

**APPENDIX D
LABORATORY ANALYTICAL DATA AND
FIELD SAMPLING REPORTS**



March 10, 2022

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between January 28, 2022 and February 01, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Minneapolis

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Michelle Barker, WOOD E&I
Anna Bottum, ERM
Andrea Brazell, ERM
Kristen Jurinko
Ms. Lauren Petty, Southern Company
Rhonda Quinn, WOOD E&I
Lacy Smith, ERM
Caitlin Tillema, ERM
Christine Weaver, ERM

Greg Wrenn, WOOD E&I



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064

Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
Please Note: Applicable air certifications are denoted with an asterisk ().

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006
9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812
North Carolina Certification #: 381

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CERTIFICATIONS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Pace Analytical Services Peachtree Corners

South Carolina Certification #: 98011001

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SAMPLE SUMMARY

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92585058001	GWA-38	Water	01/25/22 13:54	01/28/22 09:30
92585058002	GWA-52	Water	01/25/22 16:52	01/28/22 09:30
92585058003	GWA-54	Water	01/25/22 15:28	01/28/22 09:30
92585058004	FB-1	Water	01/25/22 16:18	01/28/22 09:30
92585058005	GWA-36RA	Water	01/26/22 10:35	01/28/22 09:30
92585058006	GWA-37	Water	01/26/22 13:10	01/28/22 09:30
92585058007	GWA-51RZ	Water	01/26/22 12:45	01/28/22 09:30
92585058008	GWA-53	Water	01/26/22 11:45	01/28/22 09:30
92585058009	GWA-53R	Water	01/26/22 14:20	01/28/22 09:30
92585058010	GWA-55	Water	01/26/22 15:30	01/28/22 09:30
92585058011	GWA-56	Water	01/26/22 16:01	01/28/22 09:30
92585058012	DUP-1	Water	01/26/22 00:00	01/28/22 09:30
92585058013	FB-2	Water	01/26/22 16:15	01/28/22 09:30
92585058014	EB-1	Water	01/26/22 16:10	01/28/22 09:30
92585058015	GWC-18R	Water	01/27/22 13:06	01/28/22 09:30
92585058016	GWC-19R	Water	01/27/22 14:20	01/28/22 09:30
92585058017	GWC-20R	Water	01/27/22 15:52	01/28/22 09:30
92585058018	GWC-22R	Water	01/27/22 16:00	01/28/22 09:30
92585058019	GWC-25R	Water	01/27/22 13:53	01/28/22 09:30
92585058020	GWA-55R	Water	01/27/22 12:30	01/28/22 09:30
92585058021	DUP-2	Water	01/27/22 00:00	01/28/22 09:30
92585058022	FB-3	Water	01/27/22 16:30	01/28/22 09:30
92585058023	GWC-16R	Water	01/28/22 09:38	02/01/22 11:22
92585058024	GWC-17R	Water	01/28/22 10:20	02/01/22 11:22
92585058025	GWC-18	Water	01/28/22 12:04	02/01/22 11:22
92585058026	GWC-21R	Water	01/28/22 12:17	02/01/22 11:22
92585058027	GWC-23R	Water	01/28/22 11:07	02/01/22 11:22
92585058028	GWC-24R	Water	01/28/22 10:35	02/01/22 11:22
92585058029	DUP-3	Water	01/28/22 00:00	02/01/22 11:22
92585058030	FB-4	Water	01/28/22 11:55	02/01/22 11:22

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92585058001	GWA-38	EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
92585058002	GWA-52	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92585058003	GWA-54	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
92585058004	FB-1	SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
92585058005	GWA-36RA	EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
92585058006	GWA-37	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92585058007	GWA-51RZ	EPA 6010D	KH	5	PASI-GA

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92585058008	GWA-53	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
92585058009	GWA-53R	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
92585058010	GWA-55	SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
92585058011	GWA-56	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
92585058012	DUP-1	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
92585058013	FB-2	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92585058014	EB-1	EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92585058015	GWC-18R	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92585058016	GWC-19R	EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
92585058017	GWC-20R	EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92585058018	GWC-22R	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92585058019	GWC-25R	EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92585058020	GWA-55R	SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92585058021	DUP-2	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
92585058022	FB-3	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92585058023	GWC-16R	EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
92585058024	GWC-17R	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
92585058025	GWC-18	EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92585058026	GWC-21R	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92585058027	GWC-23R	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92585058028	GWC-24R	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92585058029	DUP-3	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92585058030	FB-4	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA
PASI-M = Pace Analytical Services - Minneapolis

