16/17 17:48	7439-93-2	
Molybdenum	**2070**	ug/L	1.5	0.44	1	08/15/17 08:57	08/16/17 17:48	7439-98-7	
Selenium	**<0.32**	ug/L	1.1	0.32	1	08/15/17 08:57	08/16/17 17:48	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	08/15/17 08:57	08/16/17 17:48	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	08/15/17 12:30	08/16/17 08:45	7439-97-6	
Field Data	Analytical Method:								
Field pH	**7.58**	Std. Units			1		08/02/17 11:01		
Field Specific Conductance	**1111**	umhos/cm			1		08/02/17 11:01		
Oxygen, Dissolved	**0.5**	mg/L			1		08/02/17 11:01	7782-44-7	
REDOX	**-13**	mV			1		08/02/17 11:01		
Turbidity	**6.51**	NTU			1		08/02/17 11:01		
Elevation Water Level	**597.40**	feet			1		08/02/17 11:01		
Laboratory Temperature, C	**11.6**	deg C			1		08/02/17 11:01		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**780**	mg/L	20.0	8.7	1		08/08/17 17:17		
9040 pH	Analytical Method: EPA 9040								
pH	**7.5**	Std. Units	0.10	0.010	1		08/08/17 10:05		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**12.3**	mg/L	2.0	0.50	1		08/15/17 21:18	16887-00-6	
Fluoride	**0.32**	mg/L	0.30	0.10	1		08/15/17 21:18	16984-48-8	
Sulfate	**340**	mg/L	30.0	10.0	10		08/16/17 15:58	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

Sample: FIELD BLANK I-4 **Lab ID: 40154468003** Collected: 08/02/17 11:20 Received: 08/04/17 10:10 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Antimony	**<0.15**	ug/L	1.0	0.15	1	08/15/17 08:57	08/16/17 16:00	7440-36-0	
Arsenic	**<0.28**	ug/L	1.0	0.28	1	08/15/17 08:57	08/16/17 16:00	7440-38-2	
Barium	**<0.34**	ug/L	1.1	0.34	1	08/15/17 08:57	08/16/17 16:00	7440-39-3	
Beryllium	**<0.18**	ug/L	1.0	0.18	1	08/15/17 08:57	08/16/17 16:00	7440-41-7	
Boron	**<3.3**	ug/L	11.0	3.3	1	08/15/17 08:57	08/16/17 16:00	7440-42-8	
Cadmium	**<0.081**	ug/L	1.0	0.081	1	08/15/17 08:57	08/16/17 16:00	7440-43-9	
Calcium	**<69.8**	ug/L	250	69.8	1	08/15/17 08:57	08/16/17 16:00	7440-70-2	
Chromium	**<1.0**	ug/L	3.4	1.0	1	08/15/17 08:57	08/16/17 16:00	7440-47-3	
Cobalt	**<0.085**	ug/L	1.0	0.085	1	08/15/17 08:57	08/16/17 16:00	7440-48-4	
Lead	**<0.20**	ug/L	1.0	0.20	1	08/15/17 08:57	08/16/17 16:00	7439-92-1	
Lithium	**<0.14**	ug/L	1.0	0.14	1	08/15/17 08:57	08/16/17 16:00	7439-93-2	
Molybdenum	**<0.44**	ug/L	1.5	0.44	1	08/15/17 08:57	08/16/17 16:00	7439-98-7	
Selenium	**<0.32**	ug/L	1.1	0.32	1	08/15/17 08:57	08/16/17 16:00	7782-49-2	
Thallium	**<0.14**	ug/L	1.0	0.14	1	08/15/17 08:57	08/16/17 16:00	7440-28-0	
7470 Mercury	Analytical Method: EPA 7470 Preparation Method: EPA 7470								
Mercury	**<0.13**	ug/L	0.42	0.13	1	08/15/17 12:30	08/16/17 08:47	7439-97-6	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**<8.7**	mg/L	20.0	8.7	1		08/08/17 17:17		
9040 pH	Analytical Method: EPA 9040								
pH	**6.7**	Std. Units	0.10	0.010	1		08/08/17 10:25		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**<0.50**	mg/L	2.0	0.50	1		08/15/17 21:29	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		08/15/17 21:29	16984-48-8	
Sulfate	**<1.0**	mg/L	3.0	1.0	1		08/15/17 21:29	14808-79-8	

REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

QC Batch: 264633 Analysis Method: EPA 7470
QC Batch Method: EPA 7470 Analysis Description: 7470 Mercury
Associated Lab Samples: 40154468001, 40154468002, 40154468003

METHOD BLANK: 1556920 Matrix: Water
Associated Lab Samples: 40154468001, 40154468002, 40154468003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.13	0.42	08/16/17 08:08	

LABORATORY CONTROL SAMPLE: 1556921

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	5	4.7	93	85-115	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1556922 1556923

Parameter	Units	40154460008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	ug/L	<0.13	5	5	4.5	4.6	89	91	85-115	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

QC Batch: 264594 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40154468001, 40154468002, 40154468003