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92585058001	GWA-38					
	Performed by	CUSTOME			01/28/22 14:43	
		R				
	pH	5.14	Std. Units		01/28/22 14:43	
EPA 6010D	Calcium	1.1	mg/L	1.0	02/07/22 20:35	
EPA 6010D	Potassium	0.46	mg/L	0.20	02/07/22 20:35	BC
EPA 6010D	Sodium	3.5	mg/L	1.0	02/07/22 20:35	
EPA 6010D	Magnesium	0.44	mg/L	0.050	02/07/22 20:35	
EPA 6020B	Barium	0.012	mg/L	0.0050	02/11/22 18:36	
EPA 6020B	Chromium	0.0014J	mg/L	0.0050	02/11/22 18:36	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	02/11/22 18:36	
EPA 6020B	Nickel	0.00093J	mg/L	0.0050	02/11/22 18:36	
SM 2540C-2015	Total Dissolved Solids	27.0	mg/L	10.0	02/01/22 14:07	
SM 2320B	Alkalinity, Total as CaCO3	4.9J	mg/L	5.0	02/03/22 18:02	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	4.9J	mg/L	5.0	02/03/22 18:02	
EPA 300.0 Rev 2.1 1993	Chloride	3.2	mg/L	1.0	02/02/22 01:13	
EPA 300.0 Rev 2.1 1993	Sulfate	0.58J	mg/L	1.0	02/02/22 01:13	
92585058002	GWA-52					
	Performed by	CUSTOME			01/28/22 14:43	
		R				
	pH	7.44	Std. Units		01/28/22 14:43	
EPA 6010D	Calcium	28.6	mg/L	1.0	02/07/22 20:54	
EPA 6010D	Potassium	1.2	mg/L	0.20	02/07/22 20:54	BC
EPA 6010D	Sodium	5.1	mg/L	1.0	02/07/22 20:54	
EPA 6010D	Magnesium	14.6	mg/L	0.050	02/07/22 20:54	
EPA 6020B	Arsenic	0.0030J	mg/L	0.0050	02/11/22 18:42	
EPA 6020B	Barium	0.023	mg/L	0.0050	02/11/22 18:42	
EPA 6020B	Chromium	0.0012J	mg/L	0.0050	02/11/22 18:42	
SM 2540C-2015	Total Dissolved Solids	136	mg/L	10.0	02/01/22 14:07	
SM 2320B	Alkalinity, Total as CaCO3	132	mg/L	5.0	02/03/22 17:20	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	132	mg/L	5.0	02/03/22 17:20	
EPA 300.0 Rev 2.1 1993	Chloride	1.5	mg/L	1.0	02/02/22 01:27	
EPA 300.0 Rev 2.1 1993	Sulfate	8.6	mg/L	1.0	02/02/22 01:27	
92585058003	GWA-54					
	Performed by	CUSTOME			01/28/22 14:44	
		R				
	pH	7.38	Std. Units		01/28/22 14:44	
EPA 6010D	Calcium	24.3	mg/L	1.0	02/07/22 21:09	
EPA 6010D	Potassium	0.87	mg/L	0.20	02/07/22 21:09	
EPA 6010D	Sodium	2.5	mg/L	1.0	02/07/22 21:09	
EPA 6010D	Magnesium	13.9	mg/L	0.050	02/07/22 21:09	
EPA 6020B	Barium	0.031	mg/L	0.0050	02/11/22 19:06	
EPA 6020B	Chromium	0.0013J	mg/L	0.0050	02/11/22 19:06	
SM 2540C-2015	Total Dissolved Solids	113	mg/L	10.0	02/01/22 14:07	
SM 2320B	Alkalinity, Total as CaCO3	116	mg/L	5.0	02/03/22 17:36	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	116	mg/L	5.0	02/03/22 17:36	
EPA 300.0 Rev 2.1 1993	Chloride	0.81J	mg/L	1.0	02/02/22 01:41	
EPA 300.0 Rev 2.1 1993	Sulfate	1.4	mg/L	1.0	02/02/22 01:41	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92585058004	FB-1					
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	02/11/22 19:12	
92585058005	GWA-36RA					
	Performed by	CUSTOME			01/28/22 14:44	
		R				
	pH	7.01	Std. Units		01/28/22 14:44	
EPA 6010D	Calcium	41.0	mg/L	1.0	02/07/22 21:18	
EPA 6010D	Potassium	1.1	mg/L	0.20	02/07/22 21:18	
EPA 6010D	Sodium	2.0	mg/L	1.0	02/07/22 21:18	
EPA 6010D	Magnesium	21.4	mg/L	0.050	02/07/22 21:18	
EPA 6020B	Barium	0.035	mg/L	0.0050	02/11/22 19:18	
EPA 6020B	Boron	0.012J	mg/L	0.040	02/11/22 19:18	
SM 2540C-2015	Total Dissolved Solids	184	mg/L	10.0	02/02/22 17:22	
SM 2320B	Alkalinity, Total as CaCO3	182	mg/L	5.0	02/03/22 22:13	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	182	mg/L	5.0	02/03/22 22:13	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	02/02/22 02:09	
EPA 300.0 Rev 2.1 1993	Sulfate	7.5	mg/L	1.0	02/02/22 02:09	
92585058006	GWA-37					
	Performed by	CUSTOME			01/28/22 14:44	
		R				
	pH	4.69	Std. Units		01/28/22 14:44	
EPA 6010D	Calcium	0.70J	mg/L	1.0	02/07/22 21:23	
EPA 6010D	Potassium	0.38	mg/L	0.20	02/07/22 21:23	
EPA 6010D	Sodium	3.1	mg/L	1.0	02/07/22 21:23	
EPA 6010D	Magnesium	0.29	mg/L	0.050	02/07/22 21:23	
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	02/11/22 19:36	
EPA 6020B	Barium	0.0046J	mg/L	0.0050	02/11/22 19:36	
EPA 6020B	Copper	0.013	mg/L	0.0050	02/11/22 19:36	
EPA 6020B	Nickel	0.016	mg/L	0.0050	02/11/22 19:36	
SM 2540C-2015	Total Dissolved Solids	26.0	mg/L	10.0	02/02/22 17:22	
SM 2320B	Alkalinity, Total as CaCO3	6.8	mg/L	5.0	02/03/22 23:14	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	6.8	mg/L	5.0	02/03/22 23:14	
EPA 300.0 Rev 2.1 1993	Chloride	0.88J	mg/L	1.0	02/02/22 02:23	
92585058007	GWA-51RZ					
	Performed by	CUSTOME			01/28/22 14:44	
		R				
	pH	7.78	Std. Units		01/28/22 14:44	
EPA 6010D	Calcium	50.5	mg/L	1.0	02/07/22 21:28	
EPA 6010D	Potassium	1.0	mg/L	0.20	02/07/22 21:28	
EPA 6010D	Sodium	3.6	mg/L	1.0	02/07/22 21:28	
EPA 6010D	Magnesium	23.5	mg/L	0.050	02/07/22 21:28	
EPA 6020B	Arsenic	0.0047J	mg/L	0.0050	02/11/22 19:42	
EPA 6020B	Barium	0.034	mg/L	0.0050	02/11/22 19:42	
EPA 6020B	Boron	0.0088J	mg/L	0.040	02/11/22 19:42	
SM 2540C-2015	Total Dissolved Solids	190	mg/L	10.0	02/02/22 17:22	
SM 2320B	Alkalinity, Total as CaCO3	184	mg/L	5.0	02/03/22 22:21	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	184	mg/L	5.0	02/03/22 22:21	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92585058007	GWA-51RZ					
EPA 300.0 Rev 2.1 1993	Chloride	2.9	mg/L	1.0	02/02/22 02:37	
EPA 300.0 Rev 2.1 1993	Sulfate	22.2	mg/L	1.0	02/02/22 02:37	
92585058008	GWA-53					
	Performed by	CUSTOMER			01/28/22 14:45	
	pH	7.72	Std. Units		01/28/22 14:45	
EPA 6010D	Calcium	29.6	mg/L	1.0	02/07/22 21:33	
EPA 6010D	Potassium	0.68	mg/L	0.20	02/07/22 21:33	
EPA 6010D	Sodium	1.7	mg/L	1.0	02/07/22 21:33	
EPA 6010D	Magnesium	16.3	mg/L	0.050	02/07/22 21:33	
EPA 6020B	Barium	0.013	mg/L	0.0050	02/11/22 19:48	
EPA 6020B	Beryllium	0.000070J	mg/L	0.00050	02/11/22 19:48	
SM 2540C-2015	Total Dissolved Solids	131	mg/L	10.0	02/02/22 17:22	
SM 2320B	Alkalinity, Total as CaCO3	132	mg/L	5.0	02/03/22 22:26	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	132	mg/L	5.0	02/03/22 22:26	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	02/02/22 03:18	
EPA 300.0 Rev 2.1 1993	Sulfate	1.4	mg/L	1.0	02/02/22 03:18	
92585058009	GWA-53R					
	Performed by	CUSTOMER			01/28/22 14:45	
	pH	7.78	Std. Units		01/28/22 14:45	
EPA 6010D	Calcium	30.4	mg/L	1.0	02/07/22 21:37	
EPA 6010D	Potassium	0.67	mg/L	0.20	02/07/22 21:37	
EPA 6010D	Sodium	1.5	mg/L	1.0	02/07/22 21:37	
EPA 6010D	Magnesium	16.5	mg/L	0.050	02/07/22 21:37	
EPA 6020B	Barium	0.014	mg/L	0.0050	02/11/22 19:53	
SM 2540C-2015	Total Dissolved Solids	144	mg/L	10.0	02/02/22 17:23	
SM 2320B	Alkalinity, Total as CaCO3	139	mg/L	5.0	02/03/22 22:39	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	139	mg/L	5.0	02/03/22 22:39	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	02/02/22 04:00	
EPA 300.0 Rev 2.1 1993	Sulfate	1.6	mg/L	1.0	02/02/22 04:00	
92585058010	GWA-55					
	Performed by	CUSTOMER			01/28/22 14:45	
	pH	7.21	Std. Units		01/28/22 14:45	
EPA 6010D	Calcium	53.2	mg/L	1.0	02/07/22 21:42	
EPA 6010D	Potassium	1.4	mg/L	0.20	02/07/22 21:42	
EPA 6010D	Sodium	0.97J	mg/L	1.0	02/07/22 21:42	
EPA 6010D	Magnesium	27.9	mg/L	0.050	02/07/22 21:42	
EPA 6020B	Barium	0.026	mg/L	0.0050	02/11/22 19:59	
EPA 6020B	Cobalt	0.0035J	mg/L	0.0050	02/11/22 19:59	
EPA 6020B	Selenium	0.0025J	mg/L	0.0050	02/11/22 19:59	
SM 2540C-2015	Total Dissolved Solids	244	mg/L	10.0	02/02/22 17:23	
SM 2320B	Alkalinity, Total as CaCO3	190	mg/L	5.0	02/03/22 22:44	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	190	mg/L	5.0	02/03/22 22:44	
EPA 300.0 Rev 2.1 1993	Chloride	5.8	mg/L	1.0	02/02/22 04:42	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92585058010	GWA-55					
EPA 300.0 Rev 2.1 1993	Sulfate	32.5	mg/L	1.0	02/02/22 04:42	
92585058011	GWA-56					
	Performed by	CUSTOMER			01/28/22 14:45	
	pH	7.45	Std. Units		01/28/22 14:45	
EPA 6010D	Calcium	37.6	mg/L	1.0	02/07/22 21:47	
EPA 6010D	Potassium	3.6	mg/L	0.20	02/07/22 21:47	
EPA 6010D	Sodium	39.4	mg/L	1.0	02/07/22 21:47	
EPA 6010D	Magnesium	22.4	mg/L	0.050	02/07/22 21:47	
EPA 6020B	Arsenic	0.0015J	mg/L	0.0050	02/11/22 20:05	
EPA 6020B	Barium	0.032	mg/L	0.0050	02/11/22 20:05	
EPA 6020B	Boron	0.014J	mg/L	0.040	02/11/22 20:05	
SM 2540C-2015	Total Dissolved Solids	278	mg/L	10.0	02/02/22 17:23	
SM 2320B	Alkalinity, Total as CaCO3	216	mg/L	5.0	02/03/22 22:50	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	216	mg/L	5.0	02/03/22 22:50	
EPA 300.0 Rev 2.1 1993	Chloride	5.2	mg/L	1.0	02/02/22 04:56	
EPA 300.0 Rev 2.1 1993	Fluoride	0.076J	mg/L	0.10	02/02/22 04:56	
EPA 300.0 Rev 2.1 1993	Sulfate	47.1	mg/L	1.0	02/02/22 04:56	
92585058012	DUP-1					
EPA 6010D	Calcium	53.7	mg/L	1.0	02/07/22 21:52	
EPA 6010D	Potassium	1.5	mg/L	0.20	02/07/22 21:52	
EPA 6010D	Sodium	1.0	mg/L	1.0	02/07/22 21:52	
EPA 6010D	Magnesium	28.3	mg/L	0.050	02/07/22 21:52	
EPA 6020B	Arsenic	0.0020J	mg/L	0.0050	02/11/22 20:11	
EPA 6020B	Barium	0.029	mg/L	0.0050	02/11/22 20:11	
EPA 6020B	Cobalt	0.0039J	mg/L	0.0050	02/11/22 20:11	
EPA 6020B	Selenium	0.0025J	mg/L	0.0050	02/11/22 20:11	
SM 2540C-2015	Total Dissolved Solids	226	mg/L	10.0	02/02/22 17:23	
SM 2320B	Alkalinity, Total as CaCO3	193	mg/L	5.0	02/03/22 22:57	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	193	mg/L	5.0	02/03/22 22:57	
EPA 300.0 Rev 2.1 1993	Chloride	5.8	mg/L	1.0	02/02/22 05:10	
EPA 300.0 Rev 2.1 1993	Sulfate	32.7	mg/L	1.0	02/02/22 05:10	
92585058013	FB-2					
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	02/11/22 20:17	
92585058015	GWC-18R					
	Performed by	CUSTOMER			01/28/22 14:46	
	pH	7.76	Std. Units		01/28/22 14:46	
EPA 6010D	Potassium	0.63	mg/L	0.20	02/10/22 17:15	
EPA 6010D	Sodium	1.4	mg/L	1.0	02/10/22 17:15	
EPA 6010D	Calcium	29.3	mg/L	1.0	02/10/22 17:15	M1
EPA 6010D	Magnesium	16.4	mg/L	0.050	02/10/22 17:15	M1
EPA 6020B	Barium	0.014	mg/L	0.0050	02/11/22 20:29	
EPA 6020B	Beryllium	0.000055J	mg/L	0.00050	02/11/22 20:29	
EPA 6020B	Chromium	0.0015J	mg/L	0.0050	02/11/22 20:29	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92585058015	GWC-18R					
SM 2540C-2015	Total Dissolved Solids	146	mg/L	10.0	02/02/22 17:43	
SM 2320B	Alkalinity, Total as CaCO ₃	141	mg/L	5.0	02/04/22 15:23	
SM 2320B	Alkalinity,Bicarbonate (CaCO ₃)	141	mg/L	5.0	02/04/22 15:23	
EPA 300.0 Rev 2.1 1993	Chloride	2.3	mg/L	1.0	02/02/22 06:20	
EPA 300.0 Rev 2.1 1993	Sulfate	2.1	mg/L	1.0	02/02/22 06:20	
92585058016	GWC-19R					
	Performed by	CUSTOMER			01/28/22 14:46	
	pH	7.74	Std. Units		01/28/22 14:46	
EPA 6010D	Potassium	0.76	mg/L	0.20	02/10/22 17:35	
EPA 6010D	Sodium	1.3	mg/L	1.0	02/10/22 17:35	
EPA 6010D	Calcium	33.2	mg/L	1.0	02/10/22 17:35	
EPA 6010D	Magnesium	18.3	mg/L	0.050	02/10/22 17:35	
EPA 6020B	Barium	0.016	mg/L	0.0050	02/11/22 20:47	
SM 2540C-2015	Total Dissolved Solids	149	mg/L	10.0	02/02/22 17:43	
SM 2320B	Alkalinity, Total as CaCO ₃	149	mg/L	5.0	02/04/22 15:29	
SM 2320B	Alkalinity,Bicarbonate (CaCO ₃)	149	mg/L	5.0	02/04/22 15:29	
EPA 300.0 Rev 2.1 1993	Chloride	2.5	mg/L	1.0	02/02/22 06:34	
EPA 300.0 Rev 2.1 1993	Sulfate	3.9	mg/L	1.0	02/02/22 06:34	
92585058017	GWC-20R					
	Performed by	CUSTOMER			01/28/22 14:46	
	pH	7.73	Std. Units		01/28/22 14:46	
EPA 6010D	Potassium	0.72	mg/L	0.20	02/10/22 17:39	
EPA 6010D	Sodium	2.1	mg/L	1.0	02/10/22 17:39	
EPA 6010D	Calcium	36.2	mg/L	1.0	02/10/22 17:39	
EPA 6010D	Magnesium	20.0	mg/L	0.050	02/10/22 17:39	
EPA 6020B	Barium	0.028	mg/L	0.0050	02/11/22 20:53	
SM 2540C-2015	Total Dissolved Solids	176	mg/L	10.0	02/02/22 17:43	
SM 2320B	Alkalinity, Total as CaCO ₃	171	mg/L	5.0	02/04/22 15:34	
SM 2320B	Alkalinity,Bicarbonate (CaCO ₃)	171	mg/L	5.0	02/04/22 15:34	
EPA 300.0 Rev 2.1 1993	Chloride	1.9	mg/L	1.0	02/02/22 06:47	
EPA 300.0 Rev 2.1 1993	Sulfate	1.7	mg/L	1.0	02/02/22 06:47	
92585058018	GWC-22R					
	Performed by	CUSTOMER			01/28/22 14:46	
	pH	7.28	Std. Units		01/28/22 14:46	
EPA 6010D	Potassium	1.5	mg/L	0.20	02/10/22 17:44	
EPA 6010D	Sodium	1.8	mg/L	1.0	02/10/22 17:44	
EPA 6010D	Calcium	36.9	mg/L	1.0	02/10/22 17:44	
EPA 6010D	Magnesium	20.0	mg/L	0.050	02/10/22 17:44	
EPA 6020B	Arsenic	0.0045J	mg/L	0.0050	02/11/22 20:59	
EPA 6020B	Barium	0.060	mg/L	0.0050	02/11/22 20:59	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	02/11/22 20:59	
EPA 6020B	Nickel	0.00076J	mg/L	0.0050	02/11/22 20:59	
SM 2540C-2015	Total Dissolved Solids	167	mg/L	10.0	02/02/22 17:44	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92585058018	GWC-22R					
SM 2320B	Alkalinity, Total as CaCO ₃	176	mg/L	5.0	02/04/22 15:40	
SM 2320B	Alkalinity,Bicarbonate (CaCO ₃)	176	mg/L	5.0	02/04/22 15:40	
EPA 300.0 Rev 2.1 1993	Chloride	2.5	mg/L	1.0	02/02/22 07:01	
EPA 300.0 Rev 2.1 1993	Sulfate	1.3	mg/L	1.0	02/02/22 07:01	
92585058019	GWC-25R					
	Performed by	CUSTOMER			01/28/22 14:46	
	pH	7.46	Std. Units		01/28/22 14:46	
EPA 6010D	Potassium	0.66	mg/L	0.20	02/10/22 17:49	
EPA 6010D	Sodium	1.3	mg/L	1.0	02/10/22 17:49	
EPA 6010D	Calcium	34.4	mg/L	1.0	02/10/22 17:49	
EPA 6010D	Magnesium	19.7	mg/L	0.050	02/10/22 17:49	
EPA 6020B	Barium	0.017	mg/L	0.0050	02/11/22 21:05	
SM 2540C-2015	Total Dissolved Solids	168	mg/L	10.0	02/02/22 17:44	
SM 2320B	Alkalinity, Total as CaCO ₃	164	mg/L	5.0	02/04/22 15:45	
SM 2320B	Alkalinity,Bicarbonate (CaCO ₃)	164	mg/L	5.0	02/04/22 15:45	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	02/04/22 13:50	
EPA 300.0 Rev 2.1 1993	Sulfate	2.0	mg/L	1.0	02/04/22 13:50	
92585058020	GWA-55R					
	Performed by	CUSTOMER			01/28/22 14:47	
	pH	7.27	Std. Units		01/28/22 14:47	
EPA 6010D	Potassium	1.0	mg/L	0.20	02/10/22 17:54	
EPA 6010D	Sodium	1.2	mg/L	1.0	02/10/22 17:54	
EPA 6010D	Calcium	44.4	mg/L	1.0	02/10/22 17:54	
EPA 6010D	Magnesium	24.8	mg/L	0.050	02/10/22 17:54	
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	02/11/22 21:11	
EPA 6020B	Barium	0.032	mg/L	0.0050	02/11/22 21:11	
EPA 6020B	Selenium	0.0016J	mg/L	0.0050	02/11/22 21:11	
SM 2540C-2015	Total Dissolved Solids	207	mg/L	10.0	02/02/22 17:44	
SM 2320B	Alkalinity, Total as CaCO ₃	181	mg/L	5.0	02/04/22 16:15	
SM 2320B	Alkalinity,Bicarbonate (CaCO ₃)	181	mg/L	5.0	02/04/22 16:15	
EPA 300.0 Rev 2.1 1993	Chloride	4.5	mg/L	1.0	02/04/22 14:04	
EPA 300.0 Rev 2.1 1993	Sulfate	20.7	mg/L	1.0	02/04/22 14:04	
92585058021	DUP-2					
EPA 6010D	Potassium	0.72	mg/L	0.20	02/10/22 17:58	
EPA 6010D	Sodium	1.4	mg/L	1.0	02/10/22 17:58	
EPA 6010D	Calcium	30.8	mg/L	1.0	02/10/22 17:58	
EPA 6010D	Magnesium	16.8	mg/L	0.050	02/10/22 17:58	
EPA 6020B	Antimony	0.00090J	mg/L	0.0030	02/14/22 14:55	B
EPA 6020B	Barium	0.015	mg/L	0.0050	02/14/22 14:55	
EPA 6020B	Beryllium	0.000056J	mg/L	0.00050	02/14/22 14:55	
SM 2540C-2015	Total Dissolved Solids	147	mg/L	10.0	02/02/22 17:45	
SM 2320B	Alkalinity, Total as CaCO ₃	141	mg/L	5.0	02/04/22 16:20	
SM 2320B	Alkalinity,Bicarbonate (CaCO ₃)	141	mg/L	5.0	02/04/22 16:20	
EPA 300.0 Rev 2.1 1993	Chloride	2.3	mg/L	1.0	02/04/22 14:18	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92585058021	DUP-2					
EPA 300.0 Rev 2.1 1993	Sulfate	2.1	mg/L	1.0	02/04/22 14:18	
92585058023	GWC-16R					
	Performed by	CUSTOMER			02/01/22 17:21	
	pH	7.31	Std. Units		02/01/22 17:21	
EPA 6010D	Zinc	0.026	mg/L	0.020	02/10/22 18:17	
EPA 6010D	Potassium	5.7	mg/L	0.20	02/10/22 18:17	
EPA 6010D	Sodium	28.5	mg/L	1.0	02/10/22 18:17	
EPA 6010D	Calcium	68.5	mg/L	1.0	02/10/22 18:17	
EPA 6010D	Magnesium	23.9	mg/L	0.050	02/10/22 18:17	
EPA 6020B	Antimony	0.027	mg/L	0.0030	02/14/22 15:21	
EPA 6020B	Barium	0.049	mg/L	0.0050	02/14/22 15:21	
EPA 6020B	Boron	0.021J	mg/L	0.040	02/14/22 15:21	
EPA 6020B	Chromium	0.0011J	mg/L	0.0050	02/14/22 15:21	
EPA 6020B	Copper	0.00088J	mg/L	0.0050	02/14/22 15:21	
EPA 6020B	Nickel	0.0063	mg/L	0.0050	02/14/22 15:21	
SM 2540C-2015	Total Dissolved Solids	317	mg/L	10.0	02/03/22 12:41	
SM 2320B	Alkalinity, Total as CaCO3	315	mg/L	5.0	02/08/22 21:45	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	315	mg/L	5.0	02/08/22 21:45	
EPA 300.0 Rev 2.1 1993	Chloride	1.6	mg/L	1.0	02/06/22 04:03	
EPA 300.0 Rev 2.1 1993	Fluoride	0.17	mg/L	0.10	02/06/22 04:03	
EPA 300.0 Rev 2.1 1993	Sulfate	11.9	mg/L	1.0	02/06/22 04:03	
92585058024	GWC-17R					
	Performed by	CUSTOMER			02/01/22 17:21	
	pH	7.34	Std. Units		02/01/22 17:21	
EPA 6010D	Potassium	0.73	mg/L	0.20	02/10/22 18:22	
EPA 6010D	Sodium	2.5	mg/L	1.0	02/10/22 18:22	
EPA 6010D	Calcium	64.7	mg/L	1.0	02/10/22 18:22	
EPA 6010D	Magnesium	35.4	mg/L	0.050	02/10/22 18:22	
EPA 6020B	Barium	0.018	mg/L	0.0050	02/14/22 15:45	
SM 2540C-2015	Total Dissolved Solids	302	mg/L	10.0	02/03/22 12:41	
SM 2320B	Alkalinity, Total as CaCO3	300	mg/L	5.0	02/08/22 21:53	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	300	mg/L	5.0	02/08/22 21:53	
EPA 300.0 Rev 2.1 1993	Chloride	4.6	mg/L	1.0	02/06/22 04:17	
EPA 300.0 Rev 2.1 1993	Sulfate	7.6	mg/L	1.0	02/06/22 04:17	
92585058025	GWC-18					
	Performed by	CUSTOMER			02/01/22 17:21	
	pH	6.60	Std. Units		02/01/22 17:21	
EPA 6010D	Potassium	1.1	mg/L	0.20	02/10/22 18:27	
EPA 6010D	Sodium	1.5	mg/L	1.0	02/10/22 18:27	
EPA 6010D	Calcium	19.1	mg/L	1.0	02/10/22 18:27	
EPA 6010D	Magnesium	10.7	mg/L	0.050	02/10/22 18:27	
EPA 6020B	Barium	0.044	mg/L	0.0050	02/14/22 15:51	
EPA 6020B	Chromium	0.0014J	mg/L	0.0050	02/14/22 15:51	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92585058025	GWC-18					
SM 2540C-2015	Total Dissolved Solids	99.0	mg/L	10.0	02/03/22 12:41	
SM 2320B	Alkalinity, Total as CaCO3	84.7	mg/L	5.0	02/08/22 22:00	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	84.7	mg/L	5.0	02/08/22 22:00	
EPA 300.0 Rev 2.1 1993	Chloride	2.1	mg/L	1.0	02/06/22 04:31	
EPA 300.0 Rev 2.1 1993	Sulfate	1.6	mg/L	1.0	02/06/22 04:31	
92585058026	GWC-21R					
	Performed by	CUSTOME			02/01/22 17:21	
		R				
	pH	6.69	Std. Units		02/01/22 17:21	
EPA 6010D	Potassium	1.5	mg/L	0.20	02/10/22 18:32	
EPA 6010D	Sodium	15.1	mg/L	1.0	02/10/22 18:32	
EPA 6010D	Calcium	60.0	mg/L	1.0	02/10/22 18:32	
EPA 6010D	Magnesium	29.9	mg/L	0.050	02/10/22 18:32	
EPA 6020B	Antimony	0.0061	mg/L	0.0030	02/14/22 18:21	B
EPA 6020B	Arsenic	0.0031J	mg/L	0.0050	02/14/22 18:21	
EPA 6020B	Barium	0.037	mg/L	0.0050	02/14/22 18:21	
EPA 6020B	Boron	0.011J	mg/L	0.040	02/14/22 18:21	
EPA 6020B	Nickel	0.0014J	mg/L	0.0050	02/14/22 18:21	
EPA 6020B	Thallium	0.00021J	mg/L	0.0010	02/14/22 18:21	
SM 2540C-2015	Total Dissolved Solids	290	mg/L	10.0	02/03/22 12:41	
SM 2320B	Alkalinity, Total as CaCO3	288	mg/L	5.0	02/08/22 22:05	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	288	mg/L	5.0	02/08/22 22:05	
EPA 300.0 Rev 2.1 1993	Chloride	4.6	mg/L	1.0	02/06/22 04:45	
EPA 300.0 Rev 2.1 1993	Sulfate	13.7	mg/L	1.0	02/06/22 04:45	
92585058027	GWC-23R					
	Performed by	CUSTOME			02/01/22 17:22	
		R				
	pH	7.38	Std. Units		02/01/22 17:22	
EPA 6010D	Zinc	0.0099J	mg/L	0.020	02/10/22 18:36	
EPA 6010D	Potassium	1.4	mg/L	0.20	02/10/22 18:36	
EPA 6010D	Sodium	74.7	mg/L	1.0	02/10/22 18:36	
EPA 6010D	Calcium	64.9	mg/L	1.0	02/10/22 18:36	
EPA 6010D	Magnesium	34.0	mg/L	0.050	02/10/22 18:36	
EPA 6020B	Arsenic	0.0026J	mg/L	0.0050	02/14/22 18:27	
EPA 6020B	Barium	0.036	mg/L	0.0050	02/14/22 18:27	
EPA 6020B	Copper	0.00068J	mg/L	0.0050	02/14/22 18:27	
SM 2540C-2015	Total Dissolved Solids	454	mg/L	20.0	02/03/22 12:41	
SM 2320B	Alkalinity, Total as CaCO3	345	mg/L	5.0	02/08/22 22:12	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	345	mg/L	5.0	02/08/22 22:12	
EPA 300.0 Rev 2.1 1993	Chloride	1.7	mg/L	1.0	02/06/22 04:59	
EPA 300.0 Rev 2.1 1993	Sulfate	98.4	mg/L	2.0	02/06/22 07:35	
92585058028	GWC-24R					
	Performed by	CUSTOME			02/01/22 17:22	
		R				
	pH	7.68	Std. Units		02/01/22 17:22	
EPA 6010D	Potassium	0.87	mg/L	0.20	02/10/22 18:41	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92585058028	GWC-24R					
EPA 6010D	Sodium	1.5	mg/L	1.0	02/10/22 18:41	
EPA 6010D	Calcium	34.4	mg/L	1.0	02/10/22 18:41	
EPA 6010D	Magnesium	18.9	mg/L	0.050	02/10/22 18:41	
EPA 6020B	Arsenic	0.0021J	mg/L	0.0050	02/14/22 18:33	
EPA 6020B	Barium	0.025	mg/L	0.0050	02/14/22 18:33	
SM 2540C-2015	Total Dissolved Solids	159	mg/L	10.0	02/03/22 12:41	
SM 2320B	Alkalinity, Total as CaCO3	148	mg/L	5.0	02/08/22 22:20	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	148	mg/L	5.0	02/08/22 22:20	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	02/06/22 05:41	
EPA 300.0 Rev 2.1 1993	Sulfate	2.3	mg/L	1.0	02/06/22 05:41	
92585058029	DUP-3					
EPA 6010D	Potassium	0.83	mg/L	0.20	02/10/22 18:46	
EPA 6010D	Sodium	1.6	mg/L	1.0	02/10/22 18:46	
EPA 6010D	Calcium	33.5	mg/L	1.0	02/10/22 18:46	
EPA 6010D	Magnesium	18.5	mg/L	0.050	02/10/22 18:46	
EPA 6020B	Arsenic	0.0015J	mg/L	0.0050	02/14/22 18:39	
EPA 6020B	Barium	0.023	mg/L	0.0050	02/14/22 18:39	
EPA 6020B	Copper	0.00054J	mg/L	0.0050	02/14/22 18:39	
SM 2540C-2015	Total Dissolved Solids	156	mg/L	10.0	02/03/22 12:42	
SM 2320B	Alkalinity, Total as CaCO3	148	mg/L	5.0	02/08/22 22:25	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	148	mg/L	5.0	02/08/22 22:25	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	02/06/22 05:55	
EPA 300.0 Rev 2.1 1993	Sulfate	2.3	mg/L	1.0	02/06/22 05:55	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWA-38		Lab ID: 92585058001		Collected: 01/25/22 13:54		Received: 01/28/22 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:43		
pH	5.14	Std. Units			1		01/28/22 14:43		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 20:35	7440-66-6	
Calcium	1.1	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 20:35	7440-70-2	
Potassium	0.46	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 20:35	7440-09-7	BC
Sodium	3.5	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 20:35	7440-23-5	
Magnesium	0.44	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 20:35	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 18:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 18:36	7440-38-2	
Barium	0.012	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 18:36	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 18:36	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 18:36	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 18:36	7440-43-9	
Chromium	0.0014J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 18:36	7440-47-3	
Cobalt	0.0011J	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 18:36	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 18:36	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 18:36	7439-92-1	
Nickel	0.00093J	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 18:36	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 18:36	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 18:36	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 18:36	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 18:36	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 10:20	02/08/22 15:19	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	27.0	mg/L	10.0	10.0	1		02/01/22 14:07		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	4.9J	mg/L	5.0	1.8	1		02/03/22 18:02		
Alkalinity,Bicarbonate (CaCO3)	4.9J	mg/L	5.0	1.8	1		02/03/22 18:02		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 18:02		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-38 **Lab ID: 92585058001** Collected: 01/25/22 13:54 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.2	mg/L	1.0	0.60	1		02/02/22 01:13	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 01:13	16984-48-8	
Sulfate	0.58J	mg/L	1.0	0.50	1		02/02/22 01:13	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-52		Lab ID: 92585058002		Collected: 01/25/22 16:52		Received: 01/28/22 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:43		
pH	7.44	Std. Units			1		01/28/22 14:43		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 20:54	7440-66-6	
Calcium	28.6	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 20:54	7440-70-2	
Potassium	1.2	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 20:54	7440-09-7	BC
Sodium	5.1	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 20:54	7440-23-5	
Magnesium	14.6	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 20:54	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 18:42	7440-36-0	
Arsenic	0.0030J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 18:42	7440-38-2	
Barium	0.023	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 18:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 18:42	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 18:42	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 18:42	7440-43-9	
Chromium	0.0012J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 18:42	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 18:42	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 18:42	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 18:42	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 18:42	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 18:42	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 18:42	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 18:42	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 18:42	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 10:20	02/08/22 15:22	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	136	mg/L	10.0	10.0	1		02/01/22 14:07		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	132	mg/L	5.0	1.8	1		02/03/22 17:20		
Alkalinity,Bicarbonate (CaCO3)	132	mg/L	5.0	1.8	1		02/03/22 17:20		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 17:20		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-52 **Lab ID: 92585058002** Collected: 01/25/22 16:52 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.5	mg/L	1.0	0.60	1		02/02/22 01:27	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 01:27	16984-48-8	
Sulfate	8.6	mg/L	1.0	0.50	1		02/02/22 01:27	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-54 **Lab ID: 92585058003** Collected: 01/25/22 15:28 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:44		
pH	7.38	Std. Units			1		01/28/22 14:44		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 21:09	7440-66-6	
Calcium	24.3	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 21:09	7440-70-2	
Potassium	0.87	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 21:09	7440-09-7	
Sodium	2.5	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 21:09	7440-23-5	
Magnesium	13.9	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 21:09	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 19:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:06	7440-38-2	
Barium	0.031	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 19:06	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 19:06	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 19:06	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 19:06	7440-43-9	
Chromium	0.0013J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 19:06	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 19:06	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 19:06	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 19:06	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 19:06	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 19:06	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 19:06	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 19:06	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 10:20	02/08/22 15:24	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	113	mg/L	10.0	10.0	1		02/01/22 14:07		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	116	mg/L	5.0	1.8	1		02/03/22 17:36		
Alkalinity,Bicarbonate (CaCO3)	116	mg/L	5.0	1.8	1		02/03/22 17:36		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 17:36		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-54 **Lab ID: 92585058003** Collected: 01/25/22 15:28 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.81J	mg/L	1.0	0.60	1		02/02/22 01:41	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 01:41	16984-48-8	
Sulfate	1.4	mg/L	1.0	0.50	1		02/02/22 01:41	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: FB-1		Lab ID: 92585058004		Collected: 01/25/22 16:18	Received: 01/28/22 09:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 21:13	7440-66-6	
Calcium	ND	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 21:13	7440-70-2	
Potassium	ND	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 21:13	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 21:13	7440-23-5	
Magnesium	ND	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 21:13	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 19:12	7440-36-0	
Arsenic	0.0013J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:12	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 19:12	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 19:12	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 19:12	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 19:12	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:12	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 19:12	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 19:12	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 19:12	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 19:12	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 19:12	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 19:12	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 19:12	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 19:12	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 10:20	02/08/22 15:32	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/01/22 14:08		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis							
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/03/22 17:41		
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 17:41		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 17:41		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		02/02/22 01:55	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 01:55	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/02/22 01:55	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWA-36RA		Lab ID: 92585058005		Collected: 01/26/22 10:35		Received: 01/28/22 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:44		
pH	7.01	Std. Units			1		01/28/22 14:44		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 21:18	7440-66-6	
Calcium	41.0	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 21:18	7440-70-2	
Potassium	1.1	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 21:18	7440-09-7	
Sodium	2.0	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 21:18	7440-23-5	
Magnesium	21.4	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 21:18	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 19:18	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:18	7440-38-2	
Barium	0.035	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 19:18	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 19:18	7440-41-7	
Boron	0.012J	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 19:18	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 19:18	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:18	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 19:18	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 19:18	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 19:18	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 19:18	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 19:18	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 19:18	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 19:18	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 19:18	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 10:20	02/08/22 15:35	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	184	mg/L	10.0	10.0	1		02/02/22 17:22		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	182	mg/L	5.0	1.8	1		02/03/22 22:13		
Alkalinity,Bicarbonate (CaCO3)	182	mg/L	5.0	1.8	1		02/03/22 22:13		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 22:13		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-36RA **Lab ID: 92585058005** Collected: 01/26/22 10:35 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.4	mg/L	1.0	0.60	1		02/02/22 02:09	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 02:09	16984-48-8	
Sulfate	7.5	mg/L	1.0	0.50	1		02/02/22 02:09	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-37		Lab ID: 92585058006		Collected: 01/26/22 13:10		Received: 01/28/22 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:44		
pH	4.69	Std. Units			1		01/28/22 14:44		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 21:23	7440-66-6	
Calcium	0.70J	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 21:23	7440-70-2	
Potassium	0.38	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 21:23	7440-09-7	
Sodium	3.1	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 21:23	7440-23-5	
Magnesium	0.29	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 21:23	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 19:36	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:36	7440-38-2	
Barium	0.0046J	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 19:36	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 19:36	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 19:36	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 19:36	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 19:36	7440-48-4	
Copper	0.013	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 19:36	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 19:36	7439-92-1	
Nickel	0.016	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 19:36	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 19:36	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 19:36	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 19:36	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 19:36	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 10:20	02/08/22 15:37	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	26.0	mg/L	10.0	10.0	1		02/02/22 17:22		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	6.8	mg/L	5.0	1.8	1		02/03/22 23:14		
Alkalinity,Bicarbonate (CaCO3)	6.8	mg/L	5.0	1.8	1		02/03/22 23:14		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 23:14		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-37 **Lab ID: 92585058006** Collected: 01/26/22 13:10 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.88J	mg/L	1.0	0.60	1		02/02/22 02:23	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 02:23	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/02/22 02:23	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWA-51RZ		Lab ID: 92585058007		Collected: 01/26/22 12:45		Received: 01/28/22 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:44		
pH	7.78	Std. Units			1		01/28/22 14:44		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 21:28	7440-66-6	
Calcium	50.5	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 21:28	7440-70-2	
Potassium	1.0	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 21:28	7440-09-7	
Sodium	3.6	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 21:28	7440-23-5	
Magnesium	23.5	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 21:28	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 19:42	7440-36-0	
Arsenic	0.0047J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:42	7440-38-2	
Barium	0.034	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 19:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 19:42	7440-41-7	
Boron	0.0088J	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 19:42	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 19:42	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:42	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 19:42	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 19:42	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 19:42	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 19:42	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 19:42	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 19:42	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 19:42	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 19:42	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 10:20	02/08/22 15:40	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	190	mg/L	10.0	10.0	1		02/02/22 17:22		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	184	mg/L	5.0	1.8	1		02/03/22 22:21		
Alkalinity,Bicarbonate (CaCO3)	184	mg/L	5.0	1.8	1		02/03/22 22:21		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 22:21		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-51RZ **Lab ID: 92585058007** Collected: 01/26/22 12:45 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.9	mg/L	1.0	0.60	1		02/02/22 02:37	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 02:37	16984-48-8	
Sulfate	22.2	mg/L	1.0	0.50	1		02/02/22 02:37	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWA-53	Lab ID: 92585058008	Collected: 01/26/22 11:45	Received: 01/28/22 09:30	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:45		
pH	7.72	Std. Units			1		01/28/22 14:45		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 21:33	7440-66-6	
Calcium	29.6	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 21:33	7440-70-2	
Potassium	0.68	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 21:33	7440-09-7	
Sodium	1.7	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 21:33	7440-23-5	
Magnesium	16.3	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 21:33	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 19:48	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:48	7440-38-2	
Barium	0.013	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 19:48	7440-39-3	
Beryllium	0.000070J	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 19:48	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 19:48	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 19:48	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:48	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 19:48	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 19:48	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 19:48	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 19:48	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 19:48	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 19:48	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 19:48	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 19:48	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 10:20	02/08/22 15:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	131	mg/L	10.0	10.0	1		02/02/22 17:22		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	132	mg/L	5.0	1.8	1		02/03/22 22:26		
Alkalinity,Bicarbonate (CaCO3)	132	mg/L	5.0	1.8	1		02/03/22 22:26		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 22:26		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-53 **Lab ID: 92585058008** Collected: 01/26/22 11:45 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.2	mg/L	1.0	0.60	1		02/02/22 03:18	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 03:18	16984-48-8	
Sulfate	1.4	mg/L	1.0	0.50	1		02/02/22 03:18	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWA-53R		Lab ID: 92585058009		Collected: 01/26/22 14:20		Received: 01/28/22 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:45		
pH	7.78	Std. Units			1		01/28/22 14:45		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 21:37	7440-66-6	
Calcium	30.4	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 21:37	7440-70-2	
Potassium	0.67	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 21:37	7440-09-7	
Sodium	1.5	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 21:37	7440-23-5	
Magnesium	16.5	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 21:37	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 19:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:53	7440-38-2	
Barium	0.014	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 19:53	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 19:53	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 19:53	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 19:53	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 19:53	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 19:53	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 19:53	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 19:53	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 19:53	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 19:53	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 19:53	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 19:53	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 10:20	02/08/22 15:45	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	144	mg/L	10.0	10.0	1		02/02/22 17:23		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	139	mg/L	5.0	1.8	1		02/03/22 22:39		
Alkalinity,Bicarbonate (CaCO3)	139	mg/L	5.0	1.8	1		02/03/22 22:39		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 22:39		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-53R **Lab ID: 92585058009** Collected: 01/26/22 14:20 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.4	mg/L	1.0	0.60	1		02/02/22 04:00	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 04:00	16984-48-8	
Sulfate	1.6	mg/L	1.0	0.50	1		02/02/22 04:00	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWA-55	Lab ID: 92585058010	Collected: 01/26/22 15:30	Received: 01/28/22 09:30	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:45		
pH	7.21	Std. Units			1		01/28/22 14:45		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 21:42	7440-66-6	
Calcium	53.2	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 21:42	7440-70-2	
Potassium	1.4	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 21:42	7440-09-7	
Sodium	0.97J	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 21:42	7440-23-5	
Magnesium	27.9	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 21:42	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 19:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:59	7440-38-2	
Barium	0.026	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 19:59	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 19:59	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 19:59	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 19:59	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 19:59	7440-47-3	
Cobalt	0.0035J	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 19:59	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 19:59	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 19:59	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 19:59	7440-02-0	
Selenium	0.0025J	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 19:59	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 19:59	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 19:59	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 19:59	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 08:45	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	244	mg/L	10.0	10.0	1		02/02/22 17:23		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	190	mg/L	5.0	1.8	1		02/03/22 22:44		
Alkalinity,Bicarbonate (CaCO3)	190	mg/L	5.0	1.8	1		02/03/22 22:44		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 22:44		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-55 **Lab ID: 92585058010** Collected: 01/26/22 15:30 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	5.8	mg/L	1.0	0.60	1		02/02/22 04:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 04:42	16984-48-8	
Sulfate	32.5	mg/L	1.0	0.50	1		02/02/22 04:42	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWA-56		Lab ID: 92585058011		Collected: 01/26/22 16:01		Received: 01/28/22 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:45		
pH	7.45	Std. Units			1		01/28/22 14:45		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 21:47	7440-66-6	
Calcium	37.6	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 21:47	7440-70-2	
Potassium	3.6	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 21:47	7440-09-7	
Sodium	39.4	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 21:47	7440-23-5	
Magnesium	22.4	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 21:47	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 20:05	7440-36-0	
Arsenic	0.0015J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:05	7440-38-2	
Barium	0.032	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 20:05	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 20:05	7440-41-7	
Boron	0.014J	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 20:05	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 20:05	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 20:05	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 20:05	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 20:05	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 20:05	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 20:05	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 20:05	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 20:05	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 20:05	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 08:56	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	278	mg/L	10.0	10.0	1		02/02/22 17:23		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	216	mg/L	5.0	1.8	1		02/03/22 22:50		
Alkalinity,Bicarbonate (CaCO3)	216	mg/L	5.0	1.8	1		02/03/22 22:50		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 22:50		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-56 **Lab ID: 92585058011** Collected: 01/26/22 16:01 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	5.2	mg/L	1.0	0.60	1		02/02/22 04:56	16887-00-6	
Fluoride	0.076J	mg/L	0.10	0.050	1		02/02/22 04:56	16984-48-8	
Sulfate	47.1	mg/L	1.0	0.50	1		02/02/22 04:56	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: DUP-1 **Lab ID: 92585058012** Collected: 01/26/22 00:00 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/05/22 08:33	02/07/22 21:52	7440-66-6	
Calcium	53.7	mg/L	1.0	0.12	1	02/05/22 08:33	02/07/22 21:52	7440-70-2	
Potassium	1.5	mg/L	0.20	0.15	1	02/05/22 08:33	02/07/22 21:52	7440-09-7	
Sodium	1.0	mg/L	1.0	0.58	1	02/05/22 08:33	02/07/22 21:52	7440-23-5	
Magnesium	28.3	mg/L	0.050	0.012	1	02/05/22 08:33	02/07/22 21:52	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 20:11	7440-36-0	
Arsenic	0.0020J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:11	7440-38-2	
Barium	0.029	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 20:11	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 20:11	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 20:11	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 20:11	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:11	7440-47-3	
Cobalt	0.0039J	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 20:11	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 20:11	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 20:11	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 20:11	7440-02-0	
Selenium	0.0025J	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 20:11	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 20:11	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 20:11	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 20:11	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 08:58	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	226	mg/L	10.0	10.0	1		02/02/22 17:23		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	193	mg/L	5.0	1.8	1		02/03/22 22:57		
Alkalinity,Bicarbonate (CaCO3)	193	mg/L	5.0	1.8	1		02/03/22 22:57		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 22:57		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.8	mg/L	1.0	0.60	1		02/02/22 05:10	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 05:10	16984-48-8	
Sulfate	32.7	mg/L	1.0	0.50	1		02/02/22 05:10	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: FB-2		Lab ID: 92585058013		Collected: 01/26/22 16:15	Received: 01/28/22 09:30	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 16:39	7440-66-6		
Potassium	ND	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 16:39	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 16:39	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 16:39	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 16:39	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 20:17	7440-36-0		
Arsenic	0.0013J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:17	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 20:17	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 20:17	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 20:17	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 20:17	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:17	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 20:17	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 20:17	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 20:17	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 20:17	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 20:17	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 20:17	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 20:17	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 20:17	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:01	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/02/22 17:23			
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/03/22 23:03			
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 23:03			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 23:03			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		02/02/22 05:24	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 05:24	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		02/02/22 05:24	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: EB-1		Lab ID: 92585058014		Collected: 01/26/22 16:10	Received: 01/28/22 09:30	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 16:44	7440-66-6		
Potassium	ND	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 16:44	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 16:44	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 16:44	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 16:44	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 20:23	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:23	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 20:23	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 20:23	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 20:23	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 20:23	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:23	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 20:23	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 20:23	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 20:23	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 20:23	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 20:23	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 20:23	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 20:23	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 20:23	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:09	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/02/22 17:42			
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/03/22 23:07			
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 23:07			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/03/22 23:07			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		02/02/22 06:06	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 06:06	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		02/02/22 06:06	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWC-18R **Lab ID: 92585058015** Collected: 01/27/22 13:06 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:46		
pH	7.76	Std. Units			1		01/28/22 14:46		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 17:15	7440-66-6	
Potassium	0.63	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 17:15	7440-09-7	
Sodium	1.4	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 17:15	7440-23-5	
Calcium	29.3	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 17:15	7440-70-2	M1
Magnesium	16.4	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 17:15	7439-95-4	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 20:29	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:29	7440-38-2	
Barium	0.014	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 20:29	7440-39-3	
Beryllium	0.000055J	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 20:29	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 20:29	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 20:29	7440-43-9	
Chromium	0.0015J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:29	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 20:29	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 20:29	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 20:29	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 20:29	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 20:29	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 20:29	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 20:29	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 20:29	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:12	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	146	mg/L	10.0	10.0	1		02/02/22 17:43		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	141	mg/L	5.0	1.8	1		02/04/22 15:23		
Alkalinity,Bicarbonate (CaCO3)	141	mg/L	5.0	1.8	1		02/04/22 15:23		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/04/22 15:23		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-18R **Lab ID: 92585058015** Collected: 01/27/22 13:06 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.3	mg/L	1.0	0.60	1		02/02/22 06:20	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 06:20	16984-48-8	
Sulfate	2.1	mg/L	1.0	0.50	1		02/02/22 06:20	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWC-19R		Lab ID: 92585058016		Collected: 01/27/22 14:20	Received: 01/28/22 09:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:46		
pH	7.74	Std. Units			1		01/28/22 14:46		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 17:35	7440-66-6	
Potassium	0.76	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 17:35	7440-09-7	
Sodium	1.3	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 17:35	7440-23-5	
Calcium	33.2	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 17:35	7440-70-2	
Magnesium	18.3	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 17:35	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 20:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:47	7440-38-2	
Barium	0.016	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 20:47	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 20:47	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 20:47	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 20:47	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:47	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 20:47	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 20:47	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 20:47	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 20:47	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 20:47	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 20:47	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 20:47	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 20:47	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:14	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	149	mg/L	10.0	10.0	1		02/02/22 17:43		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	149	mg/L	5.0	1.8	1		02/04/22 15:29		
Alkalinity,Bicarbonate (CaCO3)	149	mg/L	5.0	1.8	1		02/04/22 15:29		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/04/22 15:29		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-19R **Lab ID: 92585058016** Collected: 01/27/22 14:20 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.5	mg/L	1.0	0.60	1		02/02/22 06:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 06:34	16984-48-8	
Sulfate	3.9	mg/L	1.0	0.50	1		02/02/22 06:34	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-20R		Lab ID: 92585058017		Collected: 01/27/22 15:52		Received: 01/28/22 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:46		
pH	7.73	Std. Units			1		01/28/22 14:46		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 17:39	7440-66-6	
Potassium	0.72	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 17:39	7440-09-7	
Sodium	2.1	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 17:39	7440-23-5	
Calcium	36.2	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 17:39	7440-70-2	
Magnesium	20.0	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 17:39	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 20:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:53	7440-38-2	
Barium	0.028	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 20:53	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 20:53	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 20:53	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 20:53	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 20:53	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 20:53	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 20:53	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 20:53	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 20:53	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 20:53	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 20:53	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 20:53	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:17	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	176	mg/L	10.0	10.0	1		02/02/22 17:43		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	171	mg/L	5.0	1.8	1		02/04/22 15:34		
Alkalinity,Bicarbonate (CaCO3)	171	mg/L	5.0	1.8	1		02/04/22 15:34		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/04/22 15:34		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-20R **Lab ID: 92585058017** Collected: 01/27/22 15:52 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.9	mg/L	1.0	0.60	1		02/02/22 06:47	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 06:47	16984-48-8	
Sulfate	1.7	mg/L	1.0	0.50	1		02/02/22 06:47	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-22R		Lab ID: 92585058018		Collected: 01/27/22 16:00	Received: 01/28/22 09:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:46		
pH	7.28	Std. Units			1		01/28/22 14:46		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 17:44	7440-66-6	
Potassium	1.5	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 17:44	7440-09-7	
Sodium	1.8	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 17:44	7440-23-5	
Calcium	36.9	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 17:44	7440-70-2	
Magnesium	20.0	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 17:44	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 20:59	7440-36-0	
Arsenic	0.0045J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:59	7440-38-2	
Barium	0.060	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 20:59	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 20:59	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 20:59	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 20:59	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 20:59	7440-47-3	
Cobalt	0.0011J	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 20:59	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 20:59	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 20:59	7439-92-1	
Nickel	0.00076J	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 20:59	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 20:59	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 20:59	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 20:59	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 20:59	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:19	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	167	mg/L	10.0	10.0	1		02/02/22 17:44		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	176	mg/L	5.0	1.8	1		02/04/22 15:40		
Alkalinity,Bicarbonate (CaCO3)	176	mg/L	5.0	1.8	1		02/04/22 15:40		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/04/22 15:40		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-22R **Lab ID: 92585058018** Collected: 01/27/22 16:00 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.5	mg/L	1.0	0.60	1		02/02/22 07:01	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/02/22 07:01	16984-48-8	
Sulfate	1.3	mg/L	1.0	0.50	1		02/02/22 07:01	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-25R		Lab ID: 92585058019		Collected: 01/27/22 13:53	Received: 01/28/22 09:30	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:46		
pH	7.46	Std. Units			1		01/28/22 14:46		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 17:49	7440-66-6	
Potassium	0.66	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 17:49	7440-09-7	
Sodium	1.3	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 17:49	7440-23-5	
Calcium	34.4	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 17:49	7440-70-2	
Magnesium	19.7	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 17:49	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 21:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 21:05	7440-38-2	
Barium	0.017	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 21:05	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 21:05	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 21:05	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 21:05	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 21:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 21:05	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 21:05	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 21:05	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 21:05	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 21:05	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 21:05	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 21:05	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 21:05	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:22	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	168	mg/L	10.0	10.0	1		02/02/22 17:44		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	164	mg/L	5.0	1.8	1		02/04/22 15:45		
Alkalinity,Bicarbonate (CaCO3)	164	mg/L	5.0	1.8	1		02/04/22 15:45		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/04/22 15:45		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-25R **Lab ID: 92585058019** Collected: 01/27/22 13:53 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.4	mg/L	1.0	0.60	1		02/04/22 13:50	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/04/22 13:50	16984-48-8	
Sulfate	2.0	mg/L	1.0	0.50	1		02/04/22 13:50	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWA-55R		Lab ID: 92585058020		Collected: 01/27/22 12:30		Received: 01/28/22 09:30		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		01/28/22 14:47		
pH	7.27	Std. Units			1		01/28/22 14:47		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 17:54	7440-66-6	
Potassium	1.0	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 17:54	7440-09-7	
Sodium	1.2	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 17:54	7440-23-5	
Calcium	44.4	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 17:54	7440-70-2	
Magnesium	24.8	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 17:54	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/10/22 08:25	02/11/22 21:11	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 21:11	7440-38-2	
Barium	0.032	mg/L	0.0050	0.00067	1	02/10/22 08:25	02/11/22 21:11	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/10/22 08:25	02/11/22 21:11	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/10/22 08:25	02/11/22 21:11	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/10/22 08:25	02/11/22 21:11	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/10/22 08:25	02/11/22 21:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/10/22 08:25	02/11/22 21:11	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/10/22 08:25	02/11/22 21:11	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/10/22 08:25	02/11/22 21:11	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/10/22 08:25	02/11/22 21:11	7440-02-0	
Selenium	0.0016J	mg/L	0.0050	0.0014	1	02/10/22 08:25	02/11/22 21:11	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/10/22 08:25	02/11/22 21:11	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/10/22 08:25	02/11/22 21:11	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/10/22 08:25	02/11/22 21:11	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:25	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	207	mg/L	10.0	10.0	1		02/02/22 17:44		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	181	mg/L	5.0	1.8	1		02/04/22 16:15		
Alkalinity,Bicarbonate (CaCO3)	181	mg/L	5.0	1.8	1		02/04/22 16:15		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/04/22 16:15		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWA-55R **Lab ID: 92585058020** Collected: 01/27/22 12:30 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.5	mg/L	1.0	0.60	1		02/04/22 14:04	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/04/22 14:04	16984-48-8	
Sulfate	20.7	mg/L	1.0	0.50	1		02/04/22 14:04	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: DUP-2		Lab ID: 92585058021		Collected: 01/27/22 00:00		Received: 01/28/22 09:30		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 17:58	7440-66-6		
Potassium	0.72	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 17:58	7440-09-7		
Sodium	1.4	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 17:58	7440-23-5		
Calcium	30.8	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 17:58	7440-70-2		
Magnesium	16.8	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 17:58	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	0.00090J	mg/L	0.0030	0.00078	1	02/11/22 10:29	02/14/22 14:55	7440-36-0	B	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 14:55	7440-38-2		
Barium	0.015	mg/L	0.0050	0.00067	1	02/11/22 10:29	02/14/22 14:55	7440-39-3		
Beryllium	0.000056J	mg/L	0.00050	0.000054	1	02/11/22 10:29	02/14/22 14:55	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	02/11/22 10:29	02/14/22 14:55	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	02/11/22 10:29	02/14/22 14:55	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 14:55	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	02/11/22 10:29	02/14/22 14:55	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	02/11/22 10:29	02/14/22 14:55	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	02/11/22 10:29	02/14/22 14:55	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	02/11/22 10:29	02/14/22 14:55	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	02/11/22 10:29	02/14/22 14:55	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	02/11/22 10:29	02/14/22 14:55	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	02/11/22 10:29	02/14/22 14:55	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	02/11/22 10:29	02/14/22 14:55	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:27	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	147	mg/L	10.0	10.0	1		02/02/22 17:45			
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO3	141	mg/L	5.0	1.8	1		02/04/22 16:20			
Alkalinity,Bicarbonate (CaCO3)	141	mg/L	5.0	1.8	1		02/04/22 16:20			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/04/22 16:20			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	2.3	mg/L	1.0	0.60	1		02/04/22 14:18	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		02/04/22 14:18	16984-48-8		
Sulfate	2.1	mg/L	1.0	0.50	1		02/04/22 14:18	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: FB-3 **Lab ID: 92585058022** Collected: 01/27/22 16:30 Received: 01/28/22 09:30 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 18:13	7440-66-6	
Potassium	ND	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 18:13	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 18:13	7440-23-5	
Calcium	ND	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 18:13	7440-70-2	
Magnesium	ND	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 18:13	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/11/22 10:29	02/14/22 15:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 15:01	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	02/11/22 10:29	02/14/22 15:01	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/11/22 10:29	02/14/22 15:01	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/11/22 10:29	02/14/22 15:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/11/22 10:29	02/14/22 15:01	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 15:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/11/22 10:29	02/14/22 15:01	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/11/22 10:29	02/14/22 15:01	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/11/22 10:29	02/14/22 15:01	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/11/22 10:29	02/14/22 15:01	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/11/22 10:29	02/14/22 15:01	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/11/22 10:29	02/14/22 15:01	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/11/22 10:29	02/14/22 15:01	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/11/22 10:29	02/14/22 15:01	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:30	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/02/22 17:45		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/04/22 16:24		
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/04/22 16:24		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/04/22 16:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		02/04/22 15:00	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/04/22 15:00	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/04/22 15:00	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWC-16R		Lab ID: 92585058023		Collected: 01/28/22 09:38		Received: 02/01/22 11:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/01/22 17:21		
pH	7.31	Std. Units			1		02/01/22 17:21		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.026	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 18:17	7440-66-6	
Potassium	5.7	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 18:17	7440-09-7	
Sodium	28.5	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 18:17	7440-23-5	
Calcium	68.5	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 18:17	7440-70-2	
Magnesium	23.9	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 18:17	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.027	mg/L	0.0030	0.00078	1	02/11/22 10:29	02/14/22 15:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 15:21	7440-38-2	
Barium	0.049	mg/L	0.0050	0.00067	1	02/11/22 10:29	02/14/22 15:21	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/11/22 10:29	02/14/22 15:21	7440-41-7	
Boron	0.021J	mg/L	0.040	0.0086	1	02/11/22 10:29	02/14/22 15:21	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/11/22 10:29	02/14/22 15:21	7440-43-9	
Chromium	0.0011J	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 15:21	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/11/22 10:29	02/14/22 15:21	7440-48-4	
Copper	0.00088J	mg/L	0.0050	0.00050	1	02/11/22 10:29	02/14/22 15:21	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/11/22 10:29	02/14/22 15:21	7439-92-1	
Nickel	0.0063	mg/L	0.0050	0.00071	1	02/11/22 10:29	02/14/22 15:21	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/11/22 10:29	02/14/22 15:21	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/11/22 10:29	02/14/22 15:21	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/11/22 10:29	02/14/22 15:21	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/11/22 10:29	02/14/22 15:21	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:38	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	317	mg/L	10.0	10.0	1		02/03/22 12:41		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	315	mg/L	5.0	1.8	1		02/08/22 21:45		
Alkalinity,Bicarbonate (CaCO3)	315	mg/L	5.0	1.8	1		02/08/22 21:45		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 21:45		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-16R **Lab ID: 92585058023** Collected: 01/28/22 09:38 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.6	mg/L	1.0	0.60	1		02/06/22 04:03	16887-00-6	
Fluoride	0.17	mg/L	0.10	0.050	1		02/06/22 04:03	16984-48-8	
Sulfate	11.9	mg/L	1.0	0.50	1		02/06/22 04:03	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWC-17R	Lab ID: 92585058024	Collected: 01/28/22 10:20	Received: 02/01/22 11:22	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/01/22 17:21		
pH	7.34	Std. Units			1		02/01/22 17:21		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 18:22	7440-66-6	
Potassium	0.73	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 18:22	7440-09-7	
Sodium	2.5	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 18:22	7440-23-5	
Calcium	64.7	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 18:22	7440-70-2	
Magnesium	35.4	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 18:22	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/11/22 10:29	02/14/22 15:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 15:45	7440-38-2	
Barium	0.018	mg/L	0.0050	0.00067	1	02/11/22 10:29	02/14/22 15:45	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/11/22 10:29	02/14/22 15:45	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/11/22 10:29	02/14/22 15:45	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/11/22 10:29	02/14/22 15:45	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 15:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/11/22 10:29	02/14/22 15:45	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/11/22 10:29	02/14/22 15:45	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/11/22 10:29	02/14/22 15:45	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/11/22 10:29	02/14/22 15:45	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/11/22 10:29	02/14/22 15:45	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/11/22 10:29	02/14/22 15:45	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/11/22 10:29	02/14/22 15:45	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/11/22 10:29	02/14/22 15:45	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:40	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	302	mg/L	10.0	10.0	1		02/03/22 12:41		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	300	mg/L	5.0	1.8	1		02/08/22 21:53		
Alkalinity,Bicarbonate (CaCO3)	300	mg/L	5.0	1.8	1		02/08/22 21:53		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 21:53		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-17R **Lab ID: 92585058024** Collected: 01/28/22 10:20 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.6	mg/L	1.0	0.60	1		02/06/22 04:17	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/06/22 04:17	16984-48-8	
Sulfate	7.6	mg/L	1.0	0.50	1		02/06/22 04:17	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: **GWC-18** Lab ID: **92585058025** Collected: 01/28/22 12:04 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/01/22 17:21		
pH	6.60	Std. Units			1		02/01/22 17:21		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 18:27	7440-66-6	
Potassium	1.1	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 18:27	7440-09-7	
Sodium	1.5	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 18:27	7440-23-5	
Calcium	19.1	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 18:27	7440-70-2	
Magnesium	10.7	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 18:27	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/11/22 10:29	02/14/22 15:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 15:51	7440-38-2	
Barium	0.044	mg/L	0.0050	0.00067	1	02/11/22 10:29	02/14/22 15:51	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/11/22 10:29	02/14/22 15:51	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/11/22 10:29	02/14/22 15:51	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/11/22 10:29	02/14/22 15:51	7440-43-9	
Chromium	0.0014J	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 15:51	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/11/22 10:29	02/14/22 15:51	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/11/22 10:29	02/14/22 15:51	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/11/22 10:29	02/14/22 15:51	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/11/22 10:29	02/14/22 15:51	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/11/22 10:29	02/14/22 15:51	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/11/22 10:29	02/14/22 15:51	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/11/22 10:29	02/14/22 15:51	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/11/22 10:29	02/14/22 15:51	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	99.0	mg/L	10.0	10.0	1		02/03/22 12:41		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	84.7	mg/L	5.0	1.8	1		02/08/22 22:00		
Alkalinity,Bicarbonate (CaCO3)	84.7	mg/L	5.0	1.8	1		02/08/22 22:00		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 22:00		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-18 **Lab ID: 92585058025** Collected: 01/28/22 12:04 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.1	mg/L	1.0	0.60	1		02/06/22 04:31	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/06/22 04:31	16984-48-8	
Sulfate	1.6	mg/L	1.0	0.50	1		02/06/22 04:31	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWC-21R		Lab ID: 92585058026		Collected: 01/28/22 12:17		Received: 02/01/22 11:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/01/22 17:21		
pH	6.69	Std. Units			1		02/01/22 17:21		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 18:32	7440-66-6	
Potassium	1.5	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 18:32	7440-09-7	
Sodium	15.1	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 18:32	7440-23-5	
Calcium	60.0	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 18:32	7440-70-2	
Magnesium	29.9	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 18:32	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0061	mg/L	0.0030	0.00078	1	02/11/22 10:29	02/14/22 18:21	7440-36-0	B
Arsenic	0.0031J	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 18:21	7440-38-2	
Barium	0.037	mg/L	0.0050	0.00067	1	02/11/22 10:29	02/14/22 18:21	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/11/22 10:29	02/14/22 18:21	7440-41-7	
Boron	0.011J	mg/L	0.040	0.0086	1	02/11/22 10:29	02/14/22 18:21	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/11/22 10:29	02/14/22 18:21	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 18:21	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/11/22 10:29	02/14/22 18:21	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/11/22 10:29	02/14/22 18:21	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/11/22 10:29	02/14/22 18:21	7439-92-1	
Nickel	0.0014J	mg/L	0.0050	0.00071	1	02/11/22 10:29	02/14/22 18:21	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/11/22 10:29	02/14/22 18:21	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/11/22 10:29	02/14/22 18:21	7440-22-4	
Thallium	0.00021J	mg/L	0.0010	0.00018	1	02/11/22 10:29	02/14/22 18:21	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/11/22 10:29	02/14/22 18:21	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:46	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	290	mg/L	10.0	10.0	1		02/03/22 12:41		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	288	mg/L	5.0	1.8	1		02/08/22 22:05		
Alkalinity,Bicarbonate (CaCO3)	288	mg/L	5.0	1.8	1		02/08/22 22:05		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 22:05		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-21R **Lab ID: 92585058026** Collected: 01/28/22 12:17 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.6	mg/L	1.0	0.60	1		02/06/22 04:45	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/06/22 04:45	16984-48-8	
Sulfate	13.7	mg/L	1.0	0.50	1		02/06/22 04:45	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-23R		Lab ID: 92585058027		Collected: 01/28/22 11:07		Received: 02/01/22 11:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/01/22 17:22		
pH	7.38	Std. Units			1		02/01/22 17:22		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.0099J	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 18:36	7440-66-6	
Potassium	1.4	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 18:36	7440-09-7	
Sodium	74.7	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 18:36	7440-23-5	
Calcium	64.9	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 18:36	7440-70-2	
Magnesium	34.0	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 18:36	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/11/22 10:29	02/14/22 18:27	7440-36-0	
Arsenic	0.0026J	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 18:27	7440-38-2	
Barium	0.036	mg/L	0.0050	0.00067	1	02/11/22 10:29	02/14/22 18:27	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/11/22 10:29	02/14/22 18:27	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/11/22 10:29	02/14/22 18:27	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/11/22 10:29	02/14/22 18:27	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 18:27	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/11/22 10:29	02/14/22 18:27	7440-48-4	
Copper	0.00068J	mg/L	0.0050	0.00050	1	02/11/22 10:29	02/14/22 18:27	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/11/22 10:29	02/14/22 18:27	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/11/22 10:29	02/14/22 18:27	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/11/22 10:29	02/14/22 18:27	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/11/22 10:29	02/14/22 18:27	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/11/22 10:29	02/14/22 18:27	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/11/22 10:29	02/14/22 18:27	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:48	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	454	mg/L	20.0	20.0	1		02/03/22 12:41		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	345	mg/L	5.0	1.8	1		02/08/22 22:12		
Alkalinity,Bicarbonate (CaCO3)	345	mg/L	5.0	1.8	1		02/08/22 22:12		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 22:12		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-23R **Lab ID: 92585058027** Collected: 01/28/22 11:07 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.7	mg/L	1.0	0.60	1		02/06/22 04:59	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/06/22 04:59	16984-48-8	
Sulfate	98.4	mg/L	2.0	1.0	2		02/06/22 07:35	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: GWC-24R		Lab ID: 92585058028		Collected: 01/28/22 10:35	Received: 02/01/22 11:22	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/01/22 17:22		
pH	7.68	Std. Units			1		02/01/22 17:22		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 18:41	7440-66-6	
Potassium	0.87	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 18:41	7440-09-7	
Sodium	1.5	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 18:41	7440-23-5	
Calcium	34.4	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 18:41	7440-70-2	
Magnesium	18.9	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 18:41	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/11/22 10:29	02/14/22 18:33	7440-36-0	
Arsenic	0.0021J	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 18:33	7440-38-2	
Barium	0.025	mg/L	0.0050	0.00067	1	02/11/22 10:29	02/14/22 18:33	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/11/22 10:29	02/14/22 18:33	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/11/22 10:29	02/14/22 18:33	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/11/22 10:29	02/14/22 18:33	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 18:33	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/11/22 10:29	02/14/22 18:33	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/11/22 10:29	02/14/22 18:33	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/11/22 10:29	02/14/22 18:33	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/11/22 10:29	02/14/22 18:33	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/11/22 10:29	02/14/22 18:33	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/11/22 10:29	02/14/22 18:33	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/11/22 10:29	02/14/22 18:33	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/11/22 10:29	02/14/22 18:33	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:51	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	159	mg/L	10.0	10.0	1		02/03/22 12:41		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	148	mg/L	5.0	1.8	1		02/08/22 22:20		
Alkalinity,Bicarbonate (CaCO3)	148	mg/L	5.0	1.8	1		02/08/22 22:20		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 22:20		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Sample: GWC-24R **Lab ID: 92585058028** Collected: 01/28/22 10:35 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.2	mg/L	1.0	0.60	1		02/06/22 05:41	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/06/22 05:41	16984-48-8	
Sulfate	2.3	mg/L	1.0	0.50	1		02/06/22 05:41	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: DUP-3		Lab ID: 92585058029		Collected: 01/28/22 00:00	Received: 02/01/22 11:22	Matrix: Water			
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 18:46	7440-66-6	
Potassium	0.83	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 18:46	7440-09-7	
Sodium	1.6	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 18:46	7440-23-5	
Calcium	33.5	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 18:46	7440-70-2	
Magnesium	18.5	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 18:46	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	02/11/22 10:29	02/14/22 18:39	7440-36-0	
Arsenic	0.0015J	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 18:39	7440-38-2	
Barium	0.023	mg/L	0.0050	0.00067	1	02/11/22 10:29	02/14/22 18:39	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/11/22 10:29	02/14/22 18:39	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/11/22 10:29	02/14/22 18:39	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/11/22 10:29	02/14/22 18:39	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 18:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/11/22 10:29	02/14/22 18:39	7440-48-4	
Copper	0.00054J	mg/L	0.0050	0.00050	1	02/11/22 10:29	02/14/22 18:39	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/11/22 10:29	02/14/22 18:39	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/11/22 10:29	02/14/22 18:39	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/11/22 10:29	02/14/22 18:39	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/11/22 10:29	02/14/22 18:39	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/11/22 10:29	02/14/22 18:39	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/11/22 10:29	02/14/22 18:39	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	02/08/22 15:00	02/09/22 09:53	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	156	mg/L	10.0	10.0	1		02/03/22 12:42		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis							
Alkalinity, Total as CaCO3	148	mg/L	5.0	1.8	1		02/08/22 22:25		
Alkalinity,Bicarbonate (CaCO3)	148	mg/L	5.0	1.8	1		02/08/22 22:25		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 22:25		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	2.2	mg/L	1.0	0.60	1		02/06/22 05:55	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/06/22 05:55	16984-48-8	
Sulfate	2.3	mg/L	1.0	0.50	1		02/06/22 05:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Sample: FB-4		Lab ID: 92585058030		Collected: 01/28/22 11:55	Received: 02/01/22 11:22	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	02/10/22 08:25	02/10/22 18:56	7440-66-6		
Potassium	ND	mg/L	0.20	0.15	1	02/10/22 08:25	02/10/22 18:56	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	02/10/22 08:25	02/10/22 18:56	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	02/10/22 08:25	02/10/22 18:56	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	02/10/22 08:25	02/10/22 18:56	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	02/11/22 10:29	02/14/22 18:45	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 18:45	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	02/11/22 10:29	02/14/22 18:45	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	02/11/22 10:29	02/14/22 18:45	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	02/11/22 10:29	02/14/22 18:45	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	02/11/22 10:29	02/14/22 18:45	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	02/11/22 10:29	02/14/22 18:45	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	02/11/22 10:29	02/14/22 18:45	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	02/11/22 10:29	02/14/22 18:45	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	02/11/22 10:29	02/14/22 18:45	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	02/11/22 10:29	02/14/22 18:45	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	02/11/22 10:29	02/14/22 18:45	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	02/11/22 10:29	02/14/22 18:45	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	02/11/22 10:29	02/14/22 18:45	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	02/11/22 10:29	02/14/22 18:45	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 11:00	02/09/22 15:40	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/03/22 12:42			
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/08/22 22:37			
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 22:37			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 22:37			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		02/07/22 00:27	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 00:27	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		02/07/22 00:27	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch:	676146	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012

METHOD BLANK: 3539086 Matrix: Water
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	02/07/22 20:25	
Magnesium	mg/L	ND	0.050	0.012	02/07/22 20:25	
Potassium	mg/L	ND	0.20	0.15	02/07/22 20:25	
Sodium	mg/L	ND	1.0	0.58	02/07/22 20:25	
Zinc	mg/L	ND	0.020	0.0085	02/07/22 20:25	

LABORATORY CONTROL SAMPLE: 3539087

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.98J	98	80-120	
Magnesium	mg/L	1	1.0	103	80-120	
Potassium	mg/L	1	0.99	99	80-120	
Sodium	mg/L	1	1.1	106	80-120	
Zinc	mg/L	1	0.98	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3539088 3539089

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		92585058001	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec					
Calcium	mg/L	1.1	1	1	2.1	2.1	102	100	75-125	1	20		
Magnesium	mg/L	0.44	1	1	1.5	1.5	102	103	75-125	1	20		
Potassium	mg/L	0.46	1	1	1.4	1.4	94	96	75-125	1	20		
Sodium	mg/L	3.5	1	1	4.6	4.5	104	97	75-125	2	20		
Zinc	mg/L	ND	1	1	0.98	0.98	98	98	75-125	0	20		

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch: 677117 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

METHOD BLANK: 3543806 Matrix: Water
Associated Lab Samples: 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	02/10/22 16:30	
Magnesium	mg/L	ND	0.050	0.012	02/10/22 16:30	
Potassium	mg/L	ND	0.20	0.15	02/10/22 16:30	
Sodium	mg/L	ND	1.0	0.58	02/10/22 16:30	
Zinc	mg/L	ND	0.020	0.0085	02/10/22 16:30	

LABORATORY CONTROL SAMPLE: 3543807

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	107	80-120	
Magnesium	mg/L	1	1.1	110	80-120	
Potassium	mg/L	1	1.0	104	80-120	
Sodium	mg/L	1	1.1	110	80-120	
Zinc	mg/L	1	1.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3543808 3543809

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result	% Rec	% Rec						
Calcium	mg/L	1	29.3	1	31.1	174	218	75-125	1	20	M1		
Magnesium	mg/L	1	16.4	1	18.1	172	172	75-125	0	20	M1		
Potassium	mg/L	1	0.63	1	1.7	104	108	75-125	3	20			
Sodium	mg/L	1	1.4	1	2.4	99	105	75-125	2	20			
Zinc	mg/L	1	ND	1	0.96	96	100	75-125	4	20			

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch: 677120 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020

METHOD BLANK: 3543812 Matrix: Water
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	02/11/22 18:24	
Arsenic	mg/L	ND	0.0050	0.0011	02/11/22 18:24	
Barium	mg/L	ND	0.0050	0.00067	02/11/22 18:24	
Beryllium	mg/L	ND	0.00050	0.000054	02/11/22 18:24	
Boron	mg/L	ND	0.040	0.0086	02/11/22 18:24	
Cadmium	mg/L	ND	0.00050	0.00011	02/11/22 18:24	
Chromium	mg/L	ND	0.0050	0.0011	02/11/22 18:24	
Cobalt	mg/L	ND	0.0050	0.00039	02/11/22 18:24	
Copper	mg/L	ND	0.0050	0.00050	02/11/22 18:24	
Lead	mg/L	ND	0.0010	0.00089	02/11/22 18:24	
Nickel	mg/L	ND	0.0050	0.00071	02/11/22 18:24	
Selenium	mg/L	ND	0.0050	0.0014	02/11/22 18:24	
Silver	mg/L	ND	0.0050	0.00044	02/11/22 18:24	
Thallium	mg/L	ND	0.0010	0.00018	02/11/22 18:24	
Vanadium	mg/L	ND	0.010	0.0019	02/11/22 18:24	

LABORATORY CONTROL SAMPLE: 3543813

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	108	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.10	105	80-120	
Beryllium	mg/L	0.1	0.098	98	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.10	105	80-120	
Copper	mg/L	0.1	0.10	102	80-120	
Lead	mg/L	0.1	0.094	94	80-120	
Nickel	mg/L	0.1	0.11	106	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Silver	mg/L	0.1	0.10	104	80-120	
Thallium	mg/L	0.1	0.095	95	80-120	
Vanadium	mg/L	0.1	0.10	100	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3543814 3543815												
Parameter	Units	92585058002		MS	MSD	MS		MSD		% Rec Limits	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec			
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	104	110	75-125	6	20	
Arsenic	mg/L	0.0030J	0.1	0.1	0.10	0.10	97	97	75-125	1	20	
Barium	mg/L	0.023	0.1	0.1	0.13	0.14	106	122	75-125	11	20	
Beryllium	mg/L	ND	0.1	0.1	0.10	0.11	102	108	75-125	6	20	
Boron	mg/L	ND	1	1	1.0	1.1	102	109	75-125	7	20	
Cadmium	mg/L	ND	0.1	0.1	0.099	0.10	99	101	75-125	2	20	
Chromium	mg/L	0.0012J	0.1	0.1	0.098	0.10	97	99	75-125	3	20	
Cobalt	mg/L	ND	0.1	0.1	0.095	0.10	95	100	75-125	5	20	
Copper	mg/L	ND	0.1	0.1	0.095	0.099	94	99	75-125	4	20	
Lead	mg/L	ND	0.1	0.1	0.094	0.099	94	99	75-125	5	20	
Nickel	mg/L	ND	0.1	0.1	0.096	0.10	96	102	75-125	6	20	
Selenium	mg/L	ND	0.1	0.1	0.096	0.099	96	99	75-125	3	20	
Silver	mg/L	ND	0.1	0.1	0.099	0.11	99	105	75-125	6	20	
Thallium	mg/L	ND	0.1	0.1	0.096	0.10	96	100	75-125	5	20	
Vanadium	mg/L	ND	0.1	0.1	0.10	0.10	98	102	75-125	4	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch: 677647 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

METHOD BLANK: 3546468 Matrix: Water
Associated Lab Samples: 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00078J	0.0030	0.00078	02/14/22 14:43	
Arsenic	mg/L	ND	0.0050	0.0011	02/14/22 14:43	
Barium	mg/L	ND	0.0050	0.00067	02/14/22 14:43	
Beryllium	mg/L	ND	0.00050	0.000054	02/14/22 14:43	
Boron	mg/L	ND	0.040	0.0086	02/14/22 14:43	
Cadmium	mg/L	ND	0.00050	0.00011	02/14/22 14:43	
Chromium	mg/L	ND	0.0050	0.0011	02/14/22 14:43	
Cobalt	mg/L	ND	0.0050	0.00039	02/14/22 14:43	
Copper	mg/L	ND	0.0050	0.00050	02/14/22 14:43	
Lead	mg/L	ND	0.0010	0.00089	02/14/22 14:43	
Nickel	mg/L	ND	0.0050	0.00071	02/14/22 14:43	
Selenium	mg/L	ND	0.0050	0.0014	02/14/22 14:43	
Silver	mg/L	ND	0.0050	0.00044	02/14/22 14:43	
Thallium	mg/L	ND	0.0010	0.00018	02/14/22 14:43	
Vanadium	mg/L	ND	0.010	0.0019	02/14/22 14:43	

LABORATORY CONTROL SAMPLE: 3546469

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	109	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.10	103	80-120	
Beryllium	mg/L	0.1	0.10	101	80-120	
Boron	mg/L	1	1.0	101	80-120	
Cadmium	mg/L	0.1	0.11	107	80-120	
Chromium	mg/L	0.1	0.11	107	80-120	
Cobalt	mg/L	0.1	0.11	108	80-120	
Copper	mg/L	0.1	0.10	102	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Nickel	mg/L	0.1	0.11	107	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Silver	mg/L	0.1	0.10	103	80-120	
Thallium	mg/L	0.1	0.10	102	80-120	
Vanadium	mg/L	0.1	0.11	105	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Parameter	Units	92585058023		3546470		3546471		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Antimony	mg/L	0.027	0.1	0.1	0.13	0.14	107	110	75-125	3	20			
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	1	20			
Barium	mg/L	0.049	0.1	0.1	0.16	0.17	115	119	75-125	3	20			
Beryllium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	2	20			
Boron	mg/L	0.021J	1	1	0.95	0.96	93	94	75-125	1	20			
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	105	105	75-125	0	20			
Chromium	mg/L	0.0011J	0.1	0.1	0.10	0.10	104	100	75-125	3	20			
Cobalt	mg/L	ND	0.1	0.1	0.10	0.095	100	95	75-125	6	20			
Copper	mg/L	0.00088J	0.1	0.1	0.097	0.091	96	91	75-125	6	20			
Lead	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	0	20			
Nickel	mg/L	0.0063	0.1	0.1	0.11	0.099	99	92	75-125	7	20			
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	99	102	75-125	3	20			
Silver	mg/L	ND	0.1	0.1	0.099	0.10	99	101	75-125	3	20			
Thallium	mg/L	ND	0.1	0.1	0.096	0.098	96	98	75-125	2	20			
Vanadium	mg/L	ND	0.1	0.1	0.11	0.10	106	101	75-125	5	20			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

QC Batch:	676529	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009

METHOD BLANK: 3541084 Matrix: Water

Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008, 92585058009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	02/08/22 14:45	

LABORATORY CONTROL SAMPLE: 3541085

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	94	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3541086 3541087

Parameter	Units	92583955017 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0023	90	87	75-125	3	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

QC Batch:	676728	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029

METHOD BLANK: 3541855 Matrix: Water

Associated Lab Samples: 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022, 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	02/09/22 08:40	

LABORATORY CONTROL SAMPLE: 3541856

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0022	89	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3541857 3541858

Parameter	Units	3541857		3541858		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0023	0.0024	92	94	75-125	2	20

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch: 677024	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585058030

METHOD BLANK: 3543214 Matrix: Water
Associated Lab Samples: 92585058030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	02/09/22 15:30	

LABORATORY CONTROL SAMPLE: 3543215

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3543216 3543217

Parameter	Units	3543216		3543217		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	92585717001 ND	0.0025	0.0025	0.0025	0.0024	98	95	75-125	4	20

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch: 675202 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004

METHOD BLANK: 3533883 Matrix: Water
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/01/22 14:06	

LABORATORY CONTROL SAMPLE: 3533884

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	384	96	80-120	

SAMPLE DUPLICATE: 3533885

Parameter	Units	92584543008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	57.0	52.0	9	25	

SAMPLE DUPLICATE: 3533886

Parameter	Units	92585000001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	56.0	66.0	16	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch: 675522 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013

METHOD BLANK: 3535377 Matrix: Water
Associated Lab Samples: 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/02/22 17:20	

LABORATORY CONTROL SAMPLE: 3535378

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	382	96	80-120	

SAMPLE DUPLICATE: 3535379

Parameter	Units	92583955021 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	290	301	4	25	

SAMPLE DUPLICATE: 3535380

Parameter	Units	92584814001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	4960000 ug/L	4580	8	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

QC Batch: 675523 Analysis Method: SM 2540C-2015
 QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022

METHOD BLANK: 3535385 Matrix: Water
 Associated Lab Samples: 92585058014, 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/02/22 17:42	

LABORATORY CONTROL SAMPLE: 3535386

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	382	96	80-120	

SAMPLE DUPLICATE: 3535387

Parameter	Units	92585058014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		25	

SAMPLE DUPLICATE: 3535388

Parameter	Units	92585058019 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	168	193	14	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

QC Batch: 675783

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

METHOD BLANK: 3536822

Matrix: Water

Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/03/22 12:37	

LABORATORY CONTROL SAMPLE: 3536823

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	376	94	80-120	

SAMPLE DUPLICATE: 3536824

Parameter	Units	92584785018 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	274	288	5	25	

SAMPLE DUPLICATE: 3536825

Parameter	Units	92583603003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	155	146	6	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

QC Batch: 796924

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004

METHOD BLANK: 4235804

Matrix: Water

Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	02/03/22 14:42	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	02/03/22 14:42	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	02/03/22 14:42	

LABORATORY CONTROL SAMPLE & LCSD: 4235805

4235806

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	41.8	42.0	105	105	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4235807

4235808

Parameter	Units	10595854005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	127	40	40	166	166	99	98	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4235809

4235810

Parameter	Units	92585058002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	132	40	40	171	170	98	97	80-120	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch:	797156	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
		Laboratory:	Pace Analytical Services - Minneapolis

Associated Lab Samples: 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014

METHOD BLANK: 4236642 Matrix: Water
Associated Lab Samples: 92585058005, 92585058006, 92585058007, 92585058008, 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	02/03/22 20:09	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	02/03/22 20:09	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	02/03/22 20:09	

LABORATORY CONTROL SAMPLE & LCSD: 4236643 4236644

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.2	42.2	106	106	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4236645 4236646

Parameter	Units	10595801002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	73.8	40	40	114	114	101	102	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4236647 4236648

Parameter	Units	10595871007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	884	40	40	923	924	98	100	80-120	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

QC Batch:	797193	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
		Laboratory:	Pace Analytical Services - Minneapolis

Associated Lab Samples: 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022

METHOD BLANK: 4236738 Matrix: Water

Associated Lab Samples: 92585058015, 92585058016, 92585058017, 92585058018, 92585058019, 92585058020, 92585058021, 92585058022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	02/04/22 14:59	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	02/04/22 14:59	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	02/04/22 14:59	

LABORATORY CONTROL SAMPLE & LCSD: 4236739 4236740

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.0	41.9	105	105	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4236741 4236742

Parameter	Units	10595930001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	191	40	40	229	231	95	99	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4236743 4236744

Parameter	Units	10595930002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	82.0	40	40	121	121	98	98	80-120	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch:	797866	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
		Laboratory:	Pace Analytical Services - Minneapolis

Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

METHOD BLANK: 4239372 Matrix: Water
Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029, 92585058030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	02/08/22 21:36	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	02/08/22 21:36	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	02/08/22 21:36	

LABORATORY CONTROL SAMPLE & LCSD: 4239373 4239374

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	41.8	41.3	104	103	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4239375 4239376

Parameter	Units	10596751001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	22.6	40	40	53.6	59.6	78	93	80-120	10	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4239377 4239378

Parameter	Units	92585555002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	84.2	40	40	121	124	92	100	80-120	2	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch:	675177	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008

METHOD BLANK: 3533812 Matrix: Water
Associated Lab Samples: 92585058001, 92585058002, 92585058003, 92585058004, 92585058005, 92585058006, 92585058007, 92585058008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/01/22 19:53	
Fluoride	mg/L	ND	0.10	0.050	02/01/22 19:53	
Sulfate	mg/L	ND	1.0	0.50	02/01/22 19:53	

LABORATORY CONTROL SAMPLE: 3533813

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	53.1	106	90-110	
Fluoride	mg/L	2.5	2.5	102	90-110	
Sulfate	mg/L	50	50.9	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3533814 3533815

Parameter	Units	92584984011		3533815		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	5.8	50	50	56.4	57.4	101	103	90-110	2	10
Fluoride	mg/L	0.48	2.5	2.5	2.9	3.0	98	100	90-110	2	10
Sulfate	mg/L	27.5	50	50	77.3	79.0	99	103	90-110	2	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3533816 3533817

Parameter	Units	92584984021		3533817		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	7.7	50	50	59.9	57.3	104	99	90-110	4	10
Fluoride	mg/L	0.19	2.5	2.5	2.6	2.4	95	90	90-110	5	10
Sulfate	mg/L	87.5	50	50	115	114	56	52	90-110	1	10 M1

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

QC Batch: 675178

Analysis Method: EPA 300.0 Rev 2.1 1993

QC Batch Method: EPA 300.0 Rev 2.1 1993

Analysis Description: 300.0 IC Anions

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018

METHOD BLANK: 3533818

Matrix: Water

Associated Lab Samples: 92585058009, 92585058010, 92585058011, 92585058012, 92585058013, 92585058014, 92585058015, 92585058016, 92585058017, 92585058018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/02/22 03:33	
Fluoride	mg/L	ND	0.10	0.050	02/02/22 03:33	
Sulfate	mg/L	ND	1.0	0.50	02/02/22 03:33	

LABORATORY CONTROL SAMPLE: 3533819

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.5	99	90-110	
Fluoride	mg/L	2.5	2.4	96	90-110	
Sulfate	mg/L	50	48.4	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3533820 3533821

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92585058009 Result	Spike Conc.	Spike Conc.	MS Result						
Chloride	mg/L	2.4	50	50	56.3	53.9	108	103	90-110	4	10
Fluoride	mg/L	ND	2.5	2.5	2.5	2.4	101	96	90-110	5	10
Sulfate	mg/L	1.6	50	50	55.3	54.4	107	106	90-110	2	10

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch: 675484 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92585058019, 92585058020, 92585058021, 92585058022

METHOD BLANK: 3535178 Matrix: Water
Associated Lab Samples: 92585058019, 92585058020, 92585058021, 92585058022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/04/22 12:13	
Fluoride	mg/L	ND	0.10	0.050	02/04/22 12:13	
Sulfate	mg/L	ND	1.0	0.50	02/04/22 12:13	

LABORATORY CONTROL SAMPLE: 3535179

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.4	101	90-110	
Fluoride	mg/L	2.5	2.5	98	90-110	
Sulfate	mg/L	50	49.3	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3535180 3535181

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92585451002 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	65.5	50	50	50	101	102	71	74	90-110	1	10	M1
Fluoride	mg/L	0.46	2.5	2.5	2.5	2.9	2.9	97	97	90-110	0	10	
Sulfate	mg/L	122	50	50	50	169	170	94	96	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3535182 3535183

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92584785016 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	4.9	50	50	50	57.1	56.8	104	104	90-110	1	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	2.5	100	100	90-110	0	10	
Sulfate	mg/L	89.9	50	50	50	117	117	54	55	90-110	0	10	M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch: 676288	Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029

METHOD BLANK: 3539901 Matrix: Water
Associated Lab Samples: 92585058023, 92585058024, 92585058025, 92585058026, 92585058027, 92585058028, 92585058029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/06/22 17:16	
Fluoride	mg/L	ND	0.10	0.050	02/06/22 17:16	
Sulfate	mg/L	ND	1.0	0.50	02/06/22 17:16	

LABORATORY CONTROL SAMPLE: 3539902

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.2	104	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	50.9	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3539903 3539904

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92586144012	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	4.2	50	50	63.7	64.4	119	120	90-110	1	10	M1	
Fluoride	mg/L	ND	2.5	2.5	2.9	2.9	113	116	90-110	2	10	M1	
Sulfate	mg/L	3.0	50	50	62.0	62.7	118	119	90-110	1	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3539905 3539906

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92586259001	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	46.0	50	50	84.0	85.4	76	79	90-110	2	10	M1	
Fluoride	mg/L	9.9	2.5	2.5	11.5	10.9	64	38	90-110	6	10	M1	
Sulfate	mg/L	750	50	50	782	783	64	65	90-110	0	10	M1	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

QC Batch: 676332 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92585058030

METHOD BLANK: 3540061 Matrix: Water
Associated Lab Samples: 92585058030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/06/22 23:27	
Fluoride	mg/L	ND	0.10	0.050	02/06/22 23:27	
Sulfate	mg/L	ND	1.0	0.50	02/06/22 23:27	

LABORATORY CONTROL SAMPLE: 3540062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.3	95	90-110	
Fluoride	mg/L	2.5	2.3	92	90-110	
Sulfate	mg/L	50	45.8	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3540063 3540064

Parameter	Units	92585058030		3540063		3540064		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	ND	ND	50	50	48.9	49.4	98	99	90-110	1	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.3	2.3	92	93	90-110	1	10	
Sulfate	mg/L	ND	ND	50	50	48.2	48.7	96	97	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3540065 3540066

Parameter	Units	9258555010		3540065		3540066		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	4.8	4.8	50	50	55.6	55.1	102	101	90-110	1	10	
Fluoride	mg/L	ND	ND	2.5	2.5	2.5	2.5	100	100	90-110	0	10	
Sulfate	mg/L	1.2	1.2	50	50	51.6	51.1	101	100	90-110	1	10	

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QUALIFIERS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

BC The same analyte was detected in an associated blank at a concentration above 1/2 the reporting limit but below the laboratory reporting limit.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92585058001	GWA-38				
92585058002	GWA-52				
92585058003	GWA-54				
92585058005	GWA-36RA				
92585058006	GWA-37				
92585058007	GWA-51RZ				
92585058008	GWA-53				
92585058009	GWA-53R				
92585058010	GWA-55				
92585058011	GWA-56				
92585058015	GWC-18R				
92585058016	GWC-19R				
92585058017	GWC-20R				
92585058018	GWC-22R				
92585058019	GWC-25R				
92585058020	GWA-55R				
92585058023	GWC-16R				
92585058024	GWC-17R				
92585058025	GWC-18				
92585058026	GWC-21R				
92585058027	GWC-23R				
92585058028	GWC-24R				
92585058001	GWA-38	EPA 3010A	676146	EPA 6010D	676271
92585058002	GWA-52	EPA 3010A	676146	EPA 6010D	676271
92585058003	GWA-54	EPA 3010A	676146	EPA 6010D	676271
92585058004	FB-1	EPA 3010A	676146	EPA 6010D	676271
92585058005	GWA-36RA	EPA 3010A	676146	EPA 6010D	676271
92585058006	GWA-37	EPA 3010A	676146	EPA 6010D	676271
92585058007	GWA-51RZ	EPA 3010A	676146	EPA 6010D	676271
92585058008	GWA-53	EPA 3010A	676146	EPA 6010D	676271
92585058009	GWA-53R	EPA 3010A	676146	EPA 6010D	676271
92585058010	GWA-55	EPA 3010A	676146	EPA 6010D	676271
92585058011	GWA-56	EPA 3010A	676146	EPA 6010D	676271
92585058012	DUP-1	EPA 3010A	676146	EPA 6010D	676271
92585058013	FB-2	EPA 3010A	677117	EPA 6010D	677432
92585058014	EB-1	EPA 3010A	677117	EPA 6010D	677432
92585058015	GWC-18R	EPA 3010A	677117	EPA 6010D	677432
92585058016	GWC-19R	EPA 3010A	677117	EPA 6010D	677432
92585058017	GWC-20R	EPA 3010A	677117	EPA 6010D	677432
92585058018	GWC-22R	EPA 3010A	677117	EPA 6010D	677432
92585058019	GWC-25R	EPA 3010A	677117	EPA 6010D	677432
92585058020	GWA-55R	EPA 3010A	677117	EPA 6010D	677432
92585058021	DUP-2	EPA 3010A	677117	EPA 6010D	677432
92585058022	FB-3	EPA 3010A	677117	EPA 6010D	677432
92585058023	GWC-16R	EPA 3010A	677117	EPA 6010D	677432
92585058024	GWC-17R	EPA 3010A	677117	EPA 6010D	677432
92585058025	GWC-18	EPA 3010A	677117	EPA 6010D	677432
92585058026	GWC-21R	EPA 3010A	677117	EPA 6010D	677432