METHOD BLANK: 1556761 Matrix: Water
Associated Lab Samples: 40154468001, 40154468002, 40154468003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Antimony	ug/L	<0.15	1.0	08/16/17 15:53	
Arsenic	ug/L	<0.28	1.0	08/16/17 15:53	
Barium	ug/L	<0.34	1.1	08/16/17 15:53	
Beryllium	ug/L	<0.18	1.0	08/16/17 15:53	
Boron	ug/L	<3.3	11.0	08/16/17 15:53	
Cadmium	ug/L	<0.081	1.0	08/16/17 15:53	
Calcium	ug/L	<69.8	250	08/16/17 15:53	
Chromium	ug/L	<1.0	3.4	08/16/17 15:53	
Cobalt	ug/L	<0.085	1.0	08/16/17 15:53	
Lead	ug/L	<0.20	1.0	08/16/17 15:53	
Lithium	ug/L	<0.14	1.0	08/16/17 15:53	
Molybdenum	ug/L	<0.44	1.5	08/16/17 15:53	
Selenium	ug/L	<0.32	1.1	08/16/17 15:53	
Thallium	ug/L	<0.14	1.0	08/16/17 15:53	

LABORATORY CONTROL SAMPLE: 1556762

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	ug/L	500	520	104	80-120	
Arsenic	ug/L	500	505	101	80-120	
Barium	ug/L	500	517	103	80-120	
Beryllium	ug/L	500	524	105	80-120	
Boron	ug/L	500	499	100	80-120	
Cadmium	ug/L	500	530	106	80-120	
Calcium	ug/L	5000	5340	107	80-120	
Chromium	ug/L	500	502	100	80-120	
Cobalt	ug/L	500	505	101	80-120	
Lead	ug/L	500	500	100	80-120	
Lithium	ug/L	500	519	104	80-120	
Molybdenum	ug/L	500	519	104	80-120	
Selenium	ug/L	500	540	108	80-120	
Thallium	ug/L	500	493	99	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1556763 1556764

Parameter	Units	40154466001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Antimony	ug/L	<0.15	500	500	518	523	104	105	75-125	1	20	

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REPORT OF LABORATORY ANALYSIS

Pace Analytical Services, LLC
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QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1556763 1556764

Parameter	Units	40154466001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Arsenic	ug/L	9.0	500	500	506	503	99	99	75-125	1	20	
Barium	ug/L	50.9	500	500	566	572	103	104	75-125	1	20	
Beryllium	ug/L	<0.18	500	500	516	519	103	104	75-125	0	20	
Boron	ug/L	1890	500	500	2350	2400	91	101	75-125	2	20	
Cadmium	ug/L	<0.081	500	500	519	524	104	105	75-125	1	20	
Calcium	ug/L	62600	5000	5000	71200	74000	171	228	75-125	4	20	P6
Chromium	ug/L	1.1J	500	500	495	495	99	99	75-125	0	20	
Cobalt	ug/L	0.53J	500	500	487	489	97	98	75-125	0	20	
Lead	ug/L	0.44J	500	500	513	502	103	100	75-125	2	20	
Lithium	ug/L	52.2	500	500	571	579	104	105	75-125	1	20	
Molybdenum	ug/L	649	500	500	1160	1170	102	104	75-125	1	20	
Selenium	ug/L	<0.32	500	500	527	526	105	105	75-125	0	20	
Thallium	ug/L	<0.14	500	500	512	499	102	100	75-125	3	20	

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

QC Batch: 263939 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40154468001, 40154468002, 40154468003

METHOD BLANK: 1553281 Matrix: Water
Associated Lab Samples: 40154468001, 40154468002, 40154468003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	08/08/17 17:13	

LABORATORY CONTROL SAMPLE: 1553282

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	553	582	105	80-120	

SAMPLE DUPLICATE: 1553283

Parameter	Units	40154446001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	220	214	3	5	

SAMPLE DUPLICATE: 1553284

Parameter	Units	40154514001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	454	462	2	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

QC Batch: 263876 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40154468001, 40154468002, 40154468003

SAMPLE DUPLICATE: 1552940

Parameter	Units	40154302001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.8	7.8	0	20	H6

SAMPLE DUPLICATE: 1552941

Parameter	Units	40154468001 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.1	7.1	0	20	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

QC Batch: 264190 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40154468001, 40154468002, 40154468003

METHOD BLANK: 1554662 Matrix: Water
Associated Lab Samples: 40154468001, 40154468002, 40154468003

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	2.0	08/15/17 18:25	
Fluoride	mg/L	<0.10	0.30	08/15/17 18:25	
Sulfate	mg/L	<1.0	3.0	08/15/17 18:25	

LABORATORY CONTROL SAMPLE: 1554663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.8	104	90-110	
Fluoride	mg/L	2	2.1	103	90-110	
Sulfate	mg/L	20	20.7	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1554664 1554665

Parameter	Units	40154446008 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	0.92J	20	20	21.5	21.7	103	104	90-110	1	15	
Fluoride	mg/L	0.23J	2	2	2.3	2.3	102	103	90-110	1	15	
Sulfate	mg/L	51.8	100	100	154	155	103	103	90-110	0	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1554666 1554667

Parameter	Units	40154680001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	249	400	400	661	662	103	103	90-110	0	15	
Fluoride	mg/L	<2.0	40	40	41.7	42.3	104	106	90-110	1	15	
Sulfate	mg/L	<20.0	400	400	417	421	104	105	90-110	1	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.

REPORT OF LABORATORY ANALYSIS

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(920)469-2436

ANALYTICAL RESULTS - RADIOCHEMISTRY

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

Sample: 2R-OW I-4 **Lab ID: 40154468001** Collected: 08/01/17 15:36 Received: 08/04/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.658 ± 0.437 (0.509) C:NA T:98%**	pCi/L	08/18/17 11:27	13982-63-3	
Radium-228	EPA 904.0	**0.502 ± 0.325 (0.616) C:80% T:96%**	pCi/L	08/18/17 16:39	15262-20-1	
Total Radium	Total Radium Calculation	**2.12 ± 1.10 (1.44)**	pCi/L	08/28/17 12:31	7440-14-4	

Sample: MW 301 I-4 **Lab ID: 40154468002** Collected: 08/02/17 11:01 Received: 08/04/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.548 ± 0.401 (0.448) C:NA T:92%**	pCi/L	08/18/17 11:27	13982-63-3	
Radium-228	EPA 904.0	**0.296 ± 0.345 (0.725) C:77% T:83%**	pCi/L	08/18/17 16:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.67 ± 0.843 (0.834)**	pCi/L	08/28/17 12:31	7440-14-4	

Sample: FIELD BLANK I-4 **Lab ID: 40154468003** Collected: 08/02/17 11:20 Received: 08/04/17 10:10 Matrix: Water
PWS: Site ID: Sample Type:

Parameters	Method	Act ± Unc (MDC) Carr Trac	Units	Analyzed	CAS No.	Qual
Radium-226	EPA 903.1	**0.448 ± 0.494 (0.790) C:NA T:95%**	pCi/L	08/18/17 11:45	13982-63-3	
Radium-228	EPA 904.0	**0.155 ± 0.396 (0.884) C:76% T:73%**	pCi/L	08/18/17 16:39	15262-20-1	
Total Radium	Total Radium Calculation	**1.06 ± 0.912 (1.62)**	pCi/L	08/28/17 12:31	7440-14-4	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

QC Batch: 267781 Analysis Method: EPA 903.1
QC Batch Method: EPA 903.1 Analysis Description: 903.1 Radium-226
Associated Lab Samples: 40154468001, 40154468002, 40154468003

METHOD BLANK: 1317982 Matrix: Water
Associated Lab Samples: 40154468001, 40154468002, 40154468003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-226	-0.056 ± 0.257 (0.607) C:NA T:95%	pCi/L	08/18/17 11:11	

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

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL - RADIOCHEMISTRY

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

QC Batch: 267787 Analysis Method: EPA 904.0
QC Batch Method: EPA 904.0 Analysis Description: 904.0 Radium 228
Associated Lab Samples: 40154468001, 40154468002, 40154468003

METHOD BLANK: 1317988 Matrix: Water
Associated Lab Samples: 40154468001, 40154468002, 40154468003

Parameter	Act ± Unc (MDC) Carr Trac	Units	Analyzed	Qualifiers
Radium-228	0.273 ± 0.344 (0.731) C:82% T:81%	pCi/L	08/18/17 16:37	

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

REPORT OF LABORATORY ANALYSIS

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

QUALIFIERS

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

DEFINITIONS

Act - Activity

Unc - Uncertainty: SDWA = 1.96 sigma count uncertainty, all other matrices = Expanded Uncertainty (95% confidence interval). Gamma Spec = Expanded Uncertainty (95.4% Confidence Interval)

(MDC) - Minimum Detectable Concentration

Trac - Tracer Recovery (%)

Carr - Carrier Recovery (%)

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

ND - Not Detected at or above LOD.

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

LOD - Limit of Detection adjusted for dilution factor and percent moisture.

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

S - Surrogate

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

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

LCS(D) - Laboratory Control Sample (Duplicate)

MS(D) - Matrix Spike (Duplicate)

DUP - Sample Duplicate

RPD - Relative Percent Difference

NC - Not Calculable.

SG - Silica Gel - Clean-Up

U - Indicates the compound was analyzed for, but not detected at or above the adjusted LOD.

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

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

TNI - The NELAC Institute.

LABORATORIES

PASI-G	Pace Analytical Services - Green Bay
PASI-PA	Pace Analytical Services - Greensburg

ANALYTE QUALIFIERS

H6	Analysis initiated outside of the 15 minute EPA required holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.

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

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216068.00 WPL EDGEWATER I-4
Pace Project No.: 40154468