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92585058027	GWC-23R	EPA 3010A	677117	EPA 6010D	677432
92585058028	GWC-24R	EPA 3010A	677117	EPA 6010D	677432
92585058029	DUP-3	EPA 3010A	677117	EPA 6010D	677432
92585058030	FB-4	EPA 3010A	677117	EPA 6010D	677432
92585058001	GWA-38	EPA 3005A	677120	EPA 6020B	677422
92585058002	GWA-52	EPA 3005A	677120	EPA 6020B	677422
92585058003	GWA-54	EPA 3005A	677120	EPA 6020B	677422
92585058004	FB-1	EPA 3005A	677120	EPA 6020B	677422
92585058005	GWA-36RA	EPA 3005A	677120	EPA 6020B	677422
92585058006	GWA-37	EPA 3005A	677120	EPA 6020B	677422
92585058007	GWA-51RZ	EPA 3005A	677120	EPA 6020B	677422
92585058008	GWA-53	EPA 3005A	677120	EPA 6020B	677422
92585058009	GWA-53R	EPA 3005A	677120	EPA 6020B	677422
92585058010	GWA-55	EPA 3005A	677120	EPA 6020B	677422
92585058011	GWA-56	EPA 3005A	677120	EPA 6020B	677422
92585058012	DUP-1	EPA 3005A	677120	EPA 6020B	677422
92585058013	FB-2	EPA 3005A	677120	EPA 6020B	677422
92585058014	EB-1	EPA 3005A	677120	EPA 6020B	677422
92585058015	GWC-18R	EPA 3005A	677120	EPA 6020B	677422
92585058016	GWC-19R	EPA 3005A	677120	EPA 6020B	677422
92585058017	GWC-20R	EPA 3005A	677120	EPA 6020B	677422
92585058018	GWC-22R	EPA 3005A	677120	EPA 6020B	677422
92585058019	GWC-25R	EPA 3005A	677120	EPA 6020B	677422
92585058020	GWA-55R	EPA 3005A	677120	EPA 6020B	677422
92585058021	DUP-2	EPA 3005A	677647	EPA 6020B	677773
92585058022	FB-3	EPA 3005A	677647	EPA 6020B	677773
92585058023	GWC-16R	EPA 3005A	677647	EPA 6020B	677773
92585058024	GWC-17R	EPA 3005A	677647	EPA 6020B	677773
92585058025	GWC-18	EPA 3005A	677647	EPA 6020B	677773
92585058026	GWC-21R	EPA 3005A	677647	EPA 6020B	677773
92585058027	GWC-23R	EPA 3005A	677647	EPA 6020B	677773
92585058028	GWC-24R	EPA 3005A	677647	EPA 6020B	677773
92585058029	DUP-3	EPA 3005A	677647	EPA 6020B	677773
92585058030	FB-4	EPA 3005A	677647	EPA 6020B	677773
92585058001	GWA-38	EPA 7470A	676529	EPA 7470A	676769
92585058002	GWA-52	EPA 7470A	676529	EPA 7470A	676769
92585058003	GWA-54	EPA 7470A	676529	EPA 7470A	676769
92585058004	FB-1	EPA 7470A	676529	EPA 7470A	676769
92585058005	GWA-36RA	EPA 7470A	676529	EPA 7470A	676769
92585058006	GWA-37	EPA 7470A	676529	EPA 7470A	676769
92585058007	GWA-51RZ	EPA 7470A	676529	EPA 7470A	676769
92585058008	GWA-53	EPA 7470A	676529	EPA 7470A	676769
92585058009	GWA-53R	EPA 7470A	676529	EPA 7470A	676769
92585058010	GWA-55	EPA 7470A	676728	EPA 7470A	676959
92585058011	GWA-56	EPA 7470A	676728	EPA 7470A	676959
92585058012	DUP-1	EPA 7470A	676728	EPA 7470A	676959
92585058013	FB-2	EPA 7470A	676728	EPA 7470A	676959

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92585058

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92585058014	EB-1	EPA 7470A	676728	EPA 7470A	676959
92585058015	GWC-18R	EPA 7470A	676728	EPA 7470A	676959
92585058016	GWC-19R	EPA 7470A	676728	EPA 7470A	676959
92585058017	GWC-20R	EPA 7470A	676728	EPA 7470A	676959
92585058018	GWC-22R	EPA 7470A	676728	EPA 7470A	676959
92585058019	GWC-25R	EPA 7470A	676728	EPA 7470A	676959
92585058020	GWA-55R	EPA 7470A	676728	EPA 7470A	676959
92585058021	DUP-2	EPA 7470A	676728	EPA 7470A	676959
92585058022	FB-3	EPA 7470A	676728	EPA 7470A	676959
92585058023	GWC-16R	EPA 7470A	676728	EPA 7470A	676959
92585058024	GWC-17R	EPA 7470A	676728	EPA 7470A	676959
92585058025	GWC-18	EPA 7470A	676728	EPA 7470A	676959
92585058026	GWC-21R	EPA 7470A	676728	EPA 7470A	676959
92585058027	GWC-23R	EPA 7470A	676728	EPA 7470A	676959
92585058028	GWC-24R	EPA 7470A	676728	EPA 7470A	676959
92585058029	DUP-3	EPA 7470A	676728	EPA 7470A	676959
92585058030	FB-4	EPA 7470A	677024	EPA 7470A	677121
92585058001	GWA-38	SM 2540C-2015	675202		
92585058002	GWA-52	SM 2540C-2015	675202		
92585058003	GWA-54	SM 2540C-2015	675202		
92585058004	FB-1	SM 2540C-2015	675202		
92585058005	GWA-36RA	SM 2540C-2015	675522		
92585058006	GWA-37	SM 2540C-2015	675522		
92585058007	GWA-51RZ	SM 2540C-2015	675522		
92585058008	GWA-53	SM 2540C-2015	675522		
92585058009	GWA-53R	SM 2540C-2015	675522		
92585058010	GWA-55	SM 2540C-2015	675522		
92585058011	GWA-56	SM 2540C-2015	675522		
92585058012	DUP-1	SM 2540C-2015	675522		
92585058013	FB-2	SM 2540C-2015	675522		
92585058014	EB-1	SM 2540C-2015	675523		
92585058015	GWC-18R	SM 2540C-2015	675523		
92585058016	GWC-19R	SM 2540C-2015	675523		
92585058017	GWC-20R	SM 2540C-2015	675523		
92585058018	GWC-22R	SM 2540C-2015	675523		
92585058019	GWC-25R	SM 2540C-2015	675523		
92585058020	GWA-55R	SM 2540C-2015	675523		
92585058021	DUP-2	SM 2540C-2015	675523		
92585058022	FB-3	SM 2540C-2015	675523		
92585058023	GWC-16R	SM 2540C-2015	675783		
92585058024	GWC-17R	SM 2540C-2015	675783		
92585058025	GWC-18	SM 2540C-2015	675783		
92585058026	GWC-21R	SM 2540C-2015	675783		
92585058027	GWC-23R	SM 2540C-2015	675783		
92585058028	GWC-24R	SM 2540C-2015	675783		
92585058029	DUP-3	SM 2540C-2015	675783		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92585058030	FB-4	SM 2540C-2015	675783		
92585058001	GWA-38	SM 2320B	796924		
92585058002	GWA-52	SM 2320B	796924		
92585058003	GWA-54	SM 2320B	796924		
92585058004	FB-1	SM 2320B	796924		
92585058005	GWA-36RA	SM 2320B	797156		
92585058006	GWA-37	SM 2320B	797156		
92585058007	GWA-51RZ	SM 2320B	797156		
92585058008	GWA-53	SM 2320B	797156		
92585058009	GWA-53R	SM 2320B	797156		
92585058010	GWA-55	SM 2320B	797156		
92585058011	GWA-56	SM 2320B	797156		
92585058012	DUP-1	SM 2320B	797156		
92585058013	FB-2	SM 2320B	797156		
92585058014	EB-1	SM 2320B	797156		
92585058015	GWC-18R	SM 2320B	797193		
92585058016	GWC-19R	SM 2320B	797193		
92585058017	GWC-20R	SM 2320B	797193		
92585058018	GWC-22R	SM 2320B	797193		
92585058019	GWC-25R	SM 2320B	797193		
92585058020	GWA-55R	SM 2320B	797193		
92585058021	DUP-2	SM 2320B	797193		
92585058022	FB-3	SM 2320B	797193		
92585058023	GWC-16R	SM 2320B	797866		
92585058024	GWC-17R	SM 2320B	797866		
92585058025	GWC-18	SM 2320B	797866		
92585058026	GWC-21R	SM 2320B	797866		
92585058027	GWC-23R	SM 2320B	797866		
92585058028	GWC-24R	SM 2320B	797866		
92585058029	DUP-3	SM 2320B	797866		
92585058030	FB-4	SM 2320B	797866		
92585058001	GWA-38	EPA 300.0 Rev 2.1 1993	675177		
92585058002	GWA-52	EPA 300.0 Rev 2.1 1993	675177		
92585058003	GWA-54	EPA 300.0 Rev 2.1 1993	675177		
92585058004	FB-1	EPA 300.0 Rev 2.1 1993	675177		
92585058005	GWA-36RA	EPA 300.0 Rev 2.1 1993	675177		
92585058006	GWA-37	EPA 300.0 Rev 2.1 1993	675177		
92585058007	GWA-51RZ	EPA 300.0 Rev 2.1 1993	675177		
92585058008	GWA-53	EPA 300.0 Rev 2.1 1993	675177		
92585058009	GWA-53R	EPA 300.0 Rev 2.1 1993	675178		
92585058010	GWA-55	EPA 300.0 Rev 2.1 1993	675178		
92585058011	GWA-56	EPA 300.0 Rev 2.1 1993	675178		
92585058012	DUP-1	EPA 300.0 Rev 2.1 1993	675178		
92585058013	FB-2	EPA 300.0 Rev 2.1 1993	675178		
92585058014	EB-1	EPA 300.0 Rev 2.1 1993	675178		
92585058015	GWC-18R	EPA 300.0 Rev 2.1 1993	675178		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: BOWEN LF CELLS 3&4

Pace Project No.: 92585058

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92585058016	GWC-19R	EPA 300.0 Rev 2.1 1993	675178		
92585058017	GWC-20R	EPA 300.0 Rev 2.1 1993	675178		
92585058018	GWC-22R	EPA 300.0 Rev 2.1 1993	675178		
92585058019	GWC-25R	EPA 300.0 Rev 2.1 1993	675484		
92585058020	GWA-55R	EPA 300.0 Rev 2.1 1993	675484		
92585058021	DUP-2	EPA 300.0 Rev 2.1 1993	675484		
92585058022	FB-3	EPA 300.0 Rev 2.1 1993	675484		
92585058023	GWC-16R	EPA 300.0 Rev 2.1 1993	676288		
92585058024	GWC-17R	EPA 300.0 Rev 2.1 1993	676288		
92585058025	GWC-18	EPA 300.0 Rev 2.1 1993	676288		
92585058026	GWC-21R	EPA 300.0 Rev 2.1 1993	676288		
92585058027	GWC-23R	EPA 300.0 Rev 2.1 1993	676288		
92585058028	GWC-24R	EPA 300.0 Rev 2.1 1993	676288		
92585058029	DUP-3	EPA 300.0 Rev 2.1 1993	676288		
92585058030	FB-4	EPA 300.0 Rev 2.1 1993	676332		

REPORT OF LABORATORY ANALYSIS

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	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: November 15, 2021 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.08	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92585058



Courier: Commercial Fed Ex UPS USPS Client Pace Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *MS 1/29/22*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Guid ID: *214* Type of Ice: Wet Blue None

Cooler Temp:

5.0 Correction Factor: Add/Subtract (°C) *0.01*

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): *5.1*

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
Includes Date/Time/ID/Analysis Matrix: <i>WT</i>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: 1003 Weatherstone Parkway Woodstock, Ga 30188		Section B Required Project Information: Report To: Kristen Jurjko Copy To: Rhonda Quinn		Section C Invoice Information: Attention: Southern Co. Company Name: Address: POC Name: POC Project Reference: POC Project Message: POC Profile #: 2828	
Email To: Kevin.Stephenson@Resoluteenv.com Phone: (678)5489415 Fax: Requested Due Date/TAT: 10 Day		Purchase Order No.: Project Name: Plant Bowen Landfill Project Number:		Regulatory Agency: NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input type="checkbox"/> CER	
Requested Analysis Filtered (Y/N)		Site Location: GA STATE:		Temp in °C	

ITEM #	Valid Matrix Codes MATRIX CODE (see valid codes to left)	Valid Matrix Codes CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
			DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH				
1	GWA-36	GW															
2	GWA-36R	WT															
3	GWA-37	WV															
4	GWA-38	P															
5	GWA-38	SL															
6	GWA-38	OK															
7	GWA-38	WP															
8	GWA-38	OT															
9	GWA-19R	TSRSL															
10	GWA-20R																
11	GWA-21R																
12	GWA-22R																

Additional Comments: Site Metals includes Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Tl, V, Zn, Co

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
			<i>M. L. ...</i>	4/28	0930

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: SIGNATURE of SAMPLER:		DATE SIGNED (MM/DD/YYYY): TIME:	
Temp in °C		Received on Ice (Y/N)	
Custody Sealed Cooler (Y/N)		Samples Intact (Y/N)	

Important Note: By signing this form you are accepting FACE'S NET 30 day payment terms and agreeing to the charges of 1.5% per month for any invoice not paid within 30 days

F-ALL-Q-020rev 07-15-Feb-2007



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: 1003 Weatherstone Parkway Woodstock, Ga 30188	Section B Required Project Information: Report To: Kristen Juniko Copy To: Rhonda Quinn
Section C Invoice Information: Attention: Southern Co. Company Name: Address: P.O. Code: Reference: Project Name: Nicole D'oleo Manager: P.O. Code #: 2928	REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> Site Location: _____ STATE: GA

Section D Required Client Information: Name: (678)5489415 Fax: Email To: Kevin.Stephenson@Resoluteenv.com Project Name: Plant Bowen Landfill Project Number: Requested Due Date/TAT: 10 Day	Valid Matrix Codes <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>MATRIX CODE</th> <th>Valid Matrix Codes</th> </tr> <tr> <td>DRINKING WATER</td> <td>DW</td> </tr> <tr> <td>WASTE WATER</td> <td>WW</td> </tr> <tr> <td>WASTE WATER VAP</td> <td>WV</td> </tr> <tr> <td>PRODUCT</td> <td>P</td> </tr> <tr> <td>SOIL/SOLID</td> <td>SL</td> </tr> <tr> <td>CL</td> <td>CL</td> </tr> <tr> <td>WIFE</td> <td>WIF</td> </tr> <tr> <td>AR</td> <td>AR</td> </tr> <tr> <td>OTHER</td> <td>OT</td> </tr> <tr> <td>TISSUE</td> <td>TS</td> </tr> </table>	MATRIX CODE	Valid Matrix Codes	DRINKING WATER	DW	WASTE WATER	WW	WASTE WATER VAP	WV	PRODUCT	P	SOIL/SOLID	SL	CL	CL	WIFE	WIF	AR	AR	OTHER	OT	TISSUE	TS
MATRIX CODE	Valid Matrix Codes																						
DRINKING WATER	DW																						
WASTE WATER	WW																						
WASTE WATER VAP	WV																						
PRODUCT	P																						
SOIL/SOLID	SL																						
CL	CL																						
WIFE	WIF																						
AR	AR																						
OTHER	OT																						
TISSUE	TS																						

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Page Project No./ Lab I.D.	
			DATE	TIME	DATE			TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃					Methanol
1	GWS-23R						4												
2	GWS-24R						4												
3	GWC-25R																		
4	GWA-51RZ																		
5	GWA-52						4												
6	GWA-53						4												
7	GWA-56R																		
8	GWA-54						4												
9	GWA-55						4												
10	GWA-55R																		
11	GWA-58																		
12	GG-1																		

ADDITIONAL COMMENTS (6) Kwikats include Sr, As, Ba, Br, Cd, Ca, Cr, Cu, Pb, Ni, Se, Ti, V, Zn, Co	RELINQUISHED BY / AFFILIATION DATE: _____ TIME: _____ ACCEPTED BY / AFFILIATION: <i>AKC (PAC)</i> DATE: 11/27/09 TIME: 0930
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: _____ SIGNATURE of SAMPLER: _____	
Temp in °C _____ Received on Ice (Y/N) _____ Custody Sealed Cooler (Y/N) _____ Samples Intact (Y/N) _____	



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information
Section B Required Project Information
Section C Invoice Information

Company: GA Power
 Address: 1003 Weatherstone Parkway, Woodstock, Ga 30188
 Report To: Kristen Juritko
 Copy To: Rhonda Quinn
 Purchase Order No.:
 Project Name: Plant Bowen Landfill
 Project Number:
 Company Name: Southern Co.
 Attention: Southern Co.
 Address:
 POC Name: Nicole Dolco
 POC Title: Project Manager
 POC Phone #: 2928
 POC Email:
 POC Address:
 POC State: GA

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location: STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED				SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME	DATE	TIME							
1	---BUP-1---													
2	---BUP-2---													
3	---BUP-3---													
4	FBL-1			1/28/12	12:18			4	3	1				
5	---EGBL---													
6	---FBL---													
7	---EGBL---													
8	---FBL---													
9														
10														
11														
12														

REINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
			ALL	1/28	0930	Temp in °C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)

ADDITIONAL COMMENTS
 All Metals include Sn, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Tl, V, Zn, Co

SAMPLER NAME AND SIGNATURE
 PRINT NAME OF SAMPLER: *Rhonda Quinn*
 SIGNATURE OF SAMPLER: *Rhonda Quinn*
 DATE SIGNED (MM/DD/YY): 1/28/12



CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 1 of 3

Section A Required Client Information Company: GA Power Address: 1003 Weatherstone Parkway Woodstock, Ga 30188		Section B Required Project Information Report To: Kristen Jurinko Copy To: Rhonda Quinn		Section C Invoice Information: Attention: Southern Co. Company Name: Address: Pace Client Reference: Pace Project Manager: Pace Profile #: 2928	
Email To: Kevin.Stephenson@Resoluteenv.com Phone: (678)5489415 Fax: Requested Due Date/TAT: 10 day		Purchase Order No.: Project Name: Plant Bowen Landfill Project Number:		REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> Site Location: GA STATE:	

ITEM #	Section B Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME	DATE			TIME	DATE	TIME	DATE	TIME	DATE				
1	-GWA-99-																	
2	GWA-36RA			6/14/12	10:25			43	1								7.01	
3	GWA-37			6/14/12	13:10			43	1								4.69	
4	-GWA-99-																	
5	-GWA-46R-																	
6	-GWA-47R-																	
7	-GWA-48R-																	
8	-GWA-19R-																	
9	-GWA-19R-																	
10	-GWA-20R-																	
11	-GWA-21R-																	
12	-GWA-22R-																	

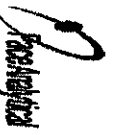
ADDITIONAL COMMENTS: Materials include Sn, As, Ba, Be, Cd, Cr, Cu, Pb, Pt, Se, Tl, V, Zn, Co

RELINQUISHED BY / AFFILIATION: [Signature] DATE: 1/28/12 TIME: 0930

ACCEPTED BY / AFFILIATION: [Signature] DATE: 1/28/12 TIME: 0930

SAMPLER NAME AND SIGNATURE: [Signature] PRINT Name of SAMPLER: [Name] SIGNATURE of SAMPLER: [Signature] DATE Signed (MM/DD/YY): 1/24/12

Temp in °C: Received on Ice (Y/N): Custody Sealed Cooler (Y/N): Samples Intact (Y/N):



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information

Company: GA Power
Address: 1003 Weatherstone Parkway
Woodstock, Ga 30188

Section B Required Project Information

Report To: Kristen Jurinco
Copy To: Rhonda Quinn

Section C Invoice Information

Attention: Southern Co.
Company Name: Southern Co.
Address:

Mail To: Kevin.Stephenson@Resoulsenv.com
Phone: (678)5489415
Requested Due Date/TIME: 18 Day

Purchase Order No.:
Project Name: Plant Bowen Landfill
Project Number:

Invoice Reference:
Sales Project: Nicole Doleo
Manager:
Sales Order #: 2928

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Site Location
STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DAMPENING WATER DW WASTEWATER WW WASTE WATER WWT PRODUCT F SOIL/SOILS S CE C WPE WPE AIR AIR OTHER AIR TISSUE OT TS TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test				Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Page Project No./Lab I.D.			
											Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Y	N	Metals + State Metals				Cl, F, SO4	Total/Carb/Bicarb Alk	TDS
1	GWG-29R																										
2	GWC-24R																										
3	GWC-25R																										
4	GWA-51RZ				03/06/14	12:45																					
5	GWA-52				03/06/14	11:45																					
6	GWA-53				03/06/14	11:45																					
7	GWA-53R				03/06/14	11:45																					
8	GWA-54				03/06/14	11:45																					
9	GWA-55				03/06/14	11:30																					
10	GWA-55R				03/06/14	11:30																					
11	GWA-56				03/06/14	11:01																					
12	SS-1																										

ADDITIONAL COMMENTS: Metals include Sb, As, Ba, Be, Cd, Ce, Cr, Cu, Pb, Ni, Se, V, Zn, Co

RELINQUISHED BY / AFFILIATION: [Signature] DATE: 11/29/09 TIME: 09:30

ACCEPTED BY / AFFILIATION: [Signature] DATE: 11/29/09 TIME: 09:30

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE: Robert M. Hall

PRINT Name of SAMPLER: Robert M. Hall

SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YY): 11/20/09

Page: 2 of 3

Page 105 of 112

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information:
 Company: GA Power

Section B Required Project Information:
 Report To: Kristen Juriniko

Section C Invoice Information:
 Attention: Southern Co.

Page: **3** of **3**

Address: 1003 Weatherstone Parkway
 Woodstock, Ga 30188

Copy To: Rhonda Quinn

Company Name: Pace Project

Address: Pace Project Manager

Reference: Nicole D'Onofrio

Project Number: 2928

Requested Date Data/TAT: 10 Day

Project Name: Plant Bowen Landfill

Project Number: 2928

Site Location: NPDES GROUND WATER DRINKING WATER

Other: UST RCRA OTHER

State: GA

Section D Requested Client Information	Valid Matrix Codes MATRIX CODE	CODE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test				Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.							
									Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other	Metals + State Metals	Cl, F, SO ₄	Total/Carb/Bicarb Alk				TDS						
	DUP-1							4																					
	DUP-2							3																					
	DUP-3							4																					
	FB-1							1																					
	FB-2							1																					
	FB-3							1																					

Section D Matrix Codes:
 DRINKING WATER DW
 WATER WT
 WASTE WATER WW
 PRODUCT P
 SOLID S
 OIL OL
 WIRE WP
 AIR AR
 OTHER OT
 TISSUE TS

MATRIX CODE (see valid codes to left)

SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
 COMPOSITE

DATE TIME DATE TIME

RELIQUISHED BY / AFFILIATION DATE TIME

ACCEPTED BY / AFFILIATION DATE TIME

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

ADDITIONAL COMMENTS:
 Metals include Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, V, Zn, Co

SAMPLER NAME AND SIGNATURE:
 PRINT Name of SAMPLER: *Edie Wall with Cal, Paula D...*
 SIGNATURE of SAMPLER: *Edie Wall*

DATE Signed (MM/DD/YY): *1/26/27*



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information:

Company: **GA Power**
 Address: **1003 Weatherstone Parkway
 Woodstock, Ga 30188**
 Email To: **Kevin.Stephenson@PaceAnalytical.com**
 Phone: **(678)5489415** Fax:
 Requested Due Date/TAT: **18 Day**

Section B
Required Project Information:

Report To: **Kristen Juriniko**
 Copy To: **Rhonda Quinn**
 Purchase Order No.:
 Project Name: **Plant Bowen Landfill**
 Project Number:

Section C
Invoice Information:

Attention: **Southern Co.**
 Company Name:
 Address:
 POC Name:
 POC Title:
 Reference:
 Project Manager:
 Pace Profile #: **2928**

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location: **GA**
 STATE:

Page: **1** of **3**

ITEM #	Section D Required Client Information	Vial Matrix Code MATRIX CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME							
1	-GWA-36-											
2	-GWA-36R-											
3	-GWA-37-											
4	-GWA-38-											
5	-GWA-16R-											
6	-GWA-17R-											
7	-GWA-18R-											
8	-GWA-19R-											
9	-GWA-19R											
10	-GWA-20R											
11	-GWA-21R											
12	-GWA-22R											

ADDITIONAL COMMENTS: **RELINQUISHED BY / AFFILIATION** DATE TIME **ACCEPTED BY / AFFILIATION** DATE TIME **SAMPLE CONDITIONS**

Temp in °C
 Received on Ice (Y/N)
 Custody Sealed Cooler (Y/N)
 Samples Intact (Y/N)

PRINT Name of SAMPLER: **Kevin Stephenson**
 SIGNATURE of SAMPLER: *[Signature]*
 DATE SIGNED (MM/DD/YYYY): **1/29/12**



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
 Required Client Information:
 Company: GA Power
 Address: 1003 Weatherstone Parkway
 Woodstock, Ga 30188
 Phone: (678)5489415
 Fax: [blank]
 E-mail: Kevin.Stephenson@Resoluteenv.com
 Project Name: Plant Bowen Landfill
 Project Number: [blank]

Section B
 Required Project Information:
 Report To: Kristen Jurinko
 Copy To: Rhonda Quinn
 Purchase Order No.: [blank]

Section C
 Invoice Information:
 Attention: Southern Co.
 Company Name: [blank]
 Address: [blank]
 Reference: [blank]
 Pace Project Manager: Nicole D'Orto
 Pace Profile #: 2928

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER CER
 Site Location: [blank] STATE: GA

Section D Required Client Information	Valid Matrix Codes MATRIX CODE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
								Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol				
GWC-25R	GWC-25R	11/28/12	12:30	11/28/12	09:40	4	3	1										
GWA-51RZ	GWA-51RZ	11/28/12	12:30	11/28/12	09:40	4	3	1										
GWA-53R	GWA-53R																	
GWA-54R	GWA-54R																	
GWA-55R	GWA-55R																	
GWA-56R	GWA-56R																	
GWA-58R	GWA-58R																	

ADDITIONAL COMMENTS: [blank]

RELINQUISHED BY / AFFILIATION: [blank] DATE: [blank] TIME: [blank]

ACCEPTED BY / AFFILIATION: [Signature] DATE: 11/28/12 TIME: 09:40

SAMPLER NAME AND SIGNATURE: [Signature]

PRINT Name of SAMPLER: [blank]

SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YYYY): 11/28/12

Temp in °C: [blank]

Received on Ice (Y/N): [blank]

Custody Sealed Cooler (Y/N): [blank]

Samples Intact (Y/N): [blank]



CHAIN-OF-CUSTODY / Analytical Request Document

Section A
 Required Client Information:
 Company: GA Power
 Address: 1003 Weatherstone Parkway
 Woodstock, Ga 30188
 Email To: Kevin.Stephenson@Resoluteenv.com
 Phone: (678)5469415
 Requested Due Date/Time: 18 Day

Section B
 Required Project Information:
 Report To: Kristen Jurincko
 Copy To: Rhonda Quinn
 Purchase Order No.:
 Project Name: Plant Bowen Landfill
 Project Number:

Section C
 Invoicing Information:
 Attention: Southern Co.
 Company Name:
 Address:
 State Code:
 Reference:
 Project Name: Nicole Doleo
 Manager:
 Page Profile #: 2978

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER CCR

Site Location: GA
 STATE: GA

Page: 3 of 3

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	CODE	COLLECTED		DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.			
				DATE	TIME							Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol						Other	Metals + State Metals	Cl, F, SO ₄
1	DUP-1										1															
2	DUP-2										1															
3	DUP-3										1															
4	FBL-3										1															
5	EGBL																									
6	FBL																									
7	EGBL																									
8	FBL																									
9	FBL																									
0																										
1																										
2																										

ADDITIONAL COMMENTS
 Metals include Sn, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, L, V, Zn, Co

RELINQUISHED BY / AFFILIATION: [Signature] DATE: 11/28/22 TIME: 0930

ACCEPTED BY / AFFILIATION: [Signature] DATE: 11/28/22 TIME: 0930

Temp in °C: _____

Received on Ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____


Samples Intact (Y/N): _____

SAMPLER NAME AND SIGNATURE: [Signature]

PRINT name of SAMPLER: [Name]

SIGNATURE of SAMPLER: [Signature]

DATE Signed (MM/DD/YYYY): 11/21/22

	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: November 15, 2021 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.08	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Got Power

Project #

WO# : 92585058

PM: NMG

Due Date: 02/11/22

CLIENT: GA-GA Power

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *2/9/22 CCH*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: *230* Type of Ice: Wet Blue None

Cooler Temp: *4.7*

Correction Factor: Add/Subtract (°C) *+0.2*
4.9

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): _____

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	<i>W</i>	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers: _____

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____

Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____

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

Section A Required Client Information
Company: GA Power
Address: 1003 Weatherstone Parkway Woodstock, Ga 30188

Section B Required Project Information
Report To: Kristen Jurinko
Copy To: Rhonda Quinn

Section C Analytical Information
Attention: Southern Co.
Company Name:
Address:
Phone: (878)5489415
Fax:
Project Name: Plant Bowen Landfill Cells 3 and 4
Purchase Order No.:
Requested Date Data/TAT: 10 Day
Project Number:
Pres. Quote Reference: Nicole D'Elia
Face Project Manager:
Face Profile #: 2928

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location: _____ STATE: GA

ITEM #	Section D Required Client Information	Value Matrix Codes MATRIX CODE DOCKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOLVENT S OIL O WIRE W AIR AR OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Requested Analysis Filtered (Y/N)		Residual Chlorine (Y/N)	
												COLLECTED	COMPONENTS		Analysis Test
1	GWVA-30									4					
2	GWVA-36R									3					
3	GWVA-37									3					
4	GWVA-88									3					
5	GWVA-16R									3					
6	GWVA-17R									3					
7	GWVA-18									3					
8	GWVA-18R									1					
9	GWVA-18R									1					
10	GWVA-20R									4					
11	GWVA-21R									3					
12	GWVA-22R									3					

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
William Leaker	2/1/22	0800	Arya Garner	2/1/22	0800	
Arya Garner Ryan William Pae	2/1/22	11:22	Kyan Villanave Darius Paul	2/1/22	1122	6.69

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Meredith Dacca / Kevin Stephenson / William Leaker / Rocco Wall
SIGNATURE OF SAMPLER: [Signatures]
DATE SIGNED (MM/DD/YY): 01/28/22

Temp in °C: _____
Received on Ice? (Y/N): _____
Custody Sealed Cooler (Y/N): _____
Samples Intact (Y/N): _____

Stephenson
 1/25/22

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: 1003 Weatherstone Parkway Woodstock, Ga 30188 Email To: Kevin.Stephenson@Resoluteenr.com Phone: (678)5489415 Requested Date Data/TAT: 10 Day		Section B Required Project Information: Report To: Kristien Jurmko Copy To: Rhonda Quinn Purchase Order No.: Project Name: Plant Bowen Landfill Project Number:		Section C Invoice Information: Address: Southern Co. Company Name: Address: Pica Quote Reference Manager: Pica Profile #: 2928	
REGULATORY AGENCY <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input checked="" type="checkbox"/> OTHER <input type="checkbox"/>		Site Location STATE: <u>GA</u>		Requested Analysis Filtered (Y/N)	

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP) DATE TIME DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other Analysis Test Metals + State Metals Cl, F, SO ₄ Total/Carb/Bicarb Alk TDS Residual Chlorine (Y/N)	Section E Valid Matrix Codes MATRIX CODE (see valid codes to left) SAMPLE TYPE (G=GRAB C=COMP) DATE TIME DATE TIME SAMPLE TEMP AT COLLECTION # OF CONTAINERS Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other Analysis Test Metals + State Metals Cl, F, SO ₄ Total/Carb/Bicarb Alk TDS Residual Chlorine (Y/N)	COLLECTED		ACCEPTED BY / AFFILIATION		SAMPLER NAME AND SIGNATURE													
			DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME										
1	GWC-23R SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	WTG 1/26/22 1107																		
2	GWC-24R	WTG 1/28/22 1035																		
3	GWC-25R																			
4	GWA-540Z																			
5	GWA-59																			
6	GWC-33																			
7	GWA-89R																			
8	GWA-54																			
9	GWA-54																			
10	GWA-54																			
11	GWA-80																			
12	GWA-80																			

Additional Comments: William Labeer

Relinquished by / Affiliation: Atoya Garner

Accepted by / Affiliation: Bryan Williams / Pace

Signature of Sampler: *William Labeer* / *Atoya Garner*

Date Signed (MM/DD/YYYY): 01/28/22

Temp in °C: _____

Received on Ice (Y/N): _____

Custody Sealed Cooler (Y/N): _____

Samples Intact (Y/N): _____

Project No./Lab ID: Pace Project No./Lab ID.

Handwritten signature

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
 Required Client Information:
 Company: GA Power
 Address: 1003 Weatherstone Parkway
 Woodstock, Ga 30188

Section B
 Required Project Information:
 Report To: Kristen Jurinko
 Copy To: Rhonda Quinn

Section C
 Invoice Information:
 Attention: Southern Co.
 Company Name:
 Address:
 Phone: (678)5489415 Fax:
 Project Name: Plant Bowen Landfill
 Requested Due Date/TIME: 10 Day

Section D
 Purchase Order No.:
 Project Number:
 Project Name: Plant Bowen Landfill
 Cells 3 and 4
 Price Quote Reference: Nicole D'oleo
 Price Project Manager:
 Price Point #: 2928

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location: GA STATE: GA

Page: 3 of 3

ITEM #	Section D Required Client Information	Valid Matrix Codes MATERIAL CODE UNPRESERVED WATER DW WASTE WATER WW PRODUCT P SOLUBLE SOL OIL OIL METALS M OTHER OT TSSIDE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.		
					DATE	TIME								DATE	TIME
1															
2															
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															

ADDITIONAL COMMENTS
 No Metals include Sr, Ar, Ba, Be, Cd, Ca, Cr, Cu, Pb, Ni, Se, Tl, V, Zn, Co

REMOVED BY / AFFILIATION
 William Loaker
 Atoya Garner
 Ryan Williams / Pace

DATE
 2/1/22
 2/1/22
 2/1/22

TIME
 0800
 11:22
 1200

ACCEPTED BY / AFFILIATION
 Atoya Garner
 Ryan Williams / Pace
 Rhonda Quinn

DATE
 2/1/22
 2/1/22
 2/1/22

TIME
 0800
 1122
 700

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Meredith Doncan/Kevin Stephenson/William Loaker/Robert Hill
 SIGNATURE of SAMPLER: *Handwritten signatures*

DATE signed (MM/DD/YY)
 01/28/22

Temp in °C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

February 17, 2022

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between February 01, 2022 and February 04, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Minneapolis

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Michelle Barker, WOOD E&I
Anna Bottum, ERM
Andrea Brazell, ERM
Kristen Jurinko
Ms. Lauren Petty, Southern Company
Rhonda Quinn, WOOD E&I
Lacy Smith, ERM
Caitlin Tillema, ERM
Christine Weaver, ERM

Greg Wrenn, WOOD E&I



REPORT OF LABORATORY ANALYSIS

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

CERTIFICATIONS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064

Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
Please Note: Applicable air certifications are denoted with an asterisk ().