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40154468001	**2R-OW I-4**	EPA 3010	264594	EPA 6020	264684
40154468002	**MW 301 I-4**	EPA 3010	264594	EPA 6020	264684
40154468003	**FIELD BLANK I-4**	EPA 3010	264594	EPA 6020	264684
40154468001	**2R-OW I-4**	EPA 7470	264633	EPA 7470	264662
40154468002	**MW 301 I-4**	EPA 7470	264633	EPA 7470	264662
40154468003	**FIELD BLANK I-4**	EPA 7470	264633	EPA 7470	264662
40154468001	**2R-OW I-4**				
40154468002	**MW 301 I-4**				
40154468001	**2R-OW I-4**	EPA 903.1	267781		
40154468002	**MW 301 I-4**	EPA 903.1	267781		
40154468003	**FIELD BLANK I-4**	EPA 903.1	267781		
40154468001	**2R-OW I-4**	EPA 904.0	267787		
40154468002	**MW 301 I-4**	EPA 904.0	267787		
40154468003	**FIELD BLANK I-4**	EPA 904.0	267787		
40154468001	**2R-OW I-4**	Total Radium Calculation	269753		
40154468002	**MW 301 I-4**	Total Radium Calculation	269753		
40154468003	**FIELD BLANK I-4**	Total Radium Calculation	269753		
40154468001	**2R-OW I-4**	SM 2540C	263939		
40154468002	**MW 301 I-4**	SM 2540C	263939		
40154468003	**FIELD BLANK I-4**	SM 2540C	263939		
40154468001	**2R-OW I-4**	EPA 9040	263876		
40154468002	**MW 301 I-4**	EPA 9040	263876		
40154468003	**FIELD BLANK I-4**	EPA 9040	263876		
40154468001	**2R-OW I-4**	EPA 300.0	264190		
40154468002	**MW 301 I-4**	EPA 300.0	264190		
40154468003	**FIELD BLANK I-4**	EPA 300.0	264190		

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

40154468

Pace Analytical®
www.pacelabs.com

CHAIN OF CUSTODY

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

(Please Print Clearly)	
Company Name:	SCS Engineers
Branch/Location:	Madison WI
Project Contact:	Meg Blodgett
Phone:	608-216-7362
Project Number:	25216068.00
Project Name:	WPL Edgewater F-4
Project State:	WI
Sampled By (Print):	Gary Sterkel
Sampled By (Sign):	Gary Sterkel
PO #:	Regulatory Program:

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	SCS Engineers
Invoice To Company:	SCS Engineers
Invoice To Address:	2830 Dairy Dr Madison WI 53718
Invoice To Phone:	

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

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

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	Chloride, Fluoride, Sulfate, TDS	pH	Radium 226	Radium 228	B, Cd, Sb, As, Ba, Be, Cr, Co, Pb, Li, Mo, Si, Ti	Mercury	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	Y/N	N	N	N	N	N	N	N						
	Pick Letter	A	A	D	D	D	D	D						
001	2R-OW F-4	8/1/17	1536	GW		X	X	X	X	X	X	X	2-1Lp 3-250mLp DAH	
002	MW 301 F-4	8/2/17	1101	GW		X	X	X	X	X	X	X		
003	Field Blank E-4	8/2/17	1120	GW		X	X	X	X	X	X	X		

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

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

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Gary Sterkel	8/3/17 0800	Mary Jannin	8/3/17 9:00
Mary Jannin	8/3/17 1415		
CS Logistics	8/4/17 1010	Sue Sobat Pace	8/4/17 1010

PACE Project No.: 40154468
Receipt Temp = 2.0 °C
Sample Receipt pH OK / Adjusted
Cooler Custody Seal Present / Not Present
Intact / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/06

ORIGINAL

Sample Condition Upon Receipt

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

Project # **WO# : 40154468**

40154468

Client Name: SCS Engineers

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS logistics

Tracking #:

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

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

Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other

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

Cooler Temperature Uncorr: R01 /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no

Temp Blank Present: ☐ yes ☑ no

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

Person examining contents:
Date: 8/4/17
Initials: BAB

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

Client Notification/ Resolution: If checked, see attached form for additional comments ☐

Person Contacted: Date/Time:

Comments/ Resolution:

Project Manager Review: RMR for DM **Date:** 8/4/17

A9 Fall 2017 Detection Sampling, Analytical Laboratory Report

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

November 09, 2017

Meghan Blodgett
SCS ENGINEERS
2830 Dairy Drive
Madison, WI 53718

RE: Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

Dear Meghan Blodgett:
Enclosed are the analytical results for sample(s) received by the laboratory on October 26, 2017. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

Sincerely,

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

Enclosures

cc: Tom Karwoski, SCS ENGINEERS
Kyle Kramer, SCS ENGINEERS
Jeff Maxted, ALLIANT ENERGY
Marc Morandi, ALLIANT ENERGY

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

CERTIFICATIONS

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

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

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

SAMPLE SUMMARY

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

Lab ID	Sample ID	Matrix	Date Collected	Date Received
40159487001	**MW 301**	Water	10/24/17 12:01	10/26/17 09:55
40159487002	**MW 302**	Water	10/24/17 11:16	10/26/17 09:55
40159487003	**MW 303**	Water	10/24/17 10:16	10/26/17 09:55
40159487004	**2R-OW**	Water	10/23/17 15:26	10/26/17 09:55
40159487005	**FIELD BLANK**	Water	10/24/17 12:15	10/26/17 09:55