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006
9800 Kinney Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812
North Carolina Certification #: 381

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Pace Analytical Services Peachtree Corners
South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92585555001	GWA-39Z	Water	01/31/22 13:50	02/01/22 11:22
92585555002	GWA-40	Water	01/31/22 14:25	02/01/22 11:22
92585555003	GWA-41	Water	01/31/22 12:55	02/01/22 11:22
92585555004	GWA-41R	Water	01/31/22 10:45	02/01/22 11:22
92585555005	GWA-42	Water	01/31/22 14:48	02/01/22 11:22
92585555006	GWA-43	Water	01/31/22 13:15	02/01/22 11:22
92585555007	GWA-43R	Water	01/31/22 12:05	02/01/22 11:22
92585555008	GWC-44	Water	01/31/22 15:30	02/01/22 11:22
92585555009	GWC-46R	Water	01/31/22 15:30	02/01/22 11:22
92585555010	GWC-48	Water	01/31/22 16:14	02/01/22 11:22
92585555011	DUP-1	Water	01/31/22 00:00	02/01/22 11:22
92585555012	FB-1	Water	01/31/22 15:50	02/01/22 11:22
92585555013	GWC-45	Water	02/01/22 12:55	02/04/22 11:45
92585555014	GWC-45R	Water	02/01/22 10:30	02/04/22 11:45
92585555015	GWC-47	Water	02/01/22 12:03	02/04/22 11:45
92585555016	GWC-47R	Water	02/01/22 10:40	02/04/22 11:45
92585555017	GWC-49Z	Water	02/01/22 12:23	02/04/22 11:45
92585555018	GWC-49R	Water	02/01/22 10:34	02/04/22 11:45
92585555019	DUP-2	Water	02/01/22 00:00	02/04/22 11:45
92585555020	FB-2	Water	02/01/22 15:45	02/04/22 11:45
92585555021	GWA-39RZ	Water	02/02/22 10:16	02/04/22 11:45
92585555022	FB-3	Water	02/02/22 16:04	02/04/22 11:45
92585555023	EB-1	Water	02/02/22 16:08	02/04/22 11:45

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92585555001	GWA-39Z	EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
92585555002	GWA-40	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92585555003	GWA-41	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
92585555004	GWA-41R	SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
92585555005	GWA-42	EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
92585555006	GWA-43	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92585555007	GWA-43R	EPA 6010D	KH	5	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
9258555008	GWC-44	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
9258555009	GWC-46R	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
9258555010	GWC-48	SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
9258555011	DUP-1	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
9258555012	FB-1	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
9258555013	GWC-45	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
9258555014	GWC-45R	EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
9258555015	GWC-47	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
9258555016	GWC-47R	EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
9258555017	GWC-49Z	EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
9258555018	GWC-49R	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
9258555019	DUP-2	EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92585555020	FB-2	SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
92585555021	GWA-39RZ	EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
92585555022	FB-3	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
92585555023	EB-1	SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M

PASI-A = Pace Analytical Services - Asheville
PASI-C = Pace Analytical Services - Charlotte
PASI-GA = Pace Analytical Services - Peachtree Corners, GA
PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
9258555001	GWA-39Z					
	Performed by	CUSTOME			02/06/22 11:28	
		R				
	pH	6.41	Std. Units		02/06/22 11:28	
EPA 6010D	Potassium	1.3	mg/L	0.20	02/14/22 14:43	
EPA 6010D	Sodium	2.4	mg/L	1.0	02/14/22 14:43	
EPA 6010D	Calcium	12.7	mg/L	1.0	02/14/22 14:43	
EPA 6010D	Magnesium	7.0	mg/L	0.050	02/14/22 14:43	
EPA 6020B	Arsenic	0.0021J	mg/L	0.0050	02/12/22 15:55	
EPA 6020B	Barium	0.013	mg/L	0.0050	02/12/22 15:55	
SM 2540C-2015	Total Dissolved Solids	61.0	mg/L	10.0	02/03/22 16:06	
SM 2320B	Alkalinity, Total as CaCO3	60.6	mg/L	5.0	02/08/22 22:40	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	60.6	mg/L	5.0	02/08/22 22:40	
EPA 300.0 Rev 2.1 1993	Chloride	1.0	mg/L	1.0	02/07/22 01:12	
EPA 300.0 Rev 2.1 1993	Sulfate	1.2	mg/L	1.0	02/07/22 01:12	
9258555002	GWA-40					
	Performed by	CUSTOME			02/06/22 11:29	
		R				
	pH	6.85	Std. Units		02/06/22 11:29	
EPA 6010D	Potassium	0.97	mg/L	0.20	02/14/22 14:48	
EPA 6010D	Sodium	1.4	mg/L	1.0	02/14/22 14:48	
EPA 6010D	Calcium	18.5	mg/L	1.0	02/14/22 14:48	M1
EPA 6010D	Magnesium	10.3	mg/L	0.050	02/14/22 14:48	M1
EPA 6020B	Antimony	0.0014J	mg/L	0.0030	02/12/22 16:19	
EPA 6020B	Barium	0.0081	mg/L	0.0050	02/12/22 16:19	
SM 2540C-2015	Total Dissolved Solids	81.0	mg/L	10.0	02/03/22 16:06	
SM 2320B	Alkalinity, Total as CaCO3	84.2	mg/L	5.0	02/08/22 22:44	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	84.2	mg/L	5.0	02/08/22 22:44	
EPA 300.0 Rev 2.1 1993	Chloride	0.71J	mg/L	1.0	02/07/22 01:27	
EPA 300.0 Rev 2.1 1993	Sulfate	1.2	mg/L	1.0	02/07/22 01:27	
9258555003	GWA-41					
	Performed by	CUSTOME			02/06/22 11:30	
		R				
	pH	6.02	Std. Units		02/06/22 11:30	
EPA 6010D	Potassium	0.56	mg/L	0.20	02/14/22 15:07	
EPA 6010D	Sodium	0.90J	mg/L	1.0	02/14/22 15:07	
EPA 6010D	Calcium	14.5	mg/L	1.0	02/14/22 15:07	
EPA 6010D	Magnesium	7.2	mg/L	0.050	02/14/22 15:07	
EPA 6020B	Barium	0.022	mg/L	0.0050	02/12/22 16:25	
SM 2540C-2015	Total Dissolved Solids	63.0	mg/L	10.0	02/03/22 16:07	
SM 2320B	Alkalinity, Total as CaCO3	66.1	mg/L	5.0	02/08/22 22:58	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	66.1	mg/L	5.0	02/08/22 22:58	
EPA 300.0 Rev 2.1 1993	Chloride	1.0	mg/L	1.0	02/07/22 01:42	
EPA 300.0 Rev 2.1 1993	Sulfate	1.8	mg/L	1.0	02/07/22 01:42	
9258555004	GWA-41R					
	Performed by	CUSTOME			02/06/22 11:30	
		R				
	pH	6.63	Std. Units		02/06/22 11:30	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
9258555004	GWA-41R					
EPA 6010D	Potassium	2.5	mg/L	0.20	02/14/22 15:23	
EPA 6010D	Calcium	39.3	mg/L	1.0	02/14/22 15:23	
EPA 6010D	Magnesium	20.1	mg/L	0.050	02/14/22 15:23	
EPA 6020B	Antimony	0.0011J	mg/L	0.0030	02/12/22 16:31	
EPA 6020B	Barium	0.031	mg/L	0.0050	02/12/22 16:31	
EPA 6020B	Boron	0.016J	mg/L	0.040	02/12/22 16:31	
EPA 6020B	Copper	0.0028J	mg/L	0.0050	02/12/22 16:31	
EPA 6020B	Nickel	0.00091J	mg/L	0.0050	02/12/22 16:31	
SM 2540C-2015	Total Dissolved Solids	184	mg/L	10.0	02/03/22 16:07	
SM 2320B	Alkalinity, Total as CaCO3	185	mg/L	5.0	02/08/22 23:02	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	185	mg/L	5.0	02/08/22 23:02	
EPA 300.0 Rev 2.1 1993	Chloride	1.0	mg/L	1.0	02/07/22 01:57	
EPA 300.0 Rev 2.1 1993	Sulfate	8.5	mg/L	1.0	02/07/22 01:57	
9258555005	GWA-42					
	Performed by	CUSTOMER			02/06/22 11:30	
	pH	7.17	Std. Units		02/06/22 11:30	
EPA 6010D	Potassium	0.26	mg/L	0.20	02/14/22 15:27	
EPA 6010D	Sodium	1.8	mg/L	1.0	02/14/22 15:27	
EPA 6010D	Calcium	37.3	mg/L	1.0	02/14/22 15:27	
EPA 6010D	Magnesium	15.2	mg/L	0.050	02/14/22 15:27	
EPA 6020B	Barium	0.0063	mg/L	0.0050	02/12/22 16:49	
EPA 6020B	Beryllium	0.00014J	mg/L	0.00050	02/12/22 16:49	
EPA 6020B	Cadmium	0.00018J	mg/L	0.00050	02/12/22 16:49	
EPA 6020B	Nickel	0.0011J	mg/L	0.0050	02/12/22 16:49	
SM 2540C-2015	Total Dissolved Solids	132	mg/L	10.0	02/03/22 16:07	
SM 2320B	Alkalinity, Total as CaCO3	142	mg/L	5.0	02/08/22 23:07	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	142	mg/L	5.0	02/08/22 23:07	
EPA 300.0 Rev 2.1 1993	Chloride	2.0	mg/L	1.0	02/07/22 02:12	
EPA 300.0 Rev 2.1 1993	Sulfate	1.1	mg/L	1.0	02/07/22 02:12	
9258555006	GWA-43					
	Performed by	CUSTOMER			02/06/22 11:31	
	pH	5.71	Std. Units		02/06/22 11:31	
EPA 6010D	Potassium	0.31	mg/L	0.20	02/14/22 15:32	
EPA 6010D	Sodium	1.2	mg/L	1.0	02/14/22 15:32	
EPA 6010D	Calcium	2.2	mg/L	1.0	02/14/22 15:32	
EPA 6010D	Magnesium	0.45	mg/L	0.050	02/14/22 15:32	
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	02/12/22 16:55	
EPA 6020B	Barium	0.014	mg/L	0.0050	02/12/22 16:55	
EPA 6020B	Copper	0.0014J	mg/L	0.0050	02/12/22 16:55	
EPA 6020B	Nickel	0.00077J	mg/L	0.0050	02/12/22 16:55	
SM 2540C-2015	Total Dissolved Solids	25.0	mg/L	10.0	02/03/22 16:07	
SM 2320B	Alkalinity, Total as CaCO3	6.4	mg/L	5.0	02/08/22 23:55	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	6.4	mg/L	5.0	02/08/22 23:55	
EPA 300.0 Rev 2.1 1993	Chloride	1.1	mg/L	1.0	02/07/22 02:27	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
9258555007	GWA-43R					
	Performed by	CUSTOME			02/06/22 11:31	
		R				
	pH	8.04	Std. Units		02/06/22 11:31	
EPA 6010D	Potassium	0.48	mg/L	0.20	02/14/22 15:37	
EPA 6010D	Sodium	1.2	mg/L	1.0	02/14/22 15:37	
EPA 6010D	Calcium	30.6	mg/L	1.0	02/14/22 15:37	
EPA 6010D	Magnesium	16.9	mg/L	0.050	02/14/22 15:37	
EPA 6020B	Barium	0.0076	mg/L	0.0050	02/12/22 17:01	
EPA 6020B	Boron	0.011J	mg/L	0.040	02/12/22 17:01	
EPA 6020B	Chromium	0.0011J	mg/L	0.0050	02/12/22 17:01	
SM 2540C-2015	Total Dissolved Solids	128	mg/L	10.0	02/03/22 16:07	
SM 2320B	Alkalinity, Total as CaCO3	140	mg/L	5.0	02/08/22 23:15	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	140	mg/L	5.0	02/08/22 23:15	
EPA 300.0 Rev 2.1 1993	Chloride	1.7	mg/L	1.0	02/07/22 02:42	
EPA 300.0 Rev 2.1 1993	Sulfate	2.5	mg/L	1.0	02/07/22 02:42	
9258555008	GWC-44					
	Performed by	CUSTOME			02/06/22 11:31	
		R				
	pH	4.78	Std. Units		02/06/22 11:31	
EPA 6010D	Potassium	1.5	mg/L	0.20	02/14/22 15:42	
EPA 6010D	Sodium	2.5	mg/L	1.0	02/14/22 15:42	
EPA 6010D	Calcium	11.2	mg/L	1.0	02/14/22 15:42	
EPA 6010D	Magnesium	2.0	mg/L	0.050	02/14/22 15:42	
EPA 6020B	Barium	0.047	mg/L	0.0050	02/12/22 17:07	
EPA 6020B	Beryllium	0.000065J	mg/L	0.00050	02/12/22 17:07	
EPA 6020B	Boron	0.015J	mg/L	0.040	02/12/22 17:07	
EPA 6020B	Cobalt	0.0017J	mg/L	0.0050	02/12/22 17:07	
EPA 6020B	Copper	0.00053J	mg/L	0.0050	02/12/22 17:07	
EPA 6020B	Selenium	0.0018J	mg/L	0.0050	02/12/22 17:07	
SM 2540C-2015	Total Dissolved Solids	63.0	mg/L	10.0	02/03/22 16:07	
EPA 300.0 Rev 2.1 1993	Chloride	4.2	mg/L	1.0	02/07/22 03:27	
EPA 300.0 Rev 2.1 1993	Sulfate	29.7	mg/L	1.0	02/07/22 03:27	
9258555009	GWC-46R					
	Performed by	CUSTOME			02/06/22 11:32	
		R				
	pH	7.48	Std. Units		02/06/22 11:32	
EPA 6010D	Potassium	1.6	mg/L	0.20	02/14/22 15:46	
EPA 6010D	Sodium	13.0	mg/L	1.0	02/14/22 15:46	
EPA 6010D	Calcium	39.9	mg/L	1.0	02/14/22 15:46	
EPA 6010D	Magnesium	22.0	mg/L	0.050	02/14/22 15:46	
EPA 6020B	Barium	0.011	mg/L	0.0050	02/12/22 17:13	
EPA 6020B	Chromium	0.0051	mg/L	0.0050	02/12/22 17:13	
SM 2540C-2015	Total Dissolved Solids	197	mg/L	10.0	02/03/22 16:07	
SM 2320B	Alkalinity, Total as CaCO3	212	mg/L	5.0	02/08/22 23:29	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	212	mg/L	5.0	02/08/22 23:29	
EPA 300.0 Rev 2.1 1993	Chloride	1.7	mg/L	1.0	02/07/22 03:42	
EPA 300.0 Rev 2.1 1993	Sulfate	5.2	mg/L	1.0	02/07/22 03:42	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
9258555010	GWC-48					
	Performed by	CUSTOME			02/06/22 11:32	
		R				
	pH	4.86	Std. Units		02/06/22 11:32	
EPA 6010D	Potassium	0.26	mg/L	0.20	02/14/22 15:51	
EPA 6010D	Sodium	4.2	mg/L	1.0	02/14/22 15:51	
EPA 6010D	Calcium	2.8	mg/L	1.0	02/14/22 15:51	
EPA 6010D	Magnesium	0.67	mg/L	0.050	02/14/22 15:51	
EPA 6020B	Barium	0.038	mg/L	0.0050	02/12/22 17:19	
EPA 6020B	Beryllium	0.00036J	mg/L	0.00050	02/12/22 17:19	
EPA 6020B	Cadmium	0.00020J	mg/L	0.00050	02/12/22 17:19	
EPA 6020B	Chromium	0.0020J	mg/L	0.0050	02/12/22 17:19	
EPA 6020B	Cobalt	0.0021J	mg/L	0.0050	02/12/22 17:19	
EPA 6020B	Nickel	0.0052	mg/L	0.0050	02/12/22 17:19	
EPA 7470A	Mercury	0.00039	mg/L	0.00020	02/09/22 17:33	
SM 2540C-2015	Total Dissolved Solids	31.0	mg/L	10.0	02/03/22 16:07	
SM 2320B	Alkalinity, Total as CaCO3	8.1	mg/L	5.0	02/09/22 14:48	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	8.1	mg/L	5.0	02/09/22 14:48	
EPA 300.0 Rev 2.1 1993	Chloride	4.8	mg/L	1.0	02/07/22 03:57	
EPA 300.0 Rev 2.1 1993	Sulfate	1.2	mg/L	1.0	02/07/22 03:57	
9258555011	DUP-1					
EPA 6010D	Potassium	2.7	mg/L	0.20	02/14/22 15:56	
EPA 6010D	Calcium	42.7	mg/L	1.0	02/14/22 15:56	
EPA 6010D	Magnesium	21.6	mg/L	0.050	02/14/22 15:56	
EPA 6020B	Arsenic	0.0012J	mg/L	0.0050	02/14/22 20:27	B
EPA 6020B	Barium	0.029	mg/L	0.0050	02/14/22 20:27	
EPA 6020B	Boron	0.020J	mg/L	0.040	02/14/22 20:27	
EPA 6020B	Copper	0.0028J	mg/L	0.0050	02/14/22 20:27	
EPA 6020B	Nickel	0.00095J	mg/L	0.0050	02/14/22 20:27	
SM 2540C-2015	Total Dissolved Solids	180	mg/L	10.0	02/03/22 16:08	
SM 2320B	Alkalinity, Total as CaCO3	188	mg/L	5.0	02/09/22 14:52	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	188	mg/L	5.0	02/09/22 14:52	
EPA 300.0 Rev 2.1 1993	Chloride	1.1	mg/L	1.0	02/07/22 04:42	
EPA 300.0 Rev 2.1 1993	Sulfate	8.5	mg/L	1.0	02/07/22 04:42	
9258555012	FB-1					
EPA 6020B	Antimony	0.0014J	mg/L	0.0030	02/14/22 20:50	
9258555013	GWC-45					
	Performed by	CUSTOME			02/07/22 10:38	
		R				
	pH	4.88	Std. Units		02/07/22 10:38	
EPA 6010D	Potassium	0.22	mg/L	0.20	02/14/22 16:34	
EPA 6010D	Sodium	1.6	mg/L	1.0	02/14/22 16:34	
EPA 6010D	Calcium	1.1	mg/L	1.0	02/14/22 16:34	
EPA 6010D	Magnesium	0.65	mg/L	0.050	02/14/22 16:34	
EPA 6020B	Antimony	0.0020J	mg/L	0.0030	02/14/22 21:50	
EPA 6020B	Barium	0.0072	mg/L	0.0050	02/14/22 21:50	
EPA 6020B	Boron	0.019J	mg/L	0.040	02/14/22 21:50	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
9258555013	GWC-45					
EPA 6020B	Cobalt	0.0013J	mg/L	0.0050	02/14/22 21:50	
EPA 6020B	Nickel	0.0011J	mg/L	0.0050	02/14/22 21:50	
SM 2540C-2015	Total Dissolved Solids	70.0	mg/L	10.0	02/07/22 16:44	
SM 2320B	Alkalinity, Total as CaCO3	2.7J	mg/L	5.0	02/09/22 22:15	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	2.7J	mg/L	5.0	02/09/22 22:15	
EPA 300.0 Rev 2.1 1993	Chloride	0.79J	mg/L	1.0	02/11/22 13:42	
9258555014	GWC-45R					
	Performed by	CUSTOME			02/07/22 10:38	
		R				
	pH	7.15	Std. Units		02/07/22 10:38	
EPA 6010D	Potassium	0.82	mg/L	0.20	02/14/22 16:39	
EPA 6010D	Sodium	1.5	mg/L	1.0	02/14/22 16:39	
EPA 6010D	Calcium	43.9	mg/L	1.0	02/14/22 16:39	
EPA 6010D	Magnesium	23.8	mg/L	0.050	02/14/22 16:39	
EPA 6020B	Barium	0.026	mg/L	0.0050	02/14/22 21:56	
EPA 6020B	Boron	0.022J	mg/L	0.040	02/14/22 21:56	
SM 2540C-2015	Total Dissolved Solids	201	mg/L	10.0	02/07/22 16:44	
SM 2320B	Alkalinity, Total as CaCO3	188	mg/L	5.0	02/09/22 21:08	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	188	mg/L	5.0	02/09/22 21:08	
EPA 300.0 Rev 2.1 1993	Chloride	4.3	mg/L	1.0	02/12/22 16:39	M1
EPA 300.0 Rev 2.1 1993	Sulfate	6.1	mg/L	1.0	02/12/22 16:39	M1
9258555015	GWC-47					
	Performed by	CUSTOME			02/07/22 10:38	
		R				
	pH	7.55	Std. Units		02/07/22 10:38	
EPA 6010D	Zinc	0.038	mg/L	0.020	02/14/22 16:44	
EPA 6010D	Potassium	0.55	mg/L	0.20	02/14/22 16:44	
EPA 6010D	Sodium	3.4	mg/L	1.0	02/14/22 16:44	
EPA 6010D	Calcium	21.3	mg/L	1.0	02/14/22 16:44	
EPA 6010D	Magnesium	12.0	mg/L	0.050	02/14/22 16:44	
EPA 6020B	Barium	0.0081	mg/L	0.0050	02/14/22 22:02	
EPA 6020B	Boron	0.011J	mg/L	0.040	02/14/22 22:02	
EPA 6020B	Cadmium	0.00014J	mg/L	0.00050	02/14/22 22:02	
EPA 6020B	Chromium	0.0015J	mg/L	0.0050	02/14/22 22:02	
SM 2540C-2015	Total Dissolved Solids	107	mg/L	10.0	02/07/22 16:45	
SM 2320B	Alkalinity, Total as CaCO3	100	mg/L	5.0	02/09/22 21:14	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	100	mg/L	5.0	02/09/22 21:14	
EPA 300.0 Rev 2.1 1993	Chloride	2.0	mg/L	1.0	02/12/22 17:21	
EPA 300.0 Rev 2.1 1993	Sulfate	4.3	mg/L	1.0	02/12/22 17:21	
9258555016	GWC-47R					
	Performed by	CUSTOME			02/07/22 10:38	
		R				
	pH	7.54	Std. Units		02/07/22 10:38	
EPA 6010D	Zinc	0.029	mg/L	0.020	02/14/22 22:17	
EPA 6010D	Potassium	1.7	mg/L	0.20	02/14/22 22:17	
EPA 6010D	Sodium	3.6	mg/L	1.0	02/14/22 22:17	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
9258555016	GWC-47R					
EPA 6010D	Calcium	29.4	mg/L	1.0	02/14/22 22:17	
EPA 6010D	Magnesium	14.6	mg/L	0.050	02/14/22 22:17	
EPA 6020B	Antimony	0.0024J	mg/L	0.0030	02/14/22 22:08	
EPA 6020B	Barium	0.0077	mg/L	0.0050	02/14/22 22:08	
EPA 6020B	Boron	0.010J	mg/L	0.040	02/14/22 22:08	
EPA 6020B	Chromium	0.0022J	mg/L	0.0050	02/14/22 22:08	
SM 2540C-2015	Total Dissolved Solids	157	mg/L	10.0	02/07/22 16:45	
SM 2320B	Alkalinity, Total as CaCO3	132	mg/L	5.0	02/09/22 21:18	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	132	mg/L	5.0	02/09/22 21:18	
EPA 300.0 Rev 2.1 1993	Chloride	2.3	mg/L	1.0	02/12/22 17:35	
EPA 300.0 Rev 2.1 1993	Sulfate	9.4	mg/L	1.0	02/12/22 17:35	
9258555017	GWC-49Z					
	Performed by	CUSTOME			02/07/22 10:39	
		R				
	pH	5.00	Std. Units		02/07/22 10:39	
EPA 6010D	Potassium	0.38	mg/L	0.20	02/14/22 22:22	
EPA 6010D	Sodium	2.5	mg/L	1.0	02/14/22 22:22	
EPA 6010D	Calcium	0.62J	mg/L	1.0	02/14/22 22:22	
EPA 6010D	Magnesium	0.29	mg/L	0.050	02/14/22 22:22	
EPA 6020B	Antimony	0.00097J	mg/L	0.0030	02/14/22 22:14	
EPA 6020B	Barium	0.0030J	mg/L	0.0050	02/14/22 22:14	
EPA 6020B	Boron	0.0087J	mg/L	0.040	02/14/22 22:14	
EPA 6020B	Cobalt	0.00066J	mg/L	0.0050	02/14/22 22:14	
EPA 6020B	Nickel	0.0014J	mg/L	0.0050	02/14/22 22:14	
SM 2540C-2015	Total Dissolved Solids	27.0	mg/L	10.0	02/07/22 16:45	
SM 2320B	Alkalinity, Total as CaCO3	3.4J	mg/L	5.0	02/09/22 22:18	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	3.4J	mg/L	5.0	02/09/22 22:18	
EPA 300.0 Rev 2.1 1993	Chloride	0.93J	mg/L	1.0	02/12/22 18:17	
EPA 300.0 Rev 2.1 1993	Sulfate	0.93J	mg/L	1.0	02/12/22 18:17	
9258555018	GWC-49R					
	Performed by	CUSTOME			02/07/22 10:39	
		R				
	pH	7.63	Std. Units		02/07/22 10:39	
EPA 6010D	Potassium	0.78	mg/L	0.20	02/14/22 22:27	
EPA 6010D	Sodium	2.3	mg/L	1.0	02/14/22 22:27	
EPA 6010D	Calcium	26.0	mg/L	1.0	02/14/22 22:27	
EPA 6010D	Magnesium	14.5	mg/L	0.050	02/14/22 22:27	
EPA 6020B	Barium	0.011	mg/L	0.0050	02/14/22 22:20	
SM 2540C-2015	Total Dissolved Solids	125	mg/L	10.0	02/07/22 16:45	
SM 2320B	Alkalinity, Total as CaCO3	121	mg/L	5.0	02/09/22 21:36	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	121	mg/L	5.0	02/09/22 21:36	
EPA 300.0 Rev 2.1 1993	Chloride	1.1	mg/L	1.0	02/12/22 18:31	
EPA 300.0 Rev 2.1 1993	Sulfate	2.5	mg/L	1.0	02/12/22 18:31	
9258555019	DUP-2					
EPA 6010D	Potassium	0.73	mg/L	0.20	02/14/22 22:32	
EPA 6010D	Sodium	1.3	mg/L	1.0	02/14/22 22:32	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
9258555019	DUP-2					
EPA 6010D	Calcium	38.8	mg/L	1.0	02/14/22 22:32	
EPA 6010D	Magnesium	21.2	mg/L	0.050	02/14/22 22:32	
EPA 6020B	Barium	0.026	mg/L	0.0050	02/14/22 22:38	
EPA 6020B	Boron	0.013J	mg/L	0.040	02/14/22 22:38	
SM 2540C-2015	Total Dissolved Solids	180	mg/L	10.0	02/07/22 17:20	
SM 2320B	Alkalinity, Total as CaCO ₃	190	mg/L	5.0	02/09/22 21:42	
SM 2320B	Alkalinity,Bicarbonate (CaCO ₃)	190	mg/L	5.0	02/09/22 21:42	
EPA 300.0 Rev 2.1 1993	Chloride	4.2	mg/L	1.0	02/12/22 18:45	
EPA 300.0 Rev 2.1 1993	Sulfate	6.1	mg/L	1.0	02/12/22 18:45	
9258555021	GWA-39RZ					
	Performed by	CUSTOME			02/07/22 10:39	
		R				
	pH	6.89	Std. Units		02/07/22 10:39	
EPA 6010D	Potassium	0.95	mg/L	0.20	02/14/22 22:41	
EPA 6010D	Sodium	1.4	mg/L	1.0	02/14/22 22:41	
EPA 6010D	Calcium	32.6	mg/L	1.0	02/14/22 22:41	
EPA 6010D	Magnesium	17.1	mg/L	0.050	02/14/22 22:41	
EPA 6020B	Barium	0.013	mg/L	0.0050	02/14/22 22:50	
EPA 6020B	Chromium	0.0012J	mg/L	0.0050	02/14/22 22:50	
SM 2540C-2015	Total Dissolved Solids	143	mg/L	10.0	02/08/22 11:12	
SM 2320B	Alkalinity, Total as CaCO ₃	146	mg/L	5.0	02/09/22 21:57	
SM 2320B	Alkalinity,Bicarbonate (CaCO ₃)	146	mg/L	5.0	02/09/22 21:57	
EPA 300.0 Rev 2.1 1993	Chloride	1.5	mg/L	1.0	02/12/22 19:12	
EPA 300.0 Rev 2.1 1993	Sulfate	4.5	mg/L	1.0	02/12/22 19:12	
9258555022	FB-3					
EPA 6020B	Chromium	0.0011J	mg/L	0.0050	02/14/22 23:02	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: GWA-39Z	Lab ID: 92585555001	Collected: 01/31/22 13:50	Received: 02/01/22 11:22	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/06/22 11:28		
pH	6.41	Std. Units			1		02/06/22 11:28		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 14:43	7440-66-6	
Potassium	1.3	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 14:43	7440-09-7	
Sodium	2.4	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 14:43	7440-23-5	
Calcium	12.7	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 14:43	7440-70-2	
Magnesium	7.0	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 14:43	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/12/22 08:26	02/12/22 15:55	7440-36-0	
Arsenic	0.0021J	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 15:55	7440-38-2	
Barium	0.013	mg/L	0.0050	0.00067	1	02/12/22 08:26	02/12/22 15:55	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/12/22 08:26	02/12/22 15:55	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/12/22 08:26	02/12/22 15:55	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/12/22 08:26	02/12/22 15:55	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 15:55	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/12/22 08:26	02/12/22 15:55	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/12/22 08:26	02/12/22 15:55	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/12/22 08:26	02/12/22 15:55	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/12/22 08:26	02/12/22 15:55	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/12/22 08:26	02/12/22 15:55	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/12/22 08:26	02/12/22 15:55	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/12/22 08:26	02/14/22 14:05	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/12/22 08:26	02/12/22 15:55	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 16:56	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	61.0	mg/L	10.0	10.0	1		02/03/22 16:06		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	60.6	mg/L	5.0	1.8	1		02/08/22 22:40		
Alkalinity,Bicarbonate (CaCO3)	60.6	mg/L	5.0	1.8	1		02/08/22 22:40		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 22:40		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWA-39Z **Lab ID: 92585555001** Collected: 01/31/22 13:50 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.0	mg/L	1.0	0.60	1		02/07/22 01:12	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 01:12	16984-48-8	
Sulfate	1.2	mg/L	1.0	0.50	1		02/07/22 01:12	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWA-40		Lab ID: 9258555002		Collected: 01/31/22 14:25		Received: 02/01/22 11:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/06/22 11:29		
pH	6.85	Std. Units			1		02/06/22 11:29		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 14:48	7440-66-6	
Potassium	0.97	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 14:48	7440-09-7	
Sodium	1.4	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 14:48	7440-23-5	
Calcium	18.5	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 14:48	7440-70-2	M1
Magnesium	10.3	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 14:48	7439-95-4	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0014J	mg/L	0.0030	0.00078	1	02/12/22 08:26	02/12/22 16:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 16:19	7440-38-2	
Barium	0.0081	mg/L	0.0050	0.00067	1	02/12/22 08:26	02/12/22 16:19	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/12/22 08:26	02/12/22 16:19	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/12/22 08:26	02/12/22 16:19	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/12/22 08:26	02/12/22 16:19	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 16:19	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/12/22 08:26	02/12/22 16:19	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/12/22 08:26	02/12/22 16:19	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/12/22 08:26	02/12/22 16:19	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/12/22 08:26	02/12/22 16:19	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/12/22 08:26	02/12/22 16:19	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/12/22 08:26	02/12/22 16:19	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/12/22 08:26	02/14/22 14:23	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/12/22 08:26	02/12/22 16:19	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:12	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	81.0	mg/L	10.0	10.0	1		02/03/22 16:06		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	84.2	mg/L	5.0	1.8	1		02/08/22 22:44		
Alkalinity,Bicarbonate (CaCO3)	84.2	mg/L	5.0	1.8	1		02/08/22 22:44		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 22:44		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWA-40 **Lab ID: 92585555002** Collected: 01/31/22 14:25 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.71J	mg/L	1.0	0.60	1		02/07/22 01:27	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 01:27	16984-48-8	
Sulfate	1.2	mg/L	1.0	0.50	1		02/07/22 01:27	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: GWA-41		Lab ID: 9258555003		Collected: 01/31/22 12:55		Received: 02/01/22 11:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/06/22 11:30		
pH	6.02	Std. Units			1		02/06/22 11:30		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 15:07	7440-66-6	
Potassium	0.56	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 15:07	7440-09-7	
Sodium	0.90J	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 15:07	7440-23-5	
Calcium	14.5	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 15:07	7440-70-2	
Magnesium	7.2	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 15:07	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/12/22 08:26	02/12/22 16:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 16:25	7440-38-2	
Barium	0.022	mg/L	0.0050	0.00067	1	02/12/22 08:26	02/12/22 16:25	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/12/22 08:26	02/12/22 16:25	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/12/22 08:26	02/12/22 16:25	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/12/22 08:26	02/12/22 16:25	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 16:25	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/12/22 08:26	02/12/22 16:25	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/12/22 08:26	02/12/22 16:25	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/12/22 08:26	02/12/22 16:25	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/12/22 08:26	02/12/22 16:25	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/12/22 08:26	02/12/22 16:25	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/12/22 08:26	02/12/22 16:25	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/12/22 08:26	02/14/22 14:29	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/12/22 08:26	02/12/22 16:25	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:15	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	63.0	mg/L	10.0	10.0	1		02/03/22 16:07		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	66.1	mg/L	5.0	1.8	1		02/08/22 22:58		
Alkalinity,Bicarbonate (CaCO3)	66.1	mg/L	5.0	1.8	1		02/08/22 22:58		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 22:58		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWA-41 **Lab ID: 92585555003** Collected: 01/31/22 12:55 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.0	mg/L	1.0	0.60	1		02/07/22 01:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 01:42	16984-48-8	
Sulfate	1.8	mg/L	1.0	0.50	1		02/07/22 01:42	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: GWA-41R		Lab ID: 9258555004		Collected: 01/31/22 10:45		Received: 02/01/22 11:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/06/22 11:30		
pH	6.63	Std. Units			1		02/06/22 11:30		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 15:23	7440-66-6	
Potassium	2.5	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 15:23	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 15:23	7440-23-5	
Calcium	39.3	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 15:23	7440-70-2	
Magnesium	20.1	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 15:23	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0011J	mg/L	0.0030	0.00078	1	02/12/22 08:26	02/12/22 16:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 16:31	7440-38-2	
Barium	0.031	mg/L	0.0050	0.00067	1	02/12/22 08:26	02/12/22 16:31	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/12/22 08:26	02/12/22 16:31	7440-41-7	
Boron	0.016J	mg/L	0.040	0.0086	1	02/12/22 08:26	02/12/22 16:31	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/12/22 08:26	02/12/22 16:31	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 16:31	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/12/22 08:26	02/12/22 16:31	7440-48-4	
Copper	0.0028J	mg/L	0.0050	0.00050	1	02/12/22 08:26	02/12/22 16:31	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/12/22 08:26	02/12/22 16:31	7439-92-1	
Nickel	0.00091J	mg/L	0.0050	0.00071	1	02/12/22 08:26	02/12/22 16:31	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/12/22 08:26	02/12/22 16:31	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/12/22 08:26	02/12/22 16:31	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/12/22 08:26	02/14/22 14:35	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/12/22 08:26	02/12/22 16:31	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:17	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	184	mg/L	10.0	10.0	1		02/03/22 16:07		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	185	mg/L	5.0	1.8	1		02/08/22 23:02		
Alkalinity,Bicarbonate (CaCO3)	185	mg/L	5.0	1.8	1		02/08/22 23:02		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 23:02		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWA-41R **Lab ID: 92585555004** Collected: 01/31/22 10:45 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.0	mg/L	1.0	0.60	1		02/07/22 01:57	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 01:57	16984-48-8	
Sulfate	8.5	mg/L	1.0	0.50	1		02/07/22 01:57	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWA-42		Lab ID: 9258555005		Collected: 01/31/22 14:48		Received: 02/01/22 11:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/06/22 11:30		
pH	7.17	Std. Units			1		02/06/22 11:30		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 15:27	7440-66-6	
Potassium	0.26	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 15:27	7440-09-7	
Sodium	1.8	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 15:27	7440-23-5	
Calcium	37.3	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 15:27	7440-70-2	
Magnesium	15.2	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 15:27	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/12/22 08:26	02/12/22 16:49	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 16:49	7440-38-2	
Barium	0.0063	mg/L	0.0050	0.00067	1	02/12/22 08:26	02/12/22 16:49	7440-39-3	
Beryllium	0.00014J	mg/L	0.00050	0.000054	1	02/12/22 08:26	02/12/22 16:49	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/12/22 08:26	02/12/22 16:49	7440-42-8	
Cadmium	0.00018J	mg/L	0.00050	0.00011	1	02/12/22 08:26	02/12/22 16:49	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 16:49	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/12/22 08:26	02/12/22 16:49	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/12/22 08:26	02/12/22 16:49	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/12/22 08:26	02/12/22 16:49	7439-92-1	
Nickel	0.0011J	mg/L	0.0050	0.00071	1	02/12/22 08:26	02/12/22 16:49	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/12/22 08:26	02/12/22 16:49	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/12/22 08:26	02/12/22 16:49	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/12/22 08:26	02/14/22 14:41	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/12/22 08:26	02/12/22 16:49	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:20	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	132	mg/L	10.0	10.0	1		02/03/22 16:07		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	142	mg/L	5.0	1.8	1		02/08/22 23:07		
Alkalinity,Bicarbonate (CaCO3)	142	mg/L	5.0	1.8	1		02/08/22 23:07		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 23:07		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWA-42 **Lab ID: 92585555005** Collected: 01/31/22 14:48 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.0	mg/L	1.0	0.60	1		02/07/22 02:12	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 02:12	16984-48-8	
Sulfate	1.1	mg/L	1.0	0.50	1		02/07/22 02:12	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: GWA-43		Lab ID: 9258555006		Collected: 01/31/22 13:15	Received: 02/01/22 11:22	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/06/22 11:31		
pH	5.71	Std. Units			1		02/06/22 11:31		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 15:32	7440-66-6	
Potassium	0.31	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 15:32	7440-09-7	
Sodium	1.2	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 15:32	7440-23-5	
Calcium	2.2	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 15:32	7440-70-2	
Magnesium	0.45	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 15:32	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/12/22 08:26	02/12/22 16:55	7440-36-0	
Arsenic	0.0013J	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 16:55	7440-38-2	
Barium	0.014	mg/L	0.0050	0.00067	1	02/12/22 08:26	02/12/22 16:55	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/12/22 08:26	02/12/22 16:55	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/12/22 08:26	02/12/22 16:55	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/12/22 08:26	02/12/22 16:55	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 16:55	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/12/22 08:26	02/12/22 16:55	7440-48-4	
Copper	0.0014J	mg/L	0.0050	0.00050	1	02/12/22 08:26	02/12/22 16:55	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/12/22 08:26	02/12/22 16:55	7439-92-1	
Nickel	0.00077J	mg/L	0.0050	0.00071	1	02/12/22 08:26	02/12/22 16:55	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/12/22 08:26	02/12/22 16:55	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/12/22 08:26	02/12/22 16:55	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/12/22 08:26	02/14/22 14:47	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/12/22 08:26	02/12/22 16:55	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:23	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	25.0	mg/L	10.0	10.0	1		02/03/22 16:07		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	6.4	mg/L	5.0	1.8	1		02/08/22 23:55		
Alkalinity,Bicarbonate (CaCO3)	6.4	mg/L	5.0	1.8	1		02/08/22 23:55		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 23:55		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWA-43 **Lab ID: 92585555006** Collected: 01/31/22 13:15 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.1	mg/L	1.0	0.60	1		02/07/22 02:27	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 02:27	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/07/22 02:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: GWA-43R		Lab ID: 9258555007		Collected: 01/31/22 12:05	Received: 02/01/22 11:22	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/06/22 11:31		
pH	8.04	Std. Units			1		02/06/22 11:31		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 15:37	7440-66-6	
Potassium	0.48	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 15:37	7440-09-7	
Sodium	1.2	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 15:37	7440-23-5	
Calcium	30.6	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 15:37	7440-70-2	
Magnesium	16.9	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 15:37	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/12/22 08:26	02/12/22 17:01	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 17:01	7440-38-2	
Barium	0.0076	mg/L	0.0050	0.00067	1	02/12/22 08:26	02/12/22 17:01	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/12/22 08:26	02/12/22 17:01	7440-41-7	
Boron	0.011J	mg/L	0.040	0.0086	1	02/12/22 08:26	02/12/22 17:01	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/12/22 08:26	02/12/22 17:01	7440-43-9	
Chromium	0.0011J	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 17:01	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/12/22 08:26	02/12/22 17:01	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/12/22 08:26	02/12/22 17:01	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/12/22 08:26	02/12/22 17:01	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/12/22 08:26	02/12/22 17:01	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/12/22 08:26	02/12/22 17:01	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/12/22 08:26	02/12/22 17:01	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/12/22 08:26	02/14/22 15:38	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/12/22 08:26	02/12/22 17:01	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:25	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	128	mg/L	10.0	10.0	1		02/03/22 16:07		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	140	mg/L	5.0	1.8	1		02/08/22 23:15		
Alkalinity,Bicarbonate (CaCO3)	140	mg/L	5.0	1.8	1		02/08/22 23:15		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 23:15		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWA-43R **Lab ID: 92585555007** Collected: 01/31/22 12:05 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.7	mg/L	1.0	0.60	1		02/07/22 02:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 02:42	16984-48-8	
Sulfate	2.5	mg/L	1.0	0.50	1		02/07/22 02:42	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-44		Lab ID: 9258555008		Collected: 01/31/22 15:30		Received: 02/01/22 11:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/06/22 11:31		
pH	4.78	Std. Units			1		02/06/22 11:31		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 15:42	7440-66-6	
Potassium	1.5	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 15:42	7440-09-7	
Sodium	2.5	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 15:42	7440-23-5	
Calcium	11.2	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 15:42	7440-70-2	
Magnesium	2.0	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 15:42	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/12/22 08:26	02/12/22 17:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 17:07	7440-38-2	
Barium	0.047	mg/L	0.0050	0.00067	1	02/12/22 08:26	02/12/22 17:07	7440-39-3	
Beryllium	0.000065J	mg/L	0.00050	0.000054	1	02/12/22 08:26	02/12/22 17:07	7440-41-7	
Boron	0.015J	mg/L	0.040	0.0086	1	02/12/22 08:26	02/12/22 17:07	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/12/22 08:26	02/12/22 17:07	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 17:07	7440-47-3	
Cobalt	0.0017J	mg/L	0.0050	0.00039	1	02/12/22 08:26	02/12/22 17:07	7440-48-4	
Copper	0.00053J	mg/L	0.0050	0.00050	1	02/12/22 08:26	02/12/22 17:07	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/12/22 08:26	02/12/22 17:07	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/12/22 08:26	02/12/22 17:07	7440-02-0	
Selenium	0.0018J	mg/L	0.0050	0.0014	1	02/12/22 08:26	02/12/22 17:07	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/12/22 08:26	02/12/22 17:07	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/12/22 08:26	02/14/22 15:44	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/12/22 08:26	02/12/22 17:07	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:28	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	63.0	mg/L	10.0	10.0	1		02/03/22 16:07		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/08/22 23:58		
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 23:58		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 23:58		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-44 **Lab ID: 92585555008** Collected: 01/31/22 15:30 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.2	mg/L	1.0	0.60	1		02/07/22 03:27	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 03:27	16984-48-8	
Sulfate	29.7	mg/L	1.0	0.50	1		02/07/22 03:27	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: GWC-46R		Lab ID: 9258555009		Collected: 01/31/22 15:30	Received: 02/01/22 11:22	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/06/22 11:32		
pH	7.48	Std. Units			1		02/06/22 11:32		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 15:46	7440-66-6	
Potassium	1.6	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 15:46	7440-09-7	
Sodium	13.0	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 15:46	7440-23-5	
Calcium	39.9	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 15:46	7440-70-2	
Magnesium	22.0	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 15:46	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/12/22 08:26	02/12/22 17:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 17:13	7440-38-2	
Barium	0.011	mg/L	0.0050	0.00067	1	02/12/22 08:26	02/12/22 17:13	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/12/22 08:26	02/12/22 17:13	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/12/22 08:26	02/12/22 17:13	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/12/22 08:26	02/12/22 17:13	7440-43-9	
Chromium	0.0051	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 17:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/12/22 08:26	02/12/22 17:13	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/12/22 08:26	02/12/22 17:13	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/12/22 08:26	02/12/22 17:13	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/12/22 08:26	02/12/22 17:13	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/12/22 08:26	02/12/22 17:13	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/12/22 08:26	02/12/22 17:13	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/12/22 08:26	02/14/22 15:50	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/12/22 08:26	02/12/22 17:13	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:31	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	197	mg/L	10.0	10.0	1		02/03/22 16:07		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	212	mg/L	5.0	1.8	1		02/08/22 23:29		
Alkalinity,Bicarbonate (CaCO3)	212	mg/L	5.0	1.8	1		02/08/22 23:29		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/08/22 23:29		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-46R **Lab ID: 92585555009** Collected: 01/31/22 15:30 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.7	mg/L	1.0	0.60	1		02/07/22 03:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 03:42	16984-48-8	
Sulfate	5.2	mg/L	1.0	0.50	1		02/07/22 03:42	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: GWC-48		Lab ID: 9258555010		Collected: 01/31/22 16:14		Received: 02/01/22 11:22		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/06/22 11:32		
pH	4.86	Std. Units			1		02/06/22 11:32		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 15:51	7440-66-6	
Potassium	0.26	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 15:51	7440-09-7	
Sodium	4.2	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 15:51	7440-23-5	
Calcium	2.8	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 15:51	7440-70-2	
Magnesium	0.67	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 15:51	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/12/22 08:26	02/12/22 17:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 17:19	7440-38-2	
Barium	0.038	mg/L	0.0050	0.00067	1	02/12/22 08:26	02/12/22 17:19	7440-39-3	
Beryllium	0.00036J	mg/L	0.00050	0.000054	1	02/12/22 08:26	02/12/22 17:19	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/12/22 08:26	02/12/22 17:19	7440-42-8	
Cadmium	0.00020J	mg/L	0.00050	0.00011	1	02/12/22 08:26	02/12/22 17:19	7440-43-9	
Chromium	0.0020J	mg/L	0.0050	0.0011	1	02/12/22 08:26	02/12/22 17:19	7440-47-3	
Cobalt	0.0021J	mg/L	0.0050	0.00039	1	02/12/22 08:26	02/12/22 17:19	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/12/22 08:26	02/12/22 17:19	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/12/22 08:26	02/12/22 17:19	7439-92-1	
Nickel	0.0052	mg/L	0.0050	0.00071	1	02/12/22 08:26	02/12/22 17:19	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/12/22 08:26	02/12/22 17:19	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/12/22 08:26	02/12/22 17:19	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/12/22 08:26	02/14/22 15:56	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/12/22 08:26	02/12/22 17:19	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.00039	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:33	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	31.0	mg/L	10.0	10.0	1		02/03/22 16:07		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	8.1	mg/L	5.0	1.8	1		02/09/22 14:48		
Alkalinity,Bicarbonate (CaCO3)	8.1	mg/L	5.0	1.8	1		02/09/22 14:48		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 14:48		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-48 **Lab ID: 9258555010** Collected: 01/31/22 16:14 Received: 02/01/22 11:22 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.8	mg/L	1.0	0.60	1		02/07/22 03:57	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 03:57	16984-48-8	
Sulfate	1.2	mg/L	1.0	0.50	1		02/07/22 03:57	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: DUP-1		Lab ID: 9258555011		Collected: 01/31/22 00:00	Received: 02/01/22 11:22	Matrix: Water			
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 15:56	7440-66-6	
Potassium	2.7	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 15:56	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 15:56	7440-23-5	
Calcium	42.7	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 15:56	7440-70-2	
Magnesium	21.6	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 15:56	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 20:27	7440-36-0	
Arsenic	0.0012J	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 20:27	7440-38-2	B
Barium	0.029	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 20:27	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 20:27	7440-41-7	
Boron	0.020J	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 20:27	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 20:27	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 20:27	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 20:27	7440-48-4	
Copper	0.0028J	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 20:27	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 20:27	7439-92-1	
Nickel	0.00095J	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 20:27	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 20:27	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 20:27	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 20:27	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/14/22 20:27	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:36	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	180	mg/L	10.0	10.0	1		02/03/22 16:08		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis							
Alkalinity, Total as CaCO3	188	mg/L	5.0	1.8	1		02/09/22 14:52		
Alkalinity,Bicarbonate (CaCO3)	188	mg/L	5.0	1.8	1		02/09/22 14:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 14:52		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	1.1	mg/L	1.0	0.60	1		02/07/22 04:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 04:42	16984-48-8	
Sulfate	8.5	mg/L	1.0	0.50	1		02/07/22 04:42	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: FB-1		Lab ID: 9258555012		Collected: 01/31/22 15:50		Received: 02/01/22 11:22		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 16:01	7440-66-6		
Potassium	ND	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 16:01	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 16:01	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 16:01	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 16:01	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	0.0014J	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 20:50	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 20:50	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 20:50	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 20:50	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 20:50	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 20:50	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 20:50	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 20:50	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 20:50	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 20:50	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 20:50	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 20:50	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 20:50	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 20:50	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/14/22 20:50	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:44	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/03/22 16:08			
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/09/22 14:58			
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 14:58			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 14:58			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		02/07/22 04:56	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		02/07/22 04:56	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		02/07/22 04:56	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: GWC-45	Lab ID: 92585555013	Collected: 02/01/22 12:55	Received: 02/04/22 11:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:38		
pH	4.88	Std. Units			1		02/07/22 10:38		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 16:34	7440-66-6	
Potassium	0.22	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 16:34	7440-09-7	
Sodium	1.6	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 16:34	7440-23-5	
Calcium	1.1	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 16:34	7440-70-2	
Magnesium	0.65	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 16:34	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0020J	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 21:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 21:50	7440-38-2	
Barium	0.0072	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 21:50	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 21:50	7440-41-7	
Boron	0.019J	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 21:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 21:50	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 21:50	7440-47-3	
Cobalt	0.0013J	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 21:50	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 21:50	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 21:50	7439-92-1	
Nickel	0.0011J	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 21:50	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 21:50	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 21:50	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 21:50	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/15/22 14:53	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:46	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	70.0	mg/L	10.0	10.0	1		02/07/22 16:44		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	2.7J	mg/L	5.0	1.8	1		02/09/22 22:15		
Alkalinity,Bicarbonate (CaCO3)	2.7J	mg/L	5.0	1.8	1		02/09/22 22:15		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 22:15		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-45 **Lab ID: 92585555013** Collected: 02/01/22 12:55 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.79J	mg/L	1.0	0.60	1		02/11/22 13:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/11/22 13:42	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/11/22 13:42	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: GWC-45R		Lab ID: 92585555014		Collected: 02/01/22 10:30	Received: 02/04/22 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:38		
pH	7.15	Std. Units			1		02/07/22 10:38		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 16:39	7440-66-6	
Potassium	0.82	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 16:39	7440-09-7	
Sodium	1.5	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 16:39	7440-23-5	
Calcium	43.9	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 16:39	7440-70-2	
Magnesium	23.8	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 16:39	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 21:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 21:56	7440-38-2	
Barium	0.026	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 21:56	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 21:56	7440-41-7	
Boron	0.022J	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 21:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 21:56	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 21:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 21:56	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 21:56	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 21:56	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 21:56	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 21:56	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 21:56	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 21:56	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/15/22 14:59	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:49	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	201	mg/L	10.0	10.0	1		02/07/22 16:44		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	188	mg/L	5.0	1.8	1		02/09/22 21:08		
Alkalinity,Bicarbonate (CaCO3)	188	mg/L	5.0	1.8	1		02/09/22 21:08		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 21:08		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-45R **Lab ID: 9258555014** Collected: 02/01/22 10:30 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.3	mg/L	1.0	0.60	1		02/12/22 16:39	16887-00-6	M1
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 16:39	16984-48-8	M1
Sulfate	6.1	mg/L	1.0	0.50	1		02/12/22 16:39	14808-79-8	M1