REPORT OF LABORATORY ANALYSIS

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

SAMPLE ANALYTE COUNT

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

Lab ID	Sample ID	Method	Analysts	Analytes Reported
40159487001	**MW 301**	EPA 6020	DS1	2
			RMW	7
		SM 2540C	TMK	1
		EPA 9040	ALY	1
		EPA 300.0	HMB	3
40159487002	**MW 302**	EPA 6020	DS1	2
			RMW	7
		SM 2540C	TMK	1
		EPA 9040	ALY	1
		EPA 300.0	HMB	3
40159487003	**MW 303**	EPA 6020	DS1	2
			RMW	7
		SM 2540C	TMK	1
		EPA 9040	ALY	1
		EPA 300.0	HMB	3
40159487004	**2R-OW**	EPA 6020	DS1	2
			RMW	7
		SM 2540C	TMK	1
		EPA 9040	ALY	1
		EPA 300.0	HMB	3
40159487005	**FIELD BLANK**	EPA 6020	DS1	2
		SM 2540C	TMK	1
		EPA 9040	ALY	1
		EPA 300.0	HMB	3

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ANALYTICAL RESULTS

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

Sample: MW 301 **Lab ID: 40159487001** Collected: 10/24/17 12:01 Received: 10/26/17 09:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Boron	**8820**	ug/L	110	33.0	10	10/31/17 10:40	11/06/17 18:45	7440-42-8	
Calcium	**87200**	ug/L	250	69.8	1	10/31/17 10:40	11/04/17 04:13	7440-70-2	
Field Data	Analytical Method:								
Field pH	**7.43**	Std. Units			1		10/24/17 12:01		
Field Specific Conductance	**1096**	umhos/cm			1		10/24/17 12:01		
Oxygen, Dissolved	**0**	mg/L			1		10/24/17 12:01	7782-44-7	
REDOX	**-18**	mV			1		10/24/17 12:01		
Turbidity	**11.58**	NTU			1		10/24/17 12:01		
Static Water Level	**597.20**	feet			1		10/24/17 12:01		
Temperature, Water (C)	**10.7**	deg C			1		10/24/17 12:01		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**772**	mg/L	20.0	8.7	1		10/31/17 14:41		
9040 pH	Analytical Method: EPA 9040								
pH	**7.5**	Std. Units	0.10	0.010	1		10/31/17 10:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**11.9**	mg/L	2.0	0.50	1		11/07/17 15:42	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		11/07/17 15:42	16984-48-8	
Sulfate	**341**	mg/L	30.0	10.0	10		11/08/17 01:32	14808-79-8	

Sample: MW 302 **Lab ID: 40159487002** Collected: 10/24/17 11:16 Received: 10/26/17 09:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Boron	**1760**	ug/L	11.0	3.3	1	10/31/17 10:40	11/04/17 04:20	7440-42-8	
Calcium	**68100**	ug/L	250	69.8	1	10/31/17 10:40	11/04/17 04:20	7440-70-2	
Field Data	Analytical Method:								
Field pH	**7.60**	Std. Units			1		10/24/17 11:16		
Field Specific Conductance	**505**	umhos/cm			1		10/24/17 11:16		
Oxygen, Dissolved	**0**	mg/L			1		10/24/17 11:16	7782-44-7	
REDOX	**-118**	mV			1		10/24/17 11:16		
Turbidity	**42.45**	NTU			1		10/24/17 11:16		
Static Water Level	**595.25**	feet			1		10/24/17 11:16		
Temperature, Water (C)	**11.1**	deg C			1		10/24/17 11:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**316**	mg/L	20.0	8.7	1		10/31/17 14:42		

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

Sample: MW 302 **Lab ID: 40159487002** Collected: 10/24/17 11:16 Received: 10/26/17 09:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
9040 pH	Analytical Method: EPA 9040								
pH	**7.7**	Std. Units	0.10	0.010	1		10/31/17 10:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**18.9**	mg/L	2.0	0.50	1		11/07/17 15:52	16887-00-6	
Fluoride	**0.84**	mg/L	0.30	0.10	1		11/07/17 15:52	16984-48-8	
Sulfate	**72.2**	mg/L	15.0	5.0	5		11/08/17 11:17	14808-79-8	

Sample: MW 303 **Lab ID: 40159487003** Collected: 10/24/17 10:16 Received: 10/26/17 09:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Boron	**3480**	ug/L	11.0	3.3	1	10/31/17 10:40	11/04/17 04:28	7440-42-8	
Calcium	**173000**	ug/L	250	69.8	1	10/31/17 10:40	11/04/17 04:28	7440-70-2	
Field Data	Analytical Method:								
Field pH	**7.14**	Std. Units			1		10/24/17 10:16		
Field Specific Conductance	**1095**	umhos/cm			1		10/24/17 10:16		
Oxygen, Dissolved	**0**	mg/L			1		10/24/17 10:16	7782-44-7	
REDOX	**-108**	mV			1		10/24/17 10:16		
Turbidity	**563**	NTU			1		10/24/17 10:16		
Static Water Level	**587.97**	feet			1		10/24/17 10:16		
Temperature, Water (C)	**11**	deg C			1		10/24/17 10:16		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**566**	mg/L	20.0	8.7	1		10/31/17 14:42		
9040 pH	Analytical Method: EPA 9040								
pH	**6.8**	Std. Units	0.10	0.010	1		10/31/17 10:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**20.4**	mg/L	10.0	2.5	5		11/07/17 16:03	16887-00-6	
Fluoride	**<0.50**	mg/L	1.5	0.50	5		11/07/17 16:03	16984-48-8	D3
Sulfate	**<5.0**	mg/L	15.0	5.0	5		11/07/17 16:03	14808-79-8	D3