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: GWC-47		Lab ID: 9258555015		Collected: 02/01/22 12:03	Received: 02/04/22 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:38		
pH	7.55	Std. Units			1		02/07/22 10:38		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.038	mg/L	0.020	0.0085	1	02/14/22 09:41	02/14/22 16:44	7440-66-6	
Potassium	0.55	mg/L	0.20	0.15	1	02/14/22 09:41	02/14/22 16:44	7440-09-7	
Sodium	3.4	mg/L	1.0	0.58	1	02/14/22 09:41	02/14/22 16:44	7440-23-5	
Calcium	21.3	mg/L	1.0	0.12	1	02/14/22 09:41	02/14/22 16:44	7440-70-2	
Magnesium	12.0	mg/L	0.050	0.012	1	02/14/22 09:41	02/14/22 16:44	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 22:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:02	7440-38-2	
Barium	0.0081	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 22:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 22:02	7440-41-7	
Boron	0.011J	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 22:02	7440-42-8	
Cadmium	0.00014J	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 22:02	7440-43-9	
Chromium	0.0015J	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 22:02	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 22:02	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 22:02	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 22:02	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 22:02	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 22:02	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 22:02	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/15/22 15:05	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:52	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	107	mg/L	10.0	10.0	1		02/07/22 16:45		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	100	mg/L	5.0	1.8	1		02/09/22 21:14		
Alkalinity,Bicarbonate (CaCO3)	100	mg/L	5.0	1.8	1		02/09/22 21:14		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 21:14		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-47 **Lab ID: 9258555015** Collected: 02/01/22 12:03 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.0	mg/L	1.0	0.60	1		02/12/22 17:21	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 17:21	16984-48-8	
Sulfate	4.3	mg/L	1.0	0.50	1		02/12/22 17:21	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-47R		Lab ID: 9258555016		Collected: 02/01/22 10:40		Received: 02/04/22 11:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:38		
pH	7.54	Std. Units			1		02/07/22 10:38		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.029	mg/L	0.020	0.0085	1	02/14/22 13:18	02/14/22 22:17	7440-66-6	
Potassium	1.7	mg/L	0.20	0.15	1	02/14/22 13:18	02/14/22 22:17	7440-09-7	
Sodium	3.6	mg/L	1.0	0.58	1	02/14/22 13:18	02/14/22 22:17	7440-23-5	
Calcium	29.4	mg/L	1.0	0.12	1	02/14/22 13:18	02/14/22 22:17	7440-70-2	
Magnesium	14.6	mg/L	0.050	0.012	1	02/14/22 13:18	02/14/22 22:17	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0024J	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 22:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:08	7440-38-2	
Barium	0.0077	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 22:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 22:08	7440-41-7	
Boron	0.010J	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 22:08	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 22:08	7440-43-9	
Chromium	0.0022J	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:08	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 22:08	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 22:08	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 22:08	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 22:08	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 22:08	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 22:08	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 22:08	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/15/22 15:11	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:54	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	157	mg/L	10.0	10.0	1		02/07/22 16:45		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	132	mg/L	5.0	1.8	1		02/09/22 21:18		
Alkalinity,Bicarbonate (CaCO3)	132	mg/L	5.0	1.8	1		02/09/22 21:18		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 21:18		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-47R **Lab ID: 9258555016** Collected: 02/01/22 10:40 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.3	mg/L	1.0	0.60	1		02/12/22 17:35	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 17:35	16984-48-8	
Sulfate	9.4	mg/L	1.0	0.50	1		02/12/22 17:35	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-49Z		Lab ID: 9258555017		Collected: 02/01/22 12:23	Received: 02/04/22 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:39		
pH	5.00	Std. Units			1		02/07/22 10:39		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 13:18	02/14/22 22:22	7440-66-6	
Potassium	0.38	mg/L	0.20	0.15	1	02/14/22 13:18	02/14/22 22:22	7440-09-7	
Sodium	2.5	mg/L	1.0	0.58	1	02/14/22 13:18	02/14/22 22:22	7440-23-5	
Calcium	0.62J	mg/L	1.0	0.12	1	02/14/22 13:18	02/14/22 22:22	7440-70-2	
Magnesium	0.29	mg/L	0.050	0.012	1	02/14/22 13:18	02/14/22 22:22	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00097J	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 22:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:14	7440-38-2	
Barium	0.0030J	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 22:14	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 22:14	7440-41-7	
Boron	0.0087J	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 22:14	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 22:14	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:14	7440-47-3	
Cobalt	0.00066J	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 22:14	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 22:14	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 22:14	7439-92-1	
Nickel	0.0014J	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 22:14	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 22:14	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 22:14	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 22:14	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/15/22 15:17	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:57	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	27.0	mg/L	10.0	10.0	1		02/07/22 16:45		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	3.4J	mg/L	5.0	1.8	1		02/09/22 22:18		
Alkalinity,Bicarbonate (CaCO3)	3.4J	mg/L	5.0	1.8	1		02/09/22 22:18		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 22:18		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-49Z **Lab ID: 9258555017** Collected: 02/01/22 12:23 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.93J	mg/L	1.0	0.60	1		02/12/22 18:17	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 18:17	16984-48-8	
Sulfate	0.93J	mg/L	1.0	0.50	1		02/12/22 18:17	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-49R		Lab ID: 9258555018		Collected: 02/01/22 10:34		Received: 02/04/22 11:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:39		
pH	7.63	Std. Units			1		02/07/22 10:39		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 13:18	02/14/22 22:27	7440-66-6	
Potassium	0.78	mg/L	0.20	0.15	1	02/14/22 13:18	02/14/22 22:27	7440-09-7	
Sodium	2.3	mg/L	1.0	0.58	1	02/14/22 13:18	02/14/22 22:27	7440-23-5	
Calcium	26.0	mg/L	1.0	0.12	1	02/14/22 13:18	02/14/22 22:27	7440-70-2	
Magnesium	14.5	mg/L	0.050	0.012	1	02/14/22 13:18	02/14/22 22:27	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 22:20	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:20	7440-38-2	
Barium	0.011	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 22:20	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 22:20	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 22:20	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 22:20	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:20	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 22:20	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 22:20	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 22:20	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 22:20	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 22:20	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 22:20	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 22:20	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/15/22 15:23	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 17:59	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	125	mg/L	10.0	10.0	1		02/07/22 16:45		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	121	mg/L	5.0	1.8	1		02/09/22 21:36		
Alkalinity,Bicarbonate (CaCO3)	121	mg/L	5.0	1.8	1		02/09/22 21:36		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 21:36		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWC-49R **Lab ID: 9258555018** Collected: 02/01/22 10:34 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.1	mg/L	1.0	0.60	1		02/12/22 18:31	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 18:31	16984-48-8	
Sulfate	2.5	mg/L	1.0	0.50	1		02/12/22 18:31	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: DUP-2		Lab ID: 9258555019		Collected: 02/01/22 00:00	Received: 02/04/22 11:45	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 13:18	02/14/22 22:32	7440-66-6		
Potassium	0.73	mg/L	0.20	0.15	1	02/14/22 13:18	02/14/22 22:32	7440-09-7		
Sodium	1.3	mg/L	1.0	0.58	1	02/14/22 13:18	02/14/22 22:32	7440-23-5		
Calcium	38.8	mg/L	1.0	0.12	1	02/14/22 13:18	02/14/22 22:32	7440-70-2		
Magnesium	21.2	mg/L	0.050	0.012	1	02/14/22 13:18	02/14/22 22:32	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 22:38	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:38	7440-38-2		
Barium	0.026	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 22:38	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 22:38	7440-41-7		
Boron	0.013J	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 22:38	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 22:38	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:38	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 22:38	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 22:38	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 22:38	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 22:38	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 22:38	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 22:38	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 22:38	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/15/22 15:29	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 18:02	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	180	mg/L	10.0	10.0	1		02/07/22 17:20			
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO3	190	mg/L	5.0	1.8	1		02/09/22 21:42			
Alkalinity,Bicarbonate (CaCO3)	190	mg/L	5.0	1.8	1		02/09/22 21:42			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 21:42			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	4.2	mg/L	1.0	0.60	1		02/12/22 18:45	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 18:45	16984-48-8		
Sulfate	6.1	mg/L	1.0	0.50	1		02/12/22 18:45	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: FB-2		Lab ID: 9258555020		Collected: 02/01/22 15:45	Received: 02/04/22 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 13:18	02/14/22 22:36	7440-66-6	
Potassium	ND	mg/L	0.20	0.15	1	02/14/22 13:18	02/14/22 22:36	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	02/14/22 13:18	02/14/22 22:36	7440-23-5	
Calcium	ND	mg/L	1.0	0.12	1	02/14/22 13:18	02/14/22 22:36	7440-70-2	
Magnesium	ND	mg/L	0.050	0.012	1	02/14/22 13:18	02/14/22 22:36	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 22:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:44	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 22:44	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 22:44	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 22:44	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 22:44	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:44	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 22:44	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 22:44	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 22:44	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 22:44	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 22:44	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 22:44	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 22:44	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/15/22 15:35	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 12:00	02/09/22 18:05	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/07/22 17:20		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis							
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	1.8	1		02/09/22 21:48		
Alkalinity,Bicarbonate (CaCO ₃)	ND	mg/L	5.0	1.8	1		02/09/22 21:48		
Alkalinity,Carbonate (CaCO ₃)	ND	mg/L	5.0	1.8	1		02/09/22 21:48		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		02/12/22 18:59	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 18:59	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/12/22 18:59	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: GWA-39RZ	Lab ID: 9258555021	Collected: 02/02/22 10:16	Received: 02/04/22 11:45	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:39		
pH	6.89	Std. Units			1		02/07/22 10:39		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 13:18	02/14/22 22:41	7440-66-6	
Potassium	0.95	mg/L	0.20	0.15	1	02/14/22 13:18	02/14/22 22:41	7440-09-7	
Sodium	1.4	mg/L	1.0	0.58	1	02/14/22 13:18	02/14/22 22:41	7440-23-5	
Calcium	32.6	mg/L	1.0	0.12	1	02/14/22 13:18	02/14/22 22:41	7440-70-2	
Magnesium	17.1	mg/L	0.050	0.012	1	02/14/22 13:18	02/14/22 22:41	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 22:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:50	7440-38-2	
Barium	0.013	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 22:50	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 22:50	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 22:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 22:50	7440-43-9	
Chromium	0.0012J	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 22:50	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 22:50	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 22:50	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 22:50	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 22:50	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 22:50	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 22:50	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 22:50	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/15/22 16:04	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 13:30	02/09/22 19:21	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	143	mg/L	10.0	10.0	1		02/08/22 11:12		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	146	mg/L	5.0	1.8	1		02/09/22 21:57		
Alkalinity,Bicarbonate (CaCO3)	146	mg/L	5.0	1.8	1		02/09/22 21:57		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 21:57		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Sample: GWA-39RZ **Lab ID: 9258555021** Collected: 02/02/22 10:16 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.5	mg/L	1.0	0.60	1		02/12/22 19:12	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 19:12	16984-48-8	
Sulfate	4.5	mg/L	1.0	0.50	1		02/12/22 19:12	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: FB-3		Lab ID: 9258555022		Collected: 02/02/22 16:04	Received: 02/04/22 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 13:18	02/14/22 22:55	7440-66-6	
Potassium	ND	mg/L	0.20	0.15	1	02/14/22 13:18	02/14/22 22:55	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	02/14/22 13:18	02/14/22 22:55	7440-23-5	
Calcium	ND	mg/L	1.0	0.12	1	02/14/22 13:18	02/14/22 22:55	7440-70-2	
Magnesium	ND	mg/L	0.050	0.012	1	02/14/22 13:18	02/14/22 22:55	7439-95-4	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 23:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 23:02	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 23:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 23:02	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 23:02	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 23:02	7440-43-9	
Chromium	0.0011J	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 23:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 23:02	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 23:02	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 23:02	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 23:02	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 23:02	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 23:02	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 23:02	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/15/22 16:10	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 13:30	02/09/22 19:23	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/08/22 11:12		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis							
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/09/22 22:03		
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 22:03		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 22:03		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		02/12/22 19:26	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 19:26	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/12/22 19:26	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Sample: EB-1		Lab ID: 9258555023		Collected: 02/02/22 16:08	Received: 02/04/22 11:45	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	02/14/22 13:18	02/14/22 23:00	7440-66-6		
Potassium	ND	mg/L	0.20	0.15	1	02/14/22 13:18	02/14/22 23:00	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	02/14/22 13:18	02/14/22 23:00	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	02/14/22 13:18	02/14/22 23:00	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	02/14/22 13:18	02/14/22 23:00	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	02/14/22 08:52	02/14/22 23:08	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 23:08	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	02/14/22 08:52	02/14/22 23:08	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	02/14/22 08:52	02/14/22 23:08	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	02/14/22 08:52	02/14/22 23:08	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	02/14/22 08:52	02/14/22 23:08	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	02/14/22 08:52	02/14/22 23:08	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	02/14/22 08:52	02/14/22 23:08	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	02/14/22 08:52	02/14/22 23:08	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	02/14/22 08:52	02/14/22 23:08	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	02/14/22 08:52	02/14/22 23:08	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	02/14/22 08:52	02/14/22 23:08	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	02/14/22 08:52	02/14/22 23:08	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	02/14/22 08:52	02/14/22 23:08	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	02/14/22 08:52	02/15/22 16:16	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/09/22 13:30	02/09/22 19:26	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/08/22 11:12			
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/09/22 22:07			
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 22:07			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/09/22 22:07			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		02/12/22 19:40	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 19:40	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		02/12/22 19:40	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch:	678031	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012, 92585555013, 92585555014, 92585555015

METHOD BLANK: 3548482 Matrix: Water
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012, 92585555013, 92585555014, 92585555015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	02/14/22 14:33	
Magnesium	mg/L	ND	0.050	0.012	02/14/22 14:33	
Potassium	mg/L	ND	0.20	0.15	02/14/22 14:33	
Sodium	mg/L	ND	1.0	0.58	02/14/22 14:33	
Zinc	mg/L	ND	0.020	0.0085	02/14/22 14:33	

LABORATORY CONTROL SAMPLE: 3548483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Magnesium	mg/L	1	1.1	107	80-120	
Potassium	mg/L	1	0.98	98	80-120	
Sodium	mg/L	1	1.0	101	80-120	
Zinc	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548484 3548485

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result						
Calcium	mg/L	1	18.5	1	18.5	1	-16	75-125	1	20	M1
Magnesium	mg/L	1	10.3	1	10.9	62	52	75-125	1	20	M1
Potassium	mg/L	1	0.97	1	2.0	101	104	75-125	1	20	
Sodium	mg/L	1	1.4	1	2.4	101	99	75-125	1	20	
Zinc	mg/L	1	ND	1	1.0	104	104	75-125	0	20	

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

QC Batch:	678103	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

METHOD BLANK: 3548893 Matrix: Water

Associated Lab Samples: 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	02/14/22 20:41	
Magnesium	mg/L	ND	0.050	0.012	02/14/22 20:41	
Potassium	mg/L	ND	0.20	0.15	02/14/22 20:41	
Sodium	mg/L	ND	1.0	0.58	02/14/22 20:41	
Zinc	mg/L	ND	0.020	0.0085	02/14/22 20:41	

LABORATORY CONTROL SAMPLE: 3548894

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	0.92J	92	80-120	
Magnesium	mg/L	1	0.97	97	80-120	
Potassium	mg/L	1	0.94	94	80-120	
Sodium	mg/L	1	0.90J	90	80-120	
Zinc	mg/L	1	0.95	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548895 3548896

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92585920002 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	17.2	1	1	17.4	18.9	28	177	75-125	8	20 M1
Magnesium	mg/L	3.1	1	1	3.9	4.2	80	111	75-125	8	20
Potassium	mg/L	2.5	1	1	3.3	3.6	82	113	75-125	9	20
Sodium	mg/L	14.4	1	1	14.7	16.0	33	163	75-125	8	20 M1
Zinc	mg/L	ND	1	1	0.96	0.98	96	98	75-125	2	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch: 677804 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010

METHOD BLANK: 3547662 Matrix: Water
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	02/12/22 15:37	
Arsenic	mg/L	ND	0.0050	0.0011	02/12/22 15:37	
Barium	mg/L	ND	0.0050	0.00067	02/12/22 15:37	
Beryllium	mg/L	ND	0.00050	0.000054	02/12/22 15:37	
Boron	mg/L	ND	0.040	0.0086	02/12/22 15:37	
Cadmium	mg/L	ND	0.00050	0.00011	02/12/22 15:37	
Chromium	mg/L	ND	0.0050	0.0011	02/12/22 15:37	
Cobalt	mg/L	ND	0.0050	0.00039	02/12/22 15:37	
Copper	mg/L	ND	0.0050	0.00050	02/12/22 15:37	
Lead	mg/L	ND	0.0010	0.00089	02/12/22 15:37	
Nickel	mg/L	ND	0.0050	0.00071	02/12/22 15:37	
Selenium	mg/L	ND	0.0050	0.0014	02/12/22 15:37	
Silver	mg/L	ND	0.0050	0.00044	02/12/22 15:37	
Thallium	mg/L	ND	0.0010	0.00018	02/14/22 13:53	
Vanadium	mg/L	ND	0.010	0.0019	02/12/22 15:37	