Sample: 2R-OW **Lab ID: 40159487004** Collected: 10/23/17 15:26 Received: 10/26/17 09:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Boron	**55.9**	ug/L	11.0	3.3	1	10/31/17 10:40	11/04/17 04:35	7440-42-8	
Calcium	**170000**	ug/L	250	69.8	1	10/31/17 10:40	11/04/17 04:35	7440-70-2	

REPORT OF LABORATORY ANALYSIS

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

ANALYTICAL RESULTS

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

Sample: 2R-OW **Lab ID: 40159487004** Collected: 10/23/17 15:26 Received: 10/26/17 09:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method:								
Field pH	**7.23**	Std. Units			1		10/23/17 15:26		
Field Specific Conductance	**1864**	umhos/cm			1		10/23/17 15:26		
Oxygen, Dissolved	**4.9**	mg/L			1		10/23/17 15:26	7782-44-7	
REDOX	**131**	mV			1		10/23/17 15:26		
Turbidity	**2.24**	NTU			1		10/23/17 15:26		
Static Water Level	**601.74**	feet			1		10/23/17 15:26		
Temperature, Water (C)	**13.0**	deg C			1		10/23/17 15:26		
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**1010**	mg/L	20.0	8.7	1		10/30/17 17:46		
9040 pH	Analytical Method: EPA 9040								
pH	**7.1**	Std. Units	0.10	0.010	1		10/31/17 10:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**305**	mg/L	20.0	5.0	10		11/08/17 11:28	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		11/07/17 16:14	16984-48-8	
Sulfate	**29.3**	mg/L	3.0	1.0	1		11/07/17 16:14	14808-79-8	

Sample: FIELD BLANK **Lab ID: 40159487005** Collected: 10/24/17 12:15 Received: 10/26/17 09:55 Matrix: Water

Parameters	Results	Units	LOQ	LOD	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS	Analytical Method: EPA 6020 Preparation Method: EPA 3010								
Boron	**<3.3**	ug/L	11.0	3.3	1	10/31/17 10:40	11/04/17 00:58	7440-42-8	
Calcium	**<69.8**	ug/L	250	69.8	1	10/31/17 10:40	11/04/17 00:58	7440-70-2	
2540C Total Dissolved Solids	Analytical Method: SM 2540C								
Total Dissolved Solids	**<8.7**	mg/L	20.0	8.7	1		10/31/17 14:42		
9040 pH	Analytical Method: EPA 9040								
pH	**6.6**	Std. Units	0.10	0.010	1		10/31/17 10:40		H6
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0								
Chloride	**<0.50**	mg/L	2.0	0.50	1		11/08/17 12:52	16887-00-6	
Fluoride	**<0.10**	mg/L	0.30	0.10	1		11/08/17 12:52	16984-48-8	
Sulfate	**<1.0**	mg/L	3.0	1.0	1		11/08/17 12:52	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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

QUALITY CONTROL DATA

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

QC Batch: 272475 Analysis Method: EPA 6020
QC Batch Method: EPA 3010 Analysis Description: 6020 MET
Associated Lab Samples: 40159487001, 40159487002, 40159487003, 40159487004, 40159487005

METHOD BLANK: 1602625 Matrix: Water
Associated Lab Samples: 40159487001, 40159487002, 40159487003, 40159487004, 40159487005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Boron	ug/L	<3.3	11.0	11/04/17 00:43	
Calcium	ug/L	<69.8	250	11/04/17 00:43	

LABORATORY CONTROL SAMPLE: 1602626

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Boron	ug/L	500	448	90	80-120	
Calcium	ug/L	5000	4680	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1602627 1602628

Parameter	Units	40159197001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Boron	ug/L	159	500	500	620	625	92	93	75-125	1	20	
Calcium	ug/L	56200	5000	5000	55200	59100	-19	58	75-125	7	20	P6

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REPORT OF LABORATORY ANALYSIS

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(920)469-2436

QUALITY CONTROL DATA

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

QC Batch: 272411 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40159487004

METHOD BLANK: 1602166 Matrix: Water
Associated Lab Samples: 40159487004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	10/30/17 17:43	

LABORATORY CONTROL SAMPLE: 1602167

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	635	548	86	80-120	

SAMPLE DUPLICATE: 1602168

Parameter	Units	40159477001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	508	508	0	5	

SAMPLE DUPLICATE: 1602169

Parameter	Units	40159478001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	540	538	0	5	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

QC Batch: 272529 Analysis Method: SM 2540C
QC Batch Method: SM 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 40159487001, 40159487002, 40159487003, 40159487005

METHOD BLANK: 1602887 Matrix: Water
Associated Lab Samples: 40159487001, 40159487002, 40159487003, 40159487005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<8.7	20.0	10/31/17 14:41	

LABORATORY CONTROL SAMPLE: 1602888

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	635	564	89	80-120	

SAMPLE DUPLICATE: 1602889

Parameter	Units	40159525009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	530	534	1	5	

SAMPLE DUPLICATE: 1602890

Parameter	Units	40159525011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	308	326	6	5	R1

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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(920)469-2436

QUALITY CONTROL DATA

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

QC Batch: 272530 Analysis Method: EPA 9040
QC Batch Method: EPA 9040 Analysis Description: 9040 pH
Associated Lab Samples: 40159487001, 40159487002, 40159487003, 40159487004, 40159487005