LABORATORY CONTROL SAMPLE: 3547663

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	112	80-120	
Arsenic	mg/L	0.1	0.11	106	80-120	
Barium	mg/L	0.1	0.10	105	80-120	
Beryllium	mg/L	0.1	0.11	109	80-120	
Boron	mg/L	1	1.1	113	80-120	
Cadmium	mg/L	0.1	0.10	103	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.10	100	80-120	
Copper	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Nickel	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.10	103	80-120	
Silver	mg/L	0.1	0.11	107	80-120	
Thallium	mg/L	0.1	0.10	105	80-120	
Vanadium	mg/L	0.1	0.10	103	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Parameter	Units	92585555001		3547664		3547665		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MS Spike Conc.	MS Result	MSD Result	MS % Rec							
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	112	106	75-125	6	20			
Arsenic	mg/L	0.0021J	0.1	0.1	0.11	0.10	104	100	75-125	3	20			
Barium	mg/L	0.013	0.1	0.1	0.12	0.12	109	102	75-125	6	20			
Beryllium	mg/L	ND	0.1	0.1	0.11	0.11	111	109	75-125	2	20			
Boron	mg/L	ND	1	1	1.1	1.1	109	111	75-125	2	20			
Cadmium	mg/L	ND	0.1	0.1	0.10	0.094	101	94	75-125	7	20			
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	104	101	75-125	3	20			
Cobalt	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20			
Copper	mg/L	ND	0.1	0.1	0.10	0.097	101	97	75-125	4	20			
Lead	mg/L	ND	0.1	0.1	0.11	0.10	107	100	75-125	6	20			
Nickel	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	3	20			
Selenium	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	2	20			
Silver	mg/L	ND	0.1	0.1	0.11	0.10	108	103	75-125	5	20			
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	103	104	75-125	2	20			
Vanadium	mg/L	ND	0.1	0.1	0.11	0.10	105	102	75-125	4	20			

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch: 678016 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92585555011, 92585555012, 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

METHOD BLANK: 3548415 Matrix: Water
Associated Lab Samples: 92585555011, 92585555012, 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	02/14/22 20:15	
Arsenic	mg/L	0.0018J	0.0050	0.0011	02/14/22 20:15	
Barium	mg/L	ND	0.0050	0.00067	02/14/22 20:15	
Beryllium	mg/L	ND	0.00050	0.000054	02/14/22 20:15	
Boron	mg/L	ND	0.040	0.0086	02/14/22 20:15	
Cadmium	mg/L	ND	0.00050	0.00011	02/14/22 20:15	
Chromium	mg/L	ND	0.0050	0.0011	02/14/22 20:15	
Cobalt	mg/L	ND	0.0050	0.00039	02/14/22 20:15	
Copper	mg/L	ND	0.0050	0.00050	02/14/22 20:15	
Lead	mg/L	ND	0.0010	0.00089	02/14/22 20:15	
Nickel	mg/L	ND	0.0050	0.00071	02/14/22 20:15	
Selenium	mg/L	ND	0.0050	0.0014	02/14/22 20:15	
Silver	mg/L	ND	0.0050	0.00044	02/14/22 20:15	
Thallium	mg/L	ND	0.0010	0.00018	02/14/22 20:15	
Vanadium	mg/L	ND	0.010	0.0019	02/14/22 20:15	

LABORATORY CONTROL SAMPLE: 3548416

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	110	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.10	104	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	0.1	0.11	105	80-120	
Chromium	mg/L	0.1	0.10	101	80-120	
Cobalt	mg/L	0.1	0.095	95	80-120	
Copper	mg/L	0.1	0.094	94	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Nickel	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.098	98	80-120	
Silver	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.10	100	80-120	
Vanadium	mg/L	0.1	0.10	100	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Parameter	Units	3548417		3548418		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	107	111	75-125	3	20	
Arsenic	mg/L	0.0012J	0.1	0.1	0.10	0.10	99	99	75-125	0	20	
Barium	mg/L	0.029	0.1	0.1	0.14	0.15	112	117	75-125	4	20	
Beryllium	mg/L	ND	0.1	0.1	0.096	0.10	96	100	75-125	4	20	
Boron	mg/L	0.020J	1	1	0.97	1.0	95	98	75-125	4	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.11	102	105	75-125	3	20	
Chromium	mg/L	ND	0.1	0.1	0.099	0.10	98	99	75-125	1	20	
Cobalt	mg/L	ND	0.1	0.1	0.096	0.098	95	97	75-125	2	20	
Copper	mg/L	0.0028J	0.1	0.1	0.096	0.099	93	96	75-125	3	20	
Lead	mg/L	ND	0.1	0.1	0.097	0.10	97	100	75-125	3	20	
Nickel	mg/L	0.00095J	0.1	0.1	0.096	0.10	95	100	75-125	4	20	
Selenium	mg/L	ND	0.1	0.1	0.098	0.097	98	97	75-125	0	20	
Silver	mg/L	ND	0.1	0.1	0.098	0.10	98	101	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.097	0.10	97	100	75-125	3	20	
Vanadium	mg/L	ND	0.1	0.1	0.10	0.10	99	100	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch:	677026	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012, 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020

METHOD BLANK: 3543220 Matrix: Water

Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012, 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	02/09/22 16:51	

LABORATORY CONTROL SAMPLE: 3543221

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3543222 3543223

Parameter	Units	92585555001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0024	0.0024	96	95	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch: 677028 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92585555021, 92585555022, 92585555023

METHOD BLANK: 3543231 Matrix: Water
Associated Lab Samples: 92585555021, 92585555022, 92585555023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	02/09/22 18:07	

LABORATORY CONTROL SAMPLE: 3543232

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0022	87	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3543233 3543234

Parameter	Units	92585920002		3543234		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0020	0.0021	79	83	75-125	6	20

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch:	675815	Analysis Method:	SM 2540C-2015
QC Batch Method:	SM 2540C-2015	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012

METHOD BLANK: 3537021 Matrix: Water
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/03/22 16:05	

LABORATORY CONTROL SAMPLE: 3537022

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	377	94	80-120	

SAMPLE DUPLICATE: 3537023

Parameter	Units	92585881002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	62.0	62.0	0	25	

SAMPLE DUPLICATE: 3537024

Parameter	Units	92585555008 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	63.0	62.0	2	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch: 676438 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018

METHOD BLANK: 3540515 Matrix: Water
Associated Lab Samples: 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/07/22 16:40	

LABORATORY CONTROL SAMPLE: 3540516

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	375	94	80-120	

SAMPLE DUPLICATE: 3540517

Parameter	Units	92585561006 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	256	265	3	25	

SAMPLE DUPLICATE: 3540518

Parameter	Units	92586342009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	156	171	9	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch: 676439	Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585555019, 92585555020

METHOD BLANK: 3540519 Matrix: Water
Associated Lab Samples: 92585555019, 92585555020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/07/22 17:19	

LABORATORY CONTROL SAMPLE: 3540520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	374	94	80-120	

SAMPLE DUPLICATE: 3540521

Parameter	Units	92585555019 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	180	181	1	25	

SAMPLE DUPLICATE: 3540522

Parameter	Units	92585920011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	96.0	94.0	2	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

QC Batch:	676566	Analysis Method:	SM 2540C-2015
QC Batch Method:	SM 2540C-2015	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92585555021, 92585555022, 92585555023

METHOD BLANK: 3541419 Matrix: Water

Associated Lab Samples: 92585555021, 92585555022, 92585555023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/08/22 11:11	

LABORATORY CONTROL SAMPLE: 3541420

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	390	98	80-120	

SAMPLE DUPLICATE: 3541421

Parameter	Units	92585920025 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	65.0	46.0	34	25	D6

SAMPLE DUPLICATE: 3541422

Parameter	Units	92586436013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	102	103	1	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

QC Batch:	797866	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
		Laboratory:	Pace Analytical Services - Minneapolis

Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009

METHOD BLANK:	4239372	Matrix:	Water
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Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	02/08/22 21:36	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	02/08/22 21:36	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	02/08/22 21:36	

LABORATORY CONTROL SAMPLE & LCSD:		4239373		4239374							
Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers	
Alkalinity, Total as CaCO3	mg/L	40	41.8	41.3	104	103	90-110	1	20		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		4239375		4239376									
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		10596751001 Result	Spike Conc.	Spike Conc.									
Alkalinity, Total as CaCO3	mg/L	22.6	40	40	40	53.6	59.6	78	93	80-120	10	20	M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:		4239377		4239378									
Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92585555002 Result	Spike Conc.	Spike Conc.									
Alkalinity, Total as CaCO3	mg/L	84.2	40	40	40	121	124	92	100	80-120	2	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch: 798025 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 92585555010, 92585555011, 92585555012

METHOD BLANK: 4240244 Matrix: Water

Associated Lab Samples: 92585555010, 92585555011, 92585555012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	02/09/22 14:38	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	02/09/22 14:38	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	02/09/22 14:38	

LABORATORY CONTROL SAMPLE & LCSD: 4240245 4240246

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	41.9	41.9	105	105	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240247 4240248

Parameter	Units	92585555010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	8.1	40	40	50.3	51.8	106	109	80-120	3	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240249 4240250

Parameter	Units	10596970001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	21.0	40	40	60.5	60.8	99	99	80-120	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch: 798068 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

METHOD BLANK: 4240572 Matrix: Water
Associated Lab Samples: 92585555013, 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	02/09/22 16:51	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	02/09/22 16:51	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	02/09/22 16:51	

LABORATORY CONTROL SAMPLE & LCSD: 4240573 4240574

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.2	42.1	105	105	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240575 4240576

Parameter	Units	10596353002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	127	40	40	167	167	100	100	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240827 4240828

Parameter	Units	92585555016 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	132	40	40	172	171	100	97	80-120	1	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch:	676332	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012

METHOD BLANK: 3540061 Matrix: Water
Associated Lab Samples: 92585555001, 92585555002, 92585555003, 92585555004, 92585555005, 92585555006, 92585555007, 92585555008, 92585555009, 92585555010, 92585555011, 92585555012

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/06/22 23:27	
Fluoride	mg/L	ND	0.10	0.050	02/06/22 23:27	
Sulfate	mg/L	ND	1.0	0.50	02/06/22 23:27	

LABORATORY CONTROL SAMPLE: 3540062

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.3	95	90-110	
Fluoride	mg/L	2.5	2.3	92	90-110	
Sulfate	mg/L	50	45.8	92	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3540063 3540064

Parameter	Units	92585058030		3540064		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	ND	50	50	48.9	49.4	98	99	90-110	1	10
Fluoride	mg/L	ND	2.5	2.5	2.3	2.3	92	93	90-110	1	10
Sulfate	mg/L	ND	50	50	48.2	48.7	96	97	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3540065 3540066

Parameter	Units	92585555010		3540066		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	4.8	50	50	55.6	55.1	102	101	90-110	1	10
Fluoride	mg/L	ND	2.5	2.5	2.5	2.5	100	100	90-110	0	10
Sulfate	mg/L	1.2	50	50	51.6	51.1	101	100	90-110	1	10

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch: 677497	Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993	Analysis Description: 300.0 IC Anions
	Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92585555013

METHOD BLANK: 3545965 Matrix: Water
Associated Lab Samples: 92585555013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/11/22 07:04	
Fluoride	mg/L	ND	0.10	0.050	02/11/22 07:04	
Sulfate	mg/L	ND	1.0	0.50	02/11/22 07:04	

LABORATORY CONTROL SAMPLE: 3545966

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.1	104	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3545967 3545968

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92587247021	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	53.3	50	50	90.2	88.9	74	71	90-110	1	10	M1	
Fluoride	mg/L	0.41	2.5	2.5	3.1	3.1	106	106	90-110	0	10		
Sulfate	mg/L	95.9	50	50	140	139	89	86	90-110	1	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3545969 3545970

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92587247031	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	73.8	50	50	106	107	65	67	90-110	1	10	M1	
Fluoride	mg/L	1.1	2.5	2.5	3.7	3.8	106	108	90-110	2	10		
Sulfate	mg/L	141	50	50	179	180	77	79	90-110	1	10	M1	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

QC Batch:	677743	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

METHOD BLANK: 3547238 Matrix: Water
Associated Lab Samples: 92585555014, 92585555015, 92585555016, 92585555017, 92585555018, 92585555019, 92585555020, 92585555021, 92585555022, 92585555023

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/12/22 16:11	
Fluoride	mg/L	ND	0.10	0.050	02/12/22 16:11	
Sulfate	mg/L	ND	1.0	0.50	02/12/22 16:11	

LABORATORY CONTROL SAMPLE: 3547239

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.1	102	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547240 3547241

Parameter	Units	92585555014		3547241		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	4.3	50	50	60.1	60.2	112	112	90-110	0	10 M1
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	110	111	90-110	1	10 M1
Sulfate	mg/L	6.1	50	50	62.6	62.4	113	113	90-110	0	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547242 3547243

Parameter	Units	92586436001		3547243		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	1.2	50	50	57.3	57.5	112	113	90-110	0	10 M1
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	110	111	90-110	1	10 M1
Sulfate	mg/L	0.93J	50	50	57.2	57.7	113	114	90-110	1	10 M1

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
9258555001	GWA-39Z				
9258555002	GWA-40				
9258555003	GWA-41				
9258555004	GWA-41R				
9258555005	GWA-42				
9258555006	GWA-43				
9258555007	GWA-43R				
9258555008	GWC-44				
9258555009	GWC-46R				
9258555010	GWC-48				
9258555013	GWC-45				
9258555014	GWC-45R				
9258555015	GWC-47				
9258555016	GWC-47R				
9258555017	GWC-49Z				
9258555018	GWC-49R				
9258555021	GWA-39RZ				
9258555001	GWA-39Z	EPA 3010A	678031	EPA 6010D	678095
9258555002	GWA-40	EPA 3010A	678031	EPA 6010D	678095
9258555003	GWA-41	EPA 3010A	678031	EPA 6010D	678095
9258555004	GWA-41R	EPA 3010A	678031	EPA 6010D	678095
9258555005	GWA-42	EPA 3010A	678031	EPA 6010D	678095
9258555006	GWA-43	EPA 3010A	678031	EPA 6010D	678095
9258555007	GWA-43R	EPA 3010A	678031	EPA 6010D	678095
9258555008	GWC-44	EPA 3010A	678031	EPA 6010D	678095
9258555009	GWC-46R	EPA 3010A	678031	EPA 6010D	678095
9258555010	GWC-48	EPA 3010A	678031	EPA 6010D	678095
9258555011	DUP-1	EPA 3010A	678031	EPA 6010D	678095
9258555012	FB-1	EPA 3010A	678031	EPA 6010D	678095
9258555013	GWC-45	EPA 3010A	678031	EPA 6010D	678095
9258555014	GWC-45R	EPA 3010A	678031	EPA 6010D	678095
9258555015	GWC-47	EPA 3010A	678031	EPA 6010D	678095
9258555016	GWC-47R	EPA 3010A	678103	EPA 6010D	678189
9258555017	GWC-49Z	EPA 3010A	678103	EPA 6010D	678189
9258555018	GWC-49R	EPA 3010A	678103	EPA 6010D	678189
9258555019	DUP-2	EPA 3010A	678103	EPA 6010D	678189
9258555020	FB-2	EPA 3010A	678103	EPA 6010D	678189
9258555021	GWA-39RZ	EPA 3010A	678103	EPA 6010D	678189
9258555022	FB-3	EPA 3010A	678103	EPA 6010D	678189
9258555023	EB-1	EPA 3010A	678103	EPA 6010D	678189
9258555001	GWA-39Z	EPA 3005A	677804	EPA 6020B	677940
9258555002	GWA-40	EPA 3005A	677804	EPA 6020B	677940
9258555003	GWA-41	EPA 3005A	677804	EPA 6020B	677940
9258555004	GWA-41R	EPA 3005A	677804	EPA 6020B	677940
9258555005	GWA-42	EPA 3005A	677804	EPA 6020B	677940
9258555006	GWA-43	EPA 3005A	677804	EPA 6020B	677940
9258555007	GWA-43R	EPA 3005A	677804	EPA 6020B	677940

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9&10
Pace Project No.: 92585555

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92585555008	GWC-44	EPA 3005A	677804	EPA 6020B	677940
92585555009	GWC-46R	EPA 3005A	677804	EPA 6020B	677940
92585555010	GWC-48	EPA 3005A	677804	EPA 6020B	677940
92585555011	DUP-1	EPA 3005A	678016	EPA 6020B	678130
92585555012	FB-1	EPA 3005A	678016	EPA 6020B	678130
92585555013	GWC-45	EPA 3005A	678016	EPA 6020B	678130
92585555014	GWC-45R	EPA 3005A	678016	EPA 6020B	678130
92585555015	GWC-47	EPA 3005A	678016	EPA 6020B	678130
92585555016	GWC-47R	EPA 3005A	678016	EPA 6020B	678130
92585555017	GWC-49Z	EPA 3005A	678016	EPA 6020B	678130
92585555018	GWC-49R	EPA 3005A	678016	EPA 6020B	678130
92585555019	DUP-2	EPA 3005A	678016	EPA 6020B	678130
92585555020	FB-2	EPA 3005A	678016	EPA 6020B	678130
92585555021	GWA-39RZ	EPA 3005A	678016	EPA 6020B	678130
92585555022	FB-3	EPA 3005A	678016	EPA 6020B	678130
92585555023	EB-1	EPA 3005A	678016	EPA 6020B	678130
92585555001	GWA-39Z	EPA 7470A	677026	EPA 7470A	677148
92585555002	GWA-40	EPA 7470A	677026	EPA 7470A	677148
92585555003	GWA-41	EPA 7470A	677026	EPA 7470A	677148
92585555004	GWA-41R	EPA 7470A	677026	EPA 7470A	677148
92585555005	GWA-42	EPA 7470A	677026	EPA 7470A	677148
92585555006	GWA-43	EPA 7470A	677026	EPA 7470A	677148
92585555007	GWA-43R	EPA 7470A	677026	EPA 7470A	677148
92585555008	GWC-44	EPA 7470A	677026	EPA 7470A	677148
92585555009	GWC-46R	EPA 7470A	677026	EPA 7470A	677148
92585555010	GWC-48	EPA 7470A	677026	EPA 7470A	677148
92585555011	DUP-1	EPA 7470A	677026	EPA 7470A	677148
92585555012	FB-1	EPA 7470A	677026	EPA 7470A	677148
92585555013	GWC-45	EPA 7470A	677026	EPA 7470A	677148
92585555014	GWC-45R	EPA 7470A	677026	EPA 7470A	677148
92585555015	GWC-47	EPA 7470A	677026	EPA 7470A	677148
92585555016	GWC-47R	EPA 7470A	677026	EPA 7470A	677148
92585555017	GWC-49Z	EPA 7470A	677026	EPA 7470A	677148
92585555018	GWC-49R	EPA 7470A	677026	EPA 7470A	677148
92585555019	DUP-2	EPA 7470A	677026	EPA 7470A	677148
92585555020	FB-2	EPA 7470A	677026	EPA 7470A	677148
92585555021	GWA-39RZ	EPA 7470A	677028	EPA 7470A	677150
92585555022	FB-3	EPA 7470A	677028	EPA 7470A	677150
92585555023	EB-1	EPA 7470A	677028	EPA 7470A	677150
92585555001	GWA-39Z	SM 2540C-2015	675815		
92585555002	GWA-40	SM 2540C-2015	675815		
92585555003	GWA-41	SM 2540C-2015	675815		
92585555004	GWA-41R	SM 2540C-2015	675815		
92585555005	GWA-42	SM 2540C-2015	675815		
92585555006	GWA-43	SM 2540C-2015	675815		
92585555007	GWA-43R	SM 2540C-2015	675815		
92585555008	GWC-44	SM 2540C-2015	675815		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92585555009	GWC-46R	SM 2540C-2015	675815		
92585555010	GWC-48	SM 2540C-2015	675815		
92585555011	DUP-1	SM 2540C-2015	675815		
92585555012	FB-1	SM 2540C-2015	675815		
92585555013	GWC-45	SM 2540C-2015	676438		
92585555014	GWC-45R	SM 2540C-2015	676438		
92585555015	GWC-47	SM 2540C-2015	676438		
92585555016	GWC-47R	SM 2540C-2015	676438		
92585555017	GWC-49Z	SM 2540C-2015	676438		
92585555018	GWC-49R	SM 2540C-2015	676438		
92585555019	DUP-2	SM 2540C-2015	676439		
92585555020	FB-2	SM 2540C-2015	676439		
92585555021	GWA-39RZ	SM 2540C-2015	676566		
92585555022	FB-3	SM 2540C-2015	676566		
92585555023	EB-1	SM 2540C-2015	676566		
92585555001	GWA-39Z	SM 2320B	797866		
92585555002	GWA-40	SM 2320B	797866		
92585555003	GWA-41	SM 2320B	797866		
92585555004	GWA-41R	SM 2320B	797866		
92585555005	GWA-42	SM 2320B	797866		
92585555006	GWA-43	SM 2320B	797866		
92585555007	GWA-43R	SM 2320B	797866		
92585555008	GWC-44	SM 2320B	797866		
92585555009	GWC-46R	SM 2320B	797866		
92585555010	GWC-48	SM 2320B	798025		
92585555011	DUP-1	SM 2320B	798025		
92585555012	FB-1	SM 2320B	798025		
92585555013	GWC-45	SM 2320B	798068		
92585555014	GWC-45R	SM 2320B	798068		
92585555015	GWC-47	SM 2320B	798068		
92585555016	GWC-47R	SM 2320B	798068		
92585555017	GWC-49Z	SM 2320B	798068		
92585555018	GWC-49R	SM 2320B	798068		
92585555019	DUP-2	SM 2320B	798068		
92585555020	FB-2	SM 2320B	798068		
92585555021	GWA-39RZ	SM 2320B	798068		
92585555022	FB-3	SM 2320B	798068		
92585555023	EB-1	SM 2320B	798068		
92585555001	GWA-39Z	EPA 300.0 Rev 2.1 1993	676332		
92585555002	GWA-40	EPA 300.0 Rev 2.1 1993	676332		
92585555003	GWA-41	EPA 300.0 Rev 2.1 1993	676332		
92585555004	GWA-41R	EPA 300.0 Rev 2.1 1993	676332		
92585555005	GWA-42	EPA 300.0 Rev 2.1 1993	676332		
92585555006	GWA-43	EPA 300.0 Rev 2.1 1993	676332		
92585555007	GWA-43R	EPA 300.0 Rev 2.1 1993	676332		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9&10

Pace Project No.: 92585555

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92585555008	GWC-44	EPA 300.0 Rev 2.1 1993	676332		
92585555009	GWC-46R	EPA 300.0 Rev 2.1 1993	676332		
92585555010	GWC-48	EPA 300.0 Rev 2.1 1993	676332		
92585555011	DUP-1	EPA 300.0 Rev 2.1 1993	676332		
92585555012	FB-1	EPA 300.0 Rev 2.1 1993	676332		
92585555013	GWC-45	EPA 300.0 Rev 2.1 1993	677497		
92585555014	GWC-45R	EPA 300.0 Rev 2.1 1993	677743		
92585555015	GWC-47	EPA 300.0 Rev 2.1 1993	677743		
92585555016	GWC-47R	EPA 300.0 Rev 2.1 1993	677743		
92585555017	GWC-49Z	EPA 300.0 Rev 2.1 1993	677743		
92585555018	GWC-49R	EPA 300.0 Rev 2.1 1993	677743		
92585555019	DUP-2	EPA 300.0 Rev 2.1 1993	677743		
92585555020	FB-2	EPA 300.0 Rev 2.1 1993	677743		
92585555021	GWA-39RZ	EPA 300.0 Rev 2.1 1993	677743		
92585555022	FB-3	EPA 300.0 Rev 2.1 1993	677743		
92585555023	EB-1	EPA 300.0 Rev 2.1 1993	677743		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-CAR-C5-033-Rev.08

Document Revised: November 15, 2021
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

G-A Power

Project #:

WO# : 92585555



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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 2/1/22
[Signature]

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Cooler Temp: 4.8 Correction Factor: Add/Subtract (°C) +0.2

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 5.0

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Bottle Identification Form (BIF)

Document No.:
F-CAR-CS-043-Rev.01

Document Issued: November 15, 2021
Page 1 of 1

Issuing Authority:
Pace Carolinas Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

Project #

WO# : 92585555

PM: NMG

Due Date: 02/15/22

CLIENT: GA-GA Power

Matrix	Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		2	1																											
2		2	1																											
3		2	1																											
4		2	1																											
5		2	1																											
6		2	1																											
7		2	1																											
8		2	1																											
9		2	1																											
10		2	1																											
11		2	1																											
12		2	1																											

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

CHAIN-OF-CUSTODY / Analytical Request Document

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



Section A
Required Client Information:

Company: GA Power
 Address: 1003 Weatherstone Parkway
 Woodstock, Ga 30188
 Email To: Kevin.Stephenson@Resoluteenv.com
 Phone: (678)5489415
 Requested Due Date/TAT: 30 Day

Section B
Required Project Information:

Report To: Kristen Junnko
 Copy To: Rhonda Quinn
 Purchase Order No.
 Project Name: Plant Bowen Landfill Cells 9 and 10
 Project Number:

Section C
Invoice Information:

Attention: Southern Co
 Company Name:
 Address:
 State:
 Zip Code:
 Reference:
 Project Manager: Nicole Doleo
 Invoice Profile #: 2928

REGULATORY AGENCY
 NPDES GROUND WATER
 UST RCRA OTHER
 Site Location: GA
 STATE: GA

ITEM #	Section D Required Client Information Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOLID S WPE WIP AIR AR OTHER OT TISSUE TS	SAMPLE ID (A-Z, 0-9 / -) Sample IDs MUST BE UNIQUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved H ₂ SO ₄ HNO ₃ HCl NaOH Na ₂ S ₂ O ₃ Methanol Other	Preservatives	Analysis Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
1		GWA-39Z			1/31/22	1350				4	3	1	X	X	X		6.41
2		-GWA-39RZ-															
3		GWA-40			1/31/22	1425				4	3	1	X	X	X		6.85
4		GWA-41			1/31/22	1255				4	3	1	X	X	X		6.02
5		GWA-41R			1/31/22	1045				4	3	1	X	X	X		6.63
6		GWA-42			1/31/22	1448				4	3	1	X	X	X		7.17
7		GWA-43			1/31/22	1315				4	3	1	X	X	X		5.71
8		GWA-43R			1/31/22	1205				4	3	1	X	X	X		8.04
9		GWC-44			1/31/22	1530				4	3	1	X	X	X		4.78
10		-GWA-45-															
11		-GWA-45R-															
12		GWC-46R			1/31/22	1530				4	3	1	X	X	X		7.48

ADDITIONAL COMMENTS

State Metals include Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Ag, Hg, V, Zn, Co

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
William Locker	2/1/22	0800	Ateya Garner	2/1/22	0800	
Ateya Garner Kean Williams / Pac	2/1/22	11:22	Kean Williams / Pac	2/1/22	1122	
	2/1/22	1700	Rhonda Quinn / Pac	2/1/22	700	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: William Locker Kevin Stephenson Robert Mull Meredith Duncan
 SIGNATURE OF SAMPLER: [Signatures]
 DATE SIGNED (MM/DD/YY): 1/31/22

Temp in °C
 Received on Ice (Y/N)
 Custody Sealed Cooler (Y/N)
 Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days

F-ALL-Q-020rev 07.15-Feb-2007



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

Section A Required Client Information
 Company: GA Power
 Address: 1003 Weatherstone Parkway
 Woodstock, Ga 30188
 Contact: Kevin Stephenson@PaceAnalytical.com
 Phone: (678)5489415
 Fax: [blank]
 Requested Due Date/TAT: 10 Day

Section B Required Project Information
 Report To: Kristen Juritko
 Copy To: Rhonda Quinn
 Project Name: Plant Bowen Landfill
 Project Number: [blank]
 Purchase Order No: [blank]
 Cells 9 and 10

Section C Invoice Information
 Attention: Southern Co
 Company Name: Southern Co
 Address: [blank]
 POC Name: Nicole Dolio
 POC Title: Project Manager
 POC Phone #: 2928

REGULATORY AGENCY
 NPDES GROUND WATER
 UST RCRA OTHER
 Site Location: GA
 STATE: GA

Page: 2 of 2

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS
				DATE	TIME							
1	-GWC-47											
2	-GWC-48											
3	GWC-48		1/31/22	16:14		4	3	1	X	X	X	486
4	-GWC-49Z											
5	-GWC-49R											
6	Dup-1		1/31/22	-		4	3	1	X	X	X	
7	-Dup-2											
8	-FBI F B -1		1/31/22	15:50		4	3	1	X	X	X	
9	-FBI											
10	-FBI											
11	-FBI											
12												

ADDITIONAL COMMENTS
 Matrix Codes include SP, AS, BA, BA, CA, CA, C, CU, PB, NI, SE, PT, V, ZN, CO

RELINQUISHED BY / AFFILIATION
 William Laaker

ACCEPTED BY / AFFILIATION
 Atoya Garner
 Ryan Williams / Pace

SAMPLER NAME AND SIGNATURE	DATE	TIME	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples intact (Y/N)
PRINT Name of SAMPLER: Will Laaker	2/1/22	0800	2/1/22	0800				
SIGNATURE of SAMPLER: [Signature]	2/1/22	1700	2/1/22	1122				
PRINT Name of SAMPLER: Kevin Stephenson	2/1/22		2/1/22	1700				
SIGNATURE of SAMPLER: [Signature]	2/1/22		2/1/22	1700				

March 09, 2022

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Dear Joju Abraham:

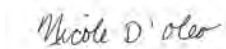
Enclosed are the analytical results for sample(s) received by the laboratory between February 04, 2022 and February 18, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Minneapolis

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Michelle Barker, WOOD E&I
Anna Bottum, ERM
Andrea Brazell, ERM
Kristen Jurinko
Ms. Lauren Petty, Southern Company
Rhonda Quinn, WOOD E&I
Lacy Smith, ERM
Caitlin Tillema, ERM
Christine Weaver, ERM

Greg Wrenn, WOOD E&I



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab
A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064

Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
Please Note: Applicable air certifications are denoted with an asterisk ().