SAMPLE DUPLICATE: 1602902

Parameter	Units	40159479003 Result	Dup Result	RPD	Max RPD	Qualifiers
pH	Std. Units	7.9	7.9	0	20	H6

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

QC Batch: 273168 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40159487001, 40159487002, 40159487003, 40159487004

METHOD BLANK: 1607421 Matrix: Water
Associated Lab Samples: 40159487001, 40159487002, 40159487003, 40159487004

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	2.0	11/07/17 10:47	
Fluoride	mg/L	<0.10	0.30	11/07/17 10:47	
Sulfate	mg/L	<1.0	3.0	11/07/17 10:47	

LABORATORY CONTROL SAMPLE: 1607422

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.5	102	90-110	
Fluoride	mg/L	2	2.0	101	90-110	
Sulfate	mg/L	20	20.5	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1607423 1607424

Parameter	Units	40159418001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5.4	20	20	26.9	26.9	108	108	90-110	0	15	
Fluoride	mg/L	1.3	2	2	3.4	3.4	102	103	90-110	0	15	
Sulfate	mg/L	162	200	200	365	372	102	105	90-110	2	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1607425 1607426

Parameter	Units	40159487004 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	305	200	200	497	509	96	102	90-110	2	15	
Fluoride	mg/L	<0.10	2	2	2.0	2.0	100	100	90-110	0	15	
Sulfate	mg/L	29.3	20	20	50.3	50.2	105	104	90-110	0	15	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

QC Batch: 273181
QC Batch Method: EPA 300.0
Analysis Method: EPA 300.0
Analysis Description: 300.0 IC Anions
Associated Lab Samples: 40159487005

METHOD BLANK: 1607457 Matrix: Water
Associated Lab Samples: 40159487005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chloride	mg/L	<0.50	2.0	11/08/17 12:00	
Fluoride	mg/L	<0.10	0.30	11/08/17 12:00	
Sulfate	mg/L	<1.0	3.0	11/08/17 12:00	

LABORATORY CONTROL SAMPLE: 1607458

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	20.7	103	90-110	
Fluoride	mg/L	2	2.0	102	90-110	
Sulfate	mg/L	20	20.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1607459 1607460

Parameter	Units	40159490001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	4.0	20	20	25.0	25.1	105	105	90-110	0	15	
Fluoride	mg/L	<0.10	2	2	2.1	2.1	105	105	90-110	0	15	
Sulfate	mg/L	27.5	20	20	48.2	49.6	103	110	90-110	3	15	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 1607461 1607462

Parameter	Units	40159565001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Chloride	mg/L	5870	10000	10000	16600	16500	107	106	90-110	1	15	
Fluoride	mg/L	240	1000	1000	1310	1310	107	107	90-110	0	15	
Sulfate	mg/L	ND	10000	10000	10600	10500	105	104	90-110	1	15	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

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.

ANALYTE QUALIFIERS

D3	Sample was diluted due to the presence of high levels of non-target analytes or other matrix interference.
H6	Analysis initiated outside of the 15 minute EPA required holding time.
P6	Matrix spike recovery was outside laboratory control limits due to a parent sample concentration notably higher than the spike level.
R1	RPD value was outside control limits.

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: 25216068.17 EDGEWATER CLOSED
Pace Project No.: 40159487

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
40159487001	**MW 301**	EPA 3010	272475	EPA 6020	272659
40159487002	**MW 302**	EPA 3010	272475	EPA 6020	272659
40159487003	**MW 303**	EPA 3010	272475	EPA 6020	272659
40159487004	**2R-OW**	EPA 3010	272475	EPA 6020	272659
40159487005	**FIELD BLANK**	EPA 3010	272475	EPA 6020	272659
40159487001	**MW 301**				
40159487002	**MW 302**				
40159487003	**MW 303**				
40159487004	**2R-OW**				
40159487001	**MW 301**	SM 2540C	272529		
40159487002	**MW 302**	SM 2540C	272529		
40159487003	**MW 303**	SM 2540C	272529		
40159487004	**2R-OW**	SM 2540C	272411		
40159487005	**FIELD BLANK**	SM 2540C	272529		
40159487001	**MW 301**	EPA 9040	272530		
40159487002	**MW 302**	EPA 9040	272530		
40159487003	**MW 303**	EPA 9040	272530		
40159487004	**2R-OW**	EPA 9040	272530		
40159487005	**FIELD BLANK**	EPA 9040	272530		
40159487001	**MW 301**	EPA 300.0	273168		
40159487002	**MW 302**	EPA 300.0	273168		
40159487003	**MW 303**	EPA 300.0	273168		
40159487004	**2R-OW**	EPA 300.0	273168		
40159487005	**FIELD BLANK**	EPA 300.0	273181		

(Please Print Clearly)	
Company Name:	SCS Engineers
Branch/Location:	Madison WI
Project Contact:	Meg Blodgett
Phone:	608-
Project Number:	25216068
Project Name:	Edgewater Closed Ash Fil
Project State:	WI
Sampled By (Print):	Gary Sterkel
Sampled By (Sign):	Gary Sterkel
PO #:	Regulatory Program:

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

RMW

Page 1 of

4015948 7

CHAIN OF CUSTODY

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

Quote #:	
Mail To Contact:	
Mail To Company:	
Mail To Address:	
Invoice To Contact:	Tom Karowski
Invoice To Company:	SCS Engineers
Invoice To Address:	2830 Dairy Dr Madison WI 53718
Invoice To Phone:	

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

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

Matrix Codes

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

PACE LAB #	CLIENT FIELD ID	COLLECTION DATE	COLLECTION TIME	MATRIX	FILTERED? (YES/NO)	PRESERVATION (CODE)*	Analyses Requested: TDS	Chloride	Fluoride	Sulfate	pH	Boron	Calcium	CLIENT COMMENTS	LAB COMMENTS (Lab Use Only)	Profile #
	Y/N				N	N	N	N								
	Pick Letter				A	A	A	D								
001	MW 301	10/24/17	1201	GW			X	X		X		X			3 x 250mL pADA	
002	MW 302	10/24/17	1116	GW			X	X		X		X			RMW 10/26/17	
003	MW 303	10/24/17	1016	GW			X	X		X		X				
004	2R-OW	10/24/17	1526	GW			X	X		X		X				
005	Field Blank	10/24/17	1215	W			X	X		X		X				

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

Transmit Prelim Rush Results by (complete what you want):

Email #1:	
Email #2:	
Telephone:	
Fax:	

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

Relinquished By:	Date/Time:	Received By:	Date/Time:
Gary Sterkel	10/25/17 0800	Mary Jannin	10/25/17 9:10
Mary Jannin	10/25/17 1320		
CS Logistics	10/26/17 0955	Kevin Ketzler Pace	10/26/17 0955

PACE Project No.: 4015948 7

Receipt Temp = R01 °C

Sample Receipt pH: (OK) / Adjusted

Cooler Custody Seal: Present / Not Present

Intact / Not Intact

C019a(27Jun2006)

Version 6.0 06/14/06

Sample Condition Upon Receipt

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

Pace Analytical™

Client Name: SCS Eng. Project # **WO#: 40159487**

40159487

Courier: ☐ Fed Ex ☐ UPS ☐ Client ☐ Pace Other: CS Logistics
Tracking #:
Custody Seal on Cooler/Box Present: ☑ yes ☐ no Seals intact: ☑ yes ☐ no
Custody Seal on Samples Present: ☐ yes ☑ no Seals intact: ☐ yes ☐ no
Packing Material: ☑ Bubble Wrap ☐ Bubble Bags ☐ None ☐ Other
Thermometer Used NA **Type of Ice:** (Wet) Blue Dry None ☑ Samples on ice, cooling process has begun
Cooler Temperature Uncorr: R01 /Corr: **Biological Tissue is Frozen:** ☐ yes ☐ no
Temp Blank Present: ☐ yes ☑ no

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

Person examining contents:
Date: 10-26-17
Initials: KR

		Comments:
Chain of Custody Present:	☑Yes ☐No ☐N/A	1.
Chain of Custody Filled Out:	☑Yes ☐No ☐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 ☐No ☐N/A	5.
- VOA Samples frozen upon receipt	☐Yes ☐No	Date/Time:
Short Hold Time Analysis (<72hr):	☑Yes ☐No ☐N/A	6.
Rush Turn Around Time Requested:	☐Yes ☑No ☐N/A	7.
Sufficient Volume:	☐Yes ☑No ☐N/A	8. No MS/MSD vol. 10-26-17 KR
Correct Containers Used:	☑Yes ☐No ☐N/A	9.
-Pace Containers Used:	☑Yes ☐No ☐N/A	
-Pace IR Containers Used:	☐Yes ☐No ☑N/A	
Containers Intact:	☑Yes ☐No ☐N/A	10.
Filtered volume received for Dissolved tests	☐Yes ☐No ☑N/A	11.
Sample Labels match COC:	☑Yes ☐No ☐N/A	12.
-Includes date/time/ID/Analysis Matrix: W		
All containers needing preservation have been checked. (Non-Compliance noted in 13.)	☑Yes ☐No ☐N/A	13. ☑ HNO3 ☐ H2SO4 ☐ NaOH ☐ NaOH +ZnAct 003 pH=7 lab added 2.5mLs of HNO3 pH≤2. 10-26-17 KR
All containers needing preservation are found to be in compliance with EPA recommendation. (HNO3, H2SO4 ≤2; NaOH+ZnAct ≥9, NaOH ≥12)	☐Yes ☑No ☐N/A	
exceptions: VOA, coliform, TOC, TOX, TOH, O&G, WIDROW, Phenolics, OTHER:	☐Yes ☑No	Initial when completed: KR; Lab Std #ID of preservative: 175371; Date/Time: 10/26/17 1220
Headspace in VOA Vials (>6mm):	☐Yes ☐No ☑N/A	14.
Trip Blank Present:	☐Yes ☐No ☑N/A	15.
Trip Blank Custody Seals Present	☐Yes ☐No ☑N/A	
Pace Trip Blank Lot # (if purchased):		

Client Notification/ Resolution: If checked, see attached form for additional comments ☐
Person Contacted: Date/Time:
Comments/ Resolution:

Project Manager Review: KMR for PM **Date:** 10/26/17