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006
9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812
North Carolina Certification #: 381

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Pace Analytical Services Peachtree Corners
South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92586436001	GWA-1	Water	02/01/22 14:50	02/04/22 11:45
92586436002	GWA-2	Water	02/01/22 14:44	02/04/22 11:45
92586436003	GWA-2R	Water	02/01/22 15:45	02/04/22 11:45
92586436004	GWA-50	Water	02/01/22 15:40	02/04/22 11:45
92586436005	DUP-1	Water	02/01/22 00:00	02/04/22 11:45
92586436006	FB-1	Water	02/01/22 16:00	02/04/22 11:45
92586436007	GWA-3A	Water	02/02/22 12:08	02/04/22 11:45
92586436008	GWC-5	Water	02/02/22 11:34	02/04/22 11:45
92586436009	GWC-6	Water	02/02/22 15:22	02/04/22 11:45
92586436010	GWC-6RZ	Water	02/02/22 14:00	02/04/22 11:45
92586436011	GWC-7Z	Water	02/02/22 12:15	02/04/22 11:45
92586436012	GWC-8Z	Water	02/02/22 14:24	02/04/22 11:45
92586436013	GWC-8RR	Water	02/02/22 16:16	02/04/22 11:45
92586436014	GWC-9	Water	02/02/22 15:02	02/04/22 11:45
92586436015	GWC-12	Water	02/02/22 15:55	02/04/22 11:45
92586436016	GWA-50R	Water	02/02/22 10:12	02/04/22 11:45
92586436017	DUP-2	Water	02/02/22 00:00	02/04/22 11:45
92586436018	FB-2	Water	02/02/22 16:14	02/04/22 11:45
92586436019	GWA-4RZ	Water	02/03/22 10:55	02/04/22 11:45
92586436020	FB-3	Water	02/03/22 12:00	02/04/22 11:45
92586436021	GWC-10	Water	02/04/22 11:15	02/08/22 08:10
92586436022	GWC-10R	Water	02/04/22 12:40	02/08/22 08:10
92586436023	GWC-11	Water	02/04/22 12:33	02/08/22 08:10
92586436024	GWC-11R	Water	02/04/22 10:45	02/08/22 08:10
92586436025	GWC-13RZ	Water	02/04/22 09:44	02/08/22 08:10
92586436026	GWC-14Z	Water	02/04/22 11:30	02/08/22 08:10
92586436027	GWC-15R	Water	02/04/22 13:14	02/08/22 08:10
92586436028	DUP-3	Water	02/04/22 00:00	02/08/22 08:10
92586436029	FB-4	Water	02/04/22 13:15	02/08/22 08:10
92586436030	GWC-15Z	Water	02/07/22 10:13	02/08/22 08:10
92586436031	FB-5	Water	02/07/22 11:30	02/08/22 08:10
92586436032	GWC-13	Water	02/17/22 13:06	02/18/22 09:52
92586436033	FB-6	Water	02/17/22 13:40	02/18/22 09:52

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92586436001	GWA-1	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
92586436002	GWA-2	EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92586436003	GWA-2R	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
92586436004	GWA-50	SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
92586436005	DUP-1	EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
92586436006	FB-1	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92586436007	GWA-3A	EPA 6010D	DRB	5	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92586436008	GWC-5	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
92586436009	GWC-6	EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
92586436010	GWC-6RZ	SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
92586436011	GWC-7Z	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
92586436012	GWC-8Z	EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
92586436013	GWC-8RR	EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92586436014	GWC-9	EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92586436015	GWC-12	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92586436016	GWA-50R	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
92586436017	DUP-2	EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92586436018	FB-2	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92586436019	GWA-4RZ	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92586436020	FB-3	SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92586436021	GWC-10	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
92586436022	GWC-10R	EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
92586436023	GWC-11	EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
92586436024	GWC-11R	EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
92586436025	GWC-13RZ	EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92586436026	GWC-14Z	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92586436027	GWC-15R	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92586436028	DUP-3	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92586436029	FB-4	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92586436030	GWC-15Z	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
92586436031	FB-5	SM 2320B	AR3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	DRB	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AR3	3	PASI-M

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92586436032	GWC-13	EPA 300.0 Rev 2.1 1993	JCM	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AB3	3	PASI-M
92586436033	FB-6	EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
		EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2540C-2015	ALW	1	PASI-GA
		SM 2320B	AB3	3	PASI-M
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92586436001	GWA-1					
	Performed by	CUSTOME			02/07/22 10:49	
		R				
	pH	7.52	Std. Units		02/07/22 10:49	
EPA 6010D	Potassium	1.3	mg/L	0.20	02/18/22 15:52	
EPA 6010D	Sodium	6.5	mg/L	1.0	02/18/22 15:52	
EPA 6010D	Calcium	34.1	mg/L	1.0	02/18/22 15:52	
EPA 6010D	Magnesium	16.4	mg/L	0.050	02/18/22 15:52	
EPA 6020B	Antimony	0.0028J	mg/L	0.0030	02/18/22 14:39	
EPA 6020B	Barium	0.015	mg/L	0.0050	02/18/22 14:39	
SM 2540C-2015	Total Dissolved Solids	143	mg/L	10.0	02/07/22 17:20	
SM 2320B	Alkalinity, Total as CaCO3	161	mg/L	5.0	02/10/22 16:44	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	161	mg/L	5.0	02/10/22 16:44	
EPA 300.0 Rev 2.1 1993	Chloride	1.2	mg/L	1.0	02/12/22 19:54	M1
EPA 300.0 Rev 2.1 1993	Sulfate	0.93J	mg/L	1.0	02/12/22 19:54	M1
92586436002	GWA-2					
	Performed by	CUSTOME			02/07/22 10:50	
		R				
	pH	6.30	Std. Units		02/07/22 10:50	
EPA 6010D	Potassium	0.88	mg/L	0.20	02/18/22 15:56	
EPA 6010D	Sodium	1.9	mg/L	1.0	02/18/22 15:56	
EPA 6010D	Calcium	48.0	mg/L	1.0	02/18/22 15:56	M1
EPA 6010D	Magnesium	14.0	mg/L	0.050	02/18/22 15:56	
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	02/18/22 14:45	
EPA 6020B	Barium	0.026	mg/L	0.0050	02/18/22 14:45	
SM 2540C-2015	Total Dissolved Solids	202	mg/L	10.0	02/07/22 17:21	
SM 2320B	Alkalinity, Total as CaCO3	80.9	mg/L	5.0	02/10/22 17:00	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	80.9	mg/L	5.0	02/10/22 17:00	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	02/12/22 21:04	
EPA 300.0 Rev 2.1 1993	Sulfate	86.1	mg/L	1.0	02/12/22 21:04	
92586436003	GWA-2R					
	Performed by	CUSTOME			02/07/22 10:50	
		R				
	pH	6.62	Std. Units		02/07/22 10:50	
EPA 6010D	Potassium	0.67	mg/L	0.20	02/18/22 16:16	
EPA 6010D	Sodium	1.1	mg/L	1.0	02/18/22 16:16	
EPA 6010D	Calcium	34.1	mg/L	1.0	02/18/22 16:16	
EPA 6010D	Magnesium	11.1	mg/L	0.050	02/18/22 16:16	
EPA 6020B	Antimony	0.0029J	mg/L	0.0030	02/18/22 14:51	
EPA 6020B	Arsenic	0.0053	mg/L	0.0050	02/18/22 14:51	
EPA 6020B	Barium	0.024	mg/L	0.0050	02/18/22 14:51	
EPA 6020B	Cobalt	0.00093J	mg/L	0.0050	02/18/22 14:51	
EPA 6020B	Copper	0.00096J	mg/L	0.0050	02/18/22 14:51	
SM 2540C-2015	Total Dissolved Solids	114	mg/L	10.0	02/07/22 17:21	
SM 2320B	Alkalinity, Total as CaCO3	122	mg/L	5.0	02/10/22 17:06	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	122	mg/L	5.0	02/10/22 17:06	
EPA 300.0 Rev 2.1 1993	Chloride	0.77J	mg/L	1.0	02/12/22 21:18	
EPA 300.0 Rev 2.1 1993	Sulfate	1.5	mg/L	1.0	02/12/22 21:18	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92586436004	GWA-50					
	Performed by	CUSTOME			02/07/22 10:50	
		R				
	pH	5.61	Std. Units		02/07/22 10:50	
EPA 6010D	Potassium	0.25	mg/L	0.20	02/18/22 16:20	
EPA 6010D	Sodium	1.7	mg/L	1.0	02/18/22 16:20	
EPA 6010D	Calcium	1.5	mg/L	1.0	02/18/22 16:20	
EPA 6010D	Magnesium	0.31	mg/L	0.050	02/18/22 16:20	
EPA 6020B	Antimony	0.0015J	mg/L	0.0030	02/18/22 15:15	
EPA 6020B	Barium	0.0065	mg/L	0.0050	02/18/22 15:15	
EPA 6020B	Copper	0.0017J	mg/L	0.0050	02/18/22 15:15	
EPA 6020B	Nickel	0.00080J	mg/L	0.0050	02/18/22 15:15	
SM 2540C-2015	Total Dissolved Solids	21.0	mg/L	10.0	02/07/22 17:21	
SM 2320B	Alkalinity, Total as CaCO3	4.7J	mg/L	5.0	02/10/22 19:19	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	4.7J	mg/L	5.0	02/10/22 19:19	
EPA 300.0 Rev 2.1 1993	Chloride	0.91J	mg/L	1.0	02/12/22 21:32	
92586436005	DUP-1					
EPA 6010D	Potassium	0.71	mg/L	0.20	02/18/22 16:25	
EPA 6010D	Sodium	1.1	mg/L	1.0	02/18/22 16:25	
EPA 6010D	Calcium	33.8	mg/L	1.0	02/18/22 16:25	
EPA 6010D	Magnesium	11.0	mg/L	0.050	02/18/22 16:25	
EPA 6020B	Antimony	0.0033	mg/L	0.0030	02/18/22 15:21	
EPA 6020B	Arsenic	0.0037J	mg/L	0.0050	02/18/22 15:21	
EPA 6020B	Barium	0.024	mg/L	0.0050	02/18/22 15:21	
EPA 6020B	Cobalt	0.00090J	mg/L	0.0050	02/18/22 15:21	
EPA 6020B	Copper	0.00078J	mg/L	0.0050	02/18/22 15:21	
SM 2540C-2015	Total Dissolved Solids	118	mg/L	10.0	02/07/22 17:21	
SM 2320B	Alkalinity, Total as CaCO3	120	mg/L	5.0	02/10/22 17:15	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	120	mg/L	5.0	02/10/22 17:15	
EPA 300.0 Rev 2.1 1993	Chloride	0.77J	mg/L	1.0	02/12/22 21:46	
EPA 300.0 Rev 2.1 1993	Sulfate	1.5	mg/L	1.0	02/12/22 21:46	
92586436007	GWA-3A					
	Performed by	CUSTOME			02/07/22 10:50	
		R				
	pH	7.94	Std. Units		02/07/22 10:50	
EPA 6010D	Potassium	1.2	mg/L	0.20	02/18/22 16:44	
EPA 6010D	Sodium	3.5	mg/L	1.0	02/18/22 16:44	
EPA 6010D	Calcium	22.6	mg/L	1.0	02/18/22 16:44	
EPA 6010D	Magnesium	11.3	mg/L	0.050	02/18/22 16:44	
EPA 6020B	Barium	0.0064	mg/L	0.0050	02/18/22 15:50	
EPA 6020B	Chromium	0.0069	mg/L	0.0050	02/18/22 15:50	
SM 2540C-2015	Total Dissolved Solids	104	mg/L	10.0	02/08/22 11:13	
SM 2320B	Alkalinity, Total as CaCO3	97.5	mg/L	5.0	02/10/22 20:33	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	97.5	mg/L	5.0	02/10/22 20:33	
EPA 300.0 Rev 2.1 1993	Chloride	1.9	mg/L	1.0	02/12/22 22:14	
EPA 300.0 Rev 2.1 1993	Sulfate	3.4	mg/L	1.0	02/12/22 22:14	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92586436008	GWC-5					
	Performed by	CUSTOME			02/07/22 10:50	
		R				
	pH	5.90	Std. Units		02/07/22 10:50	
EPA 6010D	Zinc	0.034	mg/L	0.020	02/18/22 16:49	
EPA 6010D	Potassium	1.8	mg/L	0.20	02/18/22 16:49	
EPA 6010D	Sodium	1.7	mg/L	1.0	02/18/22 16:49	
EPA 6010D	Calcium	3.7	mg/L	1.0	02/18/22 16:49	
EPA 6010D	Magnesium	0.27	mg/L	0.050	02/18/22 16:49	
EPA 6020B	Barium	0.012	mg/L	0.0050	02/18/22 15:56	
EPA 6020B	Beryllium	0.00075	mg/L	0.00050	02/18/22 15:56	
EPA 6020B	Copper	0.024	mg/L	0.0050	02/18/22 15:56	
EPA 6020B	Nickel	0.0088	mg/L	0.0050	02/18/22 15:56	
SM 2540C-2015	Total Dissolved Solids	32.0	mg/L	10.0	02/08/22 11:13	
SM 2320B	Alkalinity, Total as CaCO3	11.9	mg/L	5.0	02/10/22 21:53	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	11.9	mg/L	5.0	02/10/22 21:53	
EPA 300.0 Rev 2.1 1993	Chloride	0.66J	mg/L	1.0	02/12/22 22:27	
EPA 300.0 Rev 2.1 1993	Sulfate	1.0	mg/L	1.0	02/12/22 22:27	
92586436009	GWC-6					
	Performed by	CUSTOME			02/07/22 10:51	
		R				
	pH	7.40	Std. Units		02/07/22 10:51	
EPA 6010D	Potassium	1.1	mg/L	0.20	02/18/22 16:54	
EPA 6010D	Sodium	1.0	mg/L	1.0	02/18/22 16:54	
EPA 6010D	Calcium	15.5	mg/L	1.0	02/18/22 16:54	
EPA 6010D	Magnesium	7.6	mg/L	0.050	02/18/22 16:54	
EPA 6020B	Barium	0.0064	mg/L	0.0050	02/18/22 16:02	
EPA 6020B	Chromium	0.0026J	mg/L	0.0050	02/18/22 16:02	
SM 2540C-2015	Total Dissolved Solids	73.0	mg/L	10.0	02/08/22 11:13	
SM 2320B	Alkalinity, Total as CaCO3	63.7	mg/L	5.0	02/10/22 20:40	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	63.7	mg/L	5.0	02/10/22 20:40	
EPA 300.0 Rev 2.1 1993	Chloride	1.1	mg/L	1.0	02/12/22 22:41	
EPA 300.0 Rev 2.1 1993	Sulfate	1.7	mg/L	1.0	02/12/22 22:41	
92586436010	GWC-6RZ					
	Performed by	CUSTOME			02/07/22 10:51	
		R				
	pH	6.80	Std. Units		02/07/22 10:51	
EPA 6010D	Potassium	0.79	mg/L	0.20	02/18/22 16:58	
EPA 6010D	Sodium	1.6	mg/L	1.0	02/18/22 16:58	
EPA 6010D	Calcium	10.5	mg/L	1.0	02/18/22 16:58	
EPA 6010D	Magnesium	5.4	mg/L	0.050	02/18/22 16:58	
EPA 6020B	Arsenic	0.0012J	mg/L	0.0050	02/18/22 16:08	
EPA 6020B	Barium	0.0066	mg/L	0.0050	02/18/22 16:08	
EPA 6020B	Beryllium	0.000070J	mg/L	0.00050	02/18/22 16:08	
EPA 6020B	Chromium	0.0024J	mg/L	0.0050	02/18/22 16:08	
SM 2540C-2015	Total Dissolved Solids	51.0	mg/L	10.0	02/08/22 11:13	
SM 2320B	Alkalinity, Total as CaCO3	43.6	mg/L	5.0	02/10/22 20:44	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	43.6	mg/L	5.0	02/10/22 20:44	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92586436010	GWC-6RZ					
EPA 300.0 Rev 2.1 1993	Chloride	1.3	mg/L	1.0	02/12/22 22:55	
EPA 300.0 Rev 2.1 1993	Sulfate	1.5	mg/L	1.0	02/12/22 22:55	
92586436011	GWC-7Z					
	Performed by	CUSTOMER			02/07/22 10:51	
	pH	7.54	Std. Units		02/07/22 10:51	
EPA 6010D	Potassium	0.97	mg/L	0.20	02/18/22 17:03	
EPA 6010D	Sodium	2.7	mg/L	1.0	02/18/22 17:03	
EPA 6010D	Calcium	26.9	mg/L	1.0	02/18/22 17:03	
EPA 6010D	Magnesium	13.4	mg/L	0.050	02/18/22 17:03	
EPA 6020B	Antimony	0.00093J	mg/L	0.0030	02/18/22 16:14	
EPA 6020B	Arsenic	0.0020J	mg/L	0.0050	02/18/22 16:14	
EPA 6020B	Barium	0.015	mg/L	0.0050	02/18/22 16:14	
EPA 6020B	Cobalt	0.00042J	mg/L	0.0050	02/18/22 16:14	
SM 2540C-2015	Total Dissolved Solids	115	mg/L	10.0	02/08/22 11:14	
SM 2320B	Alkalinity, Total as CaCO3	123	mg/L	5.0	02/10/22 20:48	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	123	mg/L	5.0	02/10/22 20:48	
EPA 300.0 Rev 2.1 1993	Chloride	0.76J	mg/L	1.0	02/13/22 00:05	M1
EPA 300.0 Rev 2.1 1993	Sulfate	1.3	mg/L	1.0	02/13/22 00:05	M1
92586436012	GWC-8Z					
	Performed by	CUSTOMER			02/07/22 10:51	
	pH	8.92	Std. Units		02/07/22 10:51	
EPA 6010D	Potassium	1.8	mg/L	0.20	02/18/22 17:08	
EPA 6010D	Sodium	2.1	mg/L	1.0	02/18/22 17:08	
EPA 6010D	Calcium	20.8	mg/L	1.0	02/18/22 17:08	
EPA 6010D	Magnesium	7.0	mg/L	0.050	02/18/22 17:08	
EPA 6020B	Arsenic	0.0011J	mg/L	0.0050	02/18/22 16:20	
EPA 6020B	Barium	0.024	mg/L	0.0050	02/18/22 16:20	
EPA 6020B	Beryllium	0.00064J	mg/L	0.00050	02/18/22 16:20	
EPA 6020B	Chromium	0.0021J	mg/L	0.0050	02/18/22 16:20	
SM 2540C-2015	Total Dissolved Solids	85.0	mg/L	10.0	02/08/22 11:14	
SM 2320B	Alkalinity, Total as CaCO3	76.7	mg/L	5.0	02/10/22 20:52	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	76.7	mg/L	5.0	02/10/22 20:52	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	02/13/22 00:47	
EPA 300.0 Rev 2.1 1993	Sulfate	0.72J	mg/L	1.0	02/13/22 00:47	
92586436013	GWC-8RR					
	Performed by	CUSTOMER			02/07/22 10:51	
	pH	8.13	Std. Units		02/07/22 10:51	
EPA 6010D	Potassium	1.3	mg/L	0.20	02/18/22 17:13	
EPA 6010D	Sodium	0.81J	mg/L	1.0	02/18/22 17:13	
EPA 6010D	Calcium	23.9	mg/L	1.0	02/18/22 17:13	
EPA 6010D	Magnesium	11.0	mg/L	0.050	02/18/22 17:13	
EPA 6020B	Antimony	0.0015J	mg/L	0.0030	02/18/22 16:26	
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	02/18/22 16:26	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92586436013	GWC-8RR					
EPA 6020B	Barium	0.013	mg/L	0.0050	02/18/22 16:26	
EPA 6020B	Chromium	0.0015J	mg/L	0.0050	02/18/22 16:26	
SM 2540C-2015	Total Dissolved Solids	102	mg/L	10.0	02/08/22 11:14	
SM 2320B	Alkalinity, Total as CaCO3	102	mg/L	5.0	02/10/22 21:12	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	102	mg/L	5.0	02/10/22 21:12	
EPA 300.0 Rev 2.1 1993	Chloride	0.77J	mg/L	1.0	02/13/22 01:01	
EPA 300.0 Rev 2.1 1993	Sulfate	0.72J	mg/L	1.0	02/13/22 01:01	
92586436014	GWC-9					
	Performed by	CUSTOMER			02/07/22 10:51	
	pH	4.81	Std. Units		02/07/22 10:51	
EPA 6010D	Potassium	0.92	mg/L	0.20	02/18/22 17:17	
EPA 6010D	Sodium	1.2	mg/L	1.0	02/18/22 17:17	
EPA 6010D	Calcium	2.2	mg/L	1.0	02/18/22 17:17	
EPA 6010D	Magnesium	1.2	mg/L	0.050	02/18/22 17:17	
EPA 6020B	Arsenic	0.0013J	mg/L	0.0050	02/18/22 16:32	
EPA 6020B	Barium	0.044	mg/L	0.0050	02/18/22 16:32	
EPA 6020B	Beryllium	0.00018J	mg/L	0.00050	02/18/22 16:32	
EPA 6020B	Cobalt	0.00043J	mg/L	0.0050	02/18/22 16:32	
EPA 6020B	Nickel	0.0011J	mg/L	0.0050	02/18/22 16:32	
SM 2540C-2015	Total Dissolved Solids	21.0	mg/L	10.0	02/08/22 11:14	
SM 2320B	Alkalinity, Total as CaCO3	2.5J	mg/L	5.0	02/10/22 21:57	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	2.5J	mg/L	5.0	02/10/22 21:57	
EPA 300.0 Rev 2.1 1993	Chloride	2.1	mg/L	1.0	02/13/22 01:15	
EPA 300.0 Rev 2.1 1993	Sulfate	2.5	mg/L	1.0	02/13/22 01:15	
92586436015	GWC-12					
	Performed by	CUSTOMER			02/07/22 10:52	
	pH	6.35	Std. Units		02/07/22 10:52	
EPA 6010D	Zinc	0.019J	mg/L	0.020	02/18/22 17:22	
EPA 6010D	Potassium	1.1	mg/L	0.20	02/18/22 17:22	
EPA 6010D	Sodium	2.1	mg/L	1.0	02/18/22 17:22	
EPA 6010D	Calcium	8.4	mg/L	1.0	02/18/22 17:22	
EPA 6010D	Magnesium	4.4	mg/L	0.050	02/18/22 17:22	
EPA 6020B	Arsenic	0.0027J	mg/L	0.0050	02/18/22 16:38	
EPA 6020B	Barium	0.023	mg/L	0.0050	02/18/22 16:38	
EPA 6020B	Cadmium	0.0012	mg/L	0.00050	02/18/22 16:38	
EPA 6020B	Cobalt	0.0034J	mg/L	0.0050	02/18/22 16:38	
EPA 6020B	Nickel	0.0025J	mg/L	0.0050	02/18/22 16:38	
SM 2540C-2015	Total Dissolved Solids	54.0	mg/L	10.0	02/08/22 11:14	
SM 2320B	Alkalinity, Total as CaCO3	55.9	mg/L	5.0	02/10/22 21:19	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	55.9	mg/L	5.0	02/10/22 21:19	
EPA 300.0 Rev 2.1 1993	Chloride	0.79J	mg/L	1.0	02/13/22 01:28	
92586436016	GWA-50R					
	Performed by	CUSTOMER			02/07/22 10:52	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92586436016	GWA-50R					
	pH	5.17	Std. Units		02/07/22 10:52	
EPA 6010D	Potassium	0.20	mg/L	0.20	02/18/22 17:36	
EPA 6010D	Sodium	0.94J	mg/L	1.0	02/18/22 17:36	
EPA 6010D	Calcium	0.93J	mg/L	1.0	02/18/22 17:36	
EPA 6010D	Magnesium	0.34	mg/L	0.050	02/18/22 17:36	
EPA 6020B	Barium	0.0090	mg/L	0.0050	02/18/22 17:13	
EPA 6020B	Beryllium	0.000055J	mg/L	0.00050	02/18/22 17:13	
EPA 6020B	Copper	0.0033J	mg/L	0.0050	02/18/22 17:13	
EPA 6020B	Nickel	0.00089J	mg/L	0.0050	02/18/22 17:13	
EPA 6020B	Silver	0.0012J	mg/L	0.0050	02/18/22 17:13	
SM 2540C-2015	Total Dissolved Solids	15.0	mg/L	10.0	02/08/22 11:15	
SM 2320B	Alkalinity, Total as CaCO3	2.9J	mg/L	5.0	02/10/22 22:00	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	2.9J	mg/L	5.0	02/10/22 22:00	
EPA 300.0 Rev 2.1 1993	Chloride	0.70J	mg/L	1.0	02/13/22 01:42	
EPA 300.0 Rev 2.1 1993	Sulfate	0.53J	mg/L	1.0	02/13/22 01:42	
92586436017	DUP-2					
EPA 6010D	Potassium	0.97	mg/L	0.20	02/18/22 17:41	
EPA 6010D	Sodium	1.2	mg/L	1.0	02/18/22 17:41	
EPA 6010D	Calcium	2.3	mg/L	1.0	02/18/22 17:41	
EPA 6010D	Magnesium	1.2	mg/L	0.050	02/18/22 17:41	
EPA 6020B	Barium	0.045	mg/L	0.0050	02/18/22 17:19	
EPA 6020B	Beryllium	0.00018J	mg/L	0.00050	02/18/22 17:19	
EPA 6020B	Cobalt	0.00042J	mg/L	0.0050	02/18/22 17:19	
EPA 6020B	Nickel	0.0011J	mg/L	0.0050	02/18/22 17:19	
SM 2540C-2015	Total Dissolved Solids	27.0	mg/L	10.0	02/08/22 11:15	
SM 2320B	Alkalinity, Total as CaCO3	2.6J	mg/L	5.0	02/10/22 22:03	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	2.6J	mg/L	5.0	02/10/22 22:03	
EPA 300.0 Rev 2.1 1993	Chloride	2.1	mg/L	1.0	02/13/22 01:56	
EPA 300.0 Rev 2.1 1993	Sulfate	2.5	mg/L	1.0	02/13/22 01:56	
92586436019	GWA-4RZ					
	Performed by	CUSTOMER			02/07/22 10:52	
	pH	7.20	Std. Units		02/07/22 10:52	
EPA 6010D	Potassium	0.88	mg/L	0.20	02/18/22 18:15	
EPA 6010D	Sodium	3.8	mg/L	1.0	02/18/22 18:15	
EPA 6010D	Calcium	57.7	mg/L	1.0	02/18/22 18:15	M1
EPA 6010D	Magnesium	24.6	mg/L	0.050	02/18/22 18:15	M1
EPA 6020B	Arsenic	0.0034J	mg/L	0.0050	02/18/22 17:31	
EPA 6020B	Barium	0.063	mg/L	0.0050	02/18/22 17:31	
EPA 6020B	Cobalt	0.0059	mg/L	0.0050	02/18/22 17:31	
SM 2540C-2015	Total Dissolved Solids	243	mg/L	10.0	02/09/22 10:14	
SM 2320B	Alkalinity, Total as CaCO3	221	mg/L	5.0	02/15/22 17:21	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	221	mg/L	5.0	02/15/22 17:21	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	02/13/22 02:52	
EPA 300.0 Rev 2.1 1993	Fluoride	0.15	mg/L	0.10	02/13/22 02:52	
EPA 300.0 Rev 2.1 1993	Sulfate	20.7	mg/L	1.0	02/13/22 02:52	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92586436020	FB-3					
SM 2540C-2015	Total Dissolved Solids	12.0	mg/L	10.0	02/09/22 10:14	
92586436021	GWC-10					
	Performed by	CUSTOME			02/08/22 10:30	
		R				
	pH	6.53	Std. Units		02/08/22 10:30	
EPA 6010D	Potassium	0.51	mg/L	0.20	02/18/22 18:48	
EPA 6010D	Sodium	2.1	mg/L	1.0	02/18/22 18:48	
EPA 6010D	Calcium	21.3	mg/L	1.0	02/18/22 18:48	
EPA 6010D	Magnesium	9.0	mg/L	0.050	02/18/22 18:48	
EPA 6020B	Arsenic	0.0023J	mg/L	0.0050	02/18/22 19:37	B
EPA 6020B	Barium	0.022	mg/L	0.0050	02/18/22 19:37	
EPA 6020B	Beryllium	0.00021J	mg/L	0.00050	02/18/22 19:37	
EPA 6020B	Cobalt	0.0018J	mg/L	0.0050	02/18/22 19:37	
EPA 6020B	Nickel	0.0014J	mg/L	0.0050	02/18/22 19:37	
SM 2540C-2015	Total Dissolved Solids	102	mg/L	10.0	02/11/22 10:44	
SM 2320B	Alkalinity, Total as CaCO3	88.6	mg/L	5.0	02/10/22 20:43	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	88.6	mg/L	5.0	02/10/22 20:43	
EPA 300.0 Rev 2.1 1993	Chloride	1.9	mg/L	1.0	02/14/22 12:50	
EPA 300.0 Rev 2.1 1993	Sulfate	1.2	mg/L	1.0	02/14/22 12:50	
92586436022	GWC-10R					
	Performed by	CUSTOME			02/08/22 10:31	
		R				
	pH	7.69	Std. Units		02/08/22 10:31	
EPA 6010D	Potassium	0.71	mg/L	0.20	02/18/22 18:53	
EPA 6010D	Sodium	2.0	mg/L	1.0	02/18/22 18:53	
EPA 6010D	Calcium	46.3	mg/L	1.0	02/18/22 18:53	
EPA 6010D	Magnesium	8.9	mg/L	0.050	02/18/22 18:53	
EPA 6020B	Antimony	0.0016J	mg/L	0.0030	02/18/22 20:00	
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	02/18/22 20:00	B
EPA 6020B	Barium	0.028	mg/L	0.0050	02/18/22 20:00	
SM 2540C-2015	Total Dissolved Solids	156	mg/L	10.0	02/11/22 10:44	
SM 2320B	Alkalinity, Total as CaCO3	144	mg/L	5.0	02/10/22 20:49	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	144	mg/L	5.0	02/10/22 20:49	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	02/14/22 13:04	
EPA 300.0 Rev 2.1 1993	Sulfate	1.1	mg/L	1.0	02/14/22 13:04	
92586436023	GWC-11					
	Performed by	CUSTOME			02/08/22 10:31	
		R				
	pH	7.20	Std. Units		02/08/22 10:31	
EPA 6010D	Potassium	0.83	mg/L	0.20	02/18/22 18:58	
EPA 6010D	Sodium	1.4	mg/L	1.0	02/18/22 18:58	
EPA 6010D	Calcium	19.2	mg/L	1.0	02/18/22 18:58	
EPA 6010D	Magnesium	10.2	mg/L	0.050	02/18/22 18:58	
EPA 6020B	Arsenic	0.0023J	mg/L	0.0050	02/18/22 20:06	B
EPA 6020B	Barium	0.010	mg/L	0.0050	02/18/22 20:06	
EPA 6020B	Chromium	0.0071	mg/L	0.0050	02/18/22 20:06	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92586436023	GWC-11					
SM 2540C-2015	Total Dissolved Solids	120	mg/L	10.0	02/11/22 10:44	
SM 2320B	Alkalinity, Total as CaCO3	99.4	mg/L	5.0	02/10/22 20:56	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	99.4	mg/L	5.0	02/10/22 20:56	
EPA 300.0 Rev 2.1 1993	Chloride	1.1	mg/L	1.0	02/14/22 18:49	
EPA 300.0 Rev 2.1 1993	Sulfate	1.7	mg/L	1.0	02/14/22 18:49	
92586436024	GWC-11R					
	Performed by	CUSTOME			02/08/22 10:31	
		R				
	pH	7.58	Std. Units		02/08/22 10:31	
EPA 6010D	Potassium	1.1	mg/L	0.20	02/18/22 19:03	
EPA 6010D	Sodium	0.96J	mg/L	1.0	02/18/22 19:03	
EPA 6010D	Calcium	34.8	mg/L	1.0	02/18/22 19:03	
EPA 6010D	Magnesium	18.7	mg/L	0.050	02/18/22 19:03	
EPA 6020B	Arsenic	0.0035J	mg/L	0.0050	02/18/22 20:12	B
EPA 6020B	Barium	0.021	mg/L	0.0050	02/18/22 20:12	
EPA 6020B	Chromium	0.0042J	mg/L	0.0050	02/18/22 20:12	
SM 2540C-2015	Total Dissolved Solids	157	mg/L	10.0	02/11/22 10:44	
SM 2320B	Alkalinity, Total as CaCO3	147	mg/L	5.0	02/10/22 21:03	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	147	mg/L	5.0	02/10/22 21:03	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	02/14/22 19:34	
EPA 300.0 Rev 2.1 1993	Sulfate	1.5	mg/L	1.0	02/14/22 19:34	
92586436025	GWC-13RZ					
	Performed by	CUSTOME			02/08/22 10:31	
		R				
	pH	7.46	Std. Units		02/08/22 10:31	
EPA 6010D	Potassium	1.0	mg/L	0.20	02/18/22 19:07	
EPA 6010D	Sodium	24.1	mg/L	1.0	02/18/22 19:07	
EPA 6010D	Calcium	43.9	mg/L	1.0	02/18/22 19:07	
EPA 6010D	Magnesium	18.7	mg/L	0.050	02/18/22 19:07	
EPA 6020B	Arsenic	0.0035J	mg/L	0.0050	02/18/22 20:18	B
EPA 6020B	Barium	0.11	mg/L	0.0050	02/18/22 20:18	
EPA 6020B	Boron	0.017J	mg/L	0.040	02/18/22 20:18	
SM 2540C-2015	Total Dissolved Solids	262	mg/L	10.0	02/11/22 10:44	
SM 2320B	Alkalinity, Total as CaCO3	159	mg/L	5.0	02/10/22 21:11	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	159	mg/L	5.0	02/10/22 21:11	
EPA 300.0 Rev 2.1 1993	Chloride	6.1	mg/L	1.0	02/14/22 19:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.13	mg/L	0.10	02/14/22 19:49	
EPA 300.0 Rev 2.1 1993	Sulfate	63.1	mg/L	1.0	02/14/22 19:49	
92586436026	GWC-14Z					
	Performed by	CUSTOME			02/08/22 10:31	
		R				
	pH	6.06	Std. Units		02/08/22 10:31	
EPA 6010D	Potassium	1.2	mg/L	0.20	02/18/22 19:12	
EPA 6010D	Sodium	3.3	mg/L	1.0	02/18/22 19:12	
EPA 6010D	Calcium	14.3	mg/L	1.0	02/18/22 19:12	
EPA 6010D	Magnesium	6.3	mg/L	0.050	02/18/22 19:12	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92586436026	GWC-14Z					
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	02/18/22 20:36	B
EPA 6020B	Barium	0.014	mg/L	0.0050	02/18/22 20:36	
EPA 6020B	Beryllium	0.00011J	mg/L	0.00050	02/18/22 20:36	
SM 2540C-2015	Total Dissolved Solids	92.0	mg/L	10.0	02/11/22 10:45	
SM 2320B	Alkalinity, Total as CaCO3	49.6	mg/L	5.0	02/15/22 16:45	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	49.6	mg/L	5.0	02/15/22 16:45	
EPA 300.0 Rev 2.1 1993	Chloride	3.6	mg/L	1.0	02/14/22 20:34	
EPA 300.0 Rev 2.1 1993	Sulfate	6.4	mg/L	1.0	02/14/22 20:34	
92586436027	GWC-15R					
	Performed by	CUSTOME			02/08/22 10:31	
		R				
	pH	7.61	Std. Units		02/08/22 10:31	
EPA 6010D	Potassium	0.97	mg/L	0.20	02/18/22 19:26	
EPA 6010D	Sodium	1.1	mg/L	1.0	02/18/22 19:26	
EPA 6010D	Calcium	41.7	mg/L	1.0	02/18/22 19:26	
EPA 6010D	Magnesium	20.1	mg/L	0.050	02/18/22 19:26	
EPA 6020B	Arsenic	0.0026J	mg/L	0.0050	02/18/22 20:42	B
EPA 6020B	Barium	0.017	mg/L	0.0050	02/18/22 20:42	
EPA 6020B	Nickel	0.00093J	mg/L	0.0050	02/18/22 20:42	
SM 2540C-2015	Total Dissolved Solids	162	mg/L	10.0	02/11/22 11:39	
SM 2320B	Alkalinity, Total as CaCO3	162	mg/L	5.0	02/15/22 16:49	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	162	mg/L	5.0	02/15/22 16:49	
EPA 300.0 Rev 2.1 1993	Chloride	1.2	mg/L	1.0	02/14/22 21:19	
EPA 300.0 Rev 2.1 1993	Sulfate	8.3	mg/L	1.0	02/14/22 21:19	
92586436028	DUP-3					
EPA 6010D	Potassium	1.0	mg/L	0.20	02/18/22 19:31	
EPA 6010D	Sodium	0.95J	mg/L	1.0	02/18/22 19:31	
EPA 6010D	Calcium	33.7	mg/L	1.0	02/18/22 19:31	
EPA 6010D	Magnesium	17.8	mg/L	0.050	02/18/22 19:31	
EPA 6020B	Antimony	0.00094J	mg/L	0.0030	02/18/22 20:48	
EPA 6020B	Arsenic	0.0035J	mg/L	0.0050	02/18/22 20:48	B
EPA 6020B	Barium	0.020	mg/L	0.0050	02/18/22 20:48	
EPA 6020B	Chromium	0.0041J	mg/L	0.0050	02/18/22 20:48	
SM 2540C-2015	Total Dissolved Solids	162	mg/L	10.0	02/11/22 11:39	
SM 2320B	Alkalinity, Total as CaCO3	148	mg/L	5.0	02/15/22 16:53	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	148	mg/L	5.0	02/15/22 16:53	
EPA 300.0 Rev 2.1 1993	Chloride	1.3	mg/L	1.0	02/14/22 21:34	
EPA 300.0 Rev 2.1 1993	Sulfate	1.5	mg/L	1.0	02/14/22 21:34	
92586436029	FB-4					
EPA 6020B	Arsenic	0.0019J	mg/L	0.0050	02/18/22 20:54	B
92586436030	GWC-15Z					
	Performed by	CUSTOME			02/08/22 10:31	
		R				
	pH	7.83	Std. Units		02/08/22 10:31	
EPA 6010D	Potassium	0.96	mg/L	0.20	02/18/22 19:41	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92586436030	GWC-15Z					
EPA 6010D	Sodium	3.0	mg/L	1.0	02/18/22 19:41	
EPA 6010D	Calcium	26.1	mg/L	1.0	02/18/22 19:41	
EPA 6010D	Magnesium	14.0	mg/L	0.050	02/18/22 19:41	
EPA 6020B	Arsenic	0.0025J	mg/L	0.0050	02/18/22 21:00	B
EPA 6020B	Barium	0.012	mg/L	0.0050	02/18/22 21:00	
EPA 6020B	Chromium	0.0011J	mg/L	0.0050	02/18/22 21:00	
SM 2540C-2015	Total Dissolved Solids	121	mg/L	10.0	02/11/22 11:40	
SM 2320B	Alkalinity, Total as CaCO3	123	mg/L	5.0	02/15/22 17:01	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	123	mg/L	5.0	02/15/22 17:01	
EPA 300.0 Rev 2.1 1993	Chloride	0.60J	mg/L	1.0	02/14/22 22:04	
EPA 300.0 Rev 2.1 1993	Sulfate	0.64J	mg/L	1.0	02/14/22 22:04	
92586436031	FB-5					
EPA 6020B	Arsenic	0.0018J	mg/L	0.0050	02/18/22 21:12	B
92586436032	GWC-13					
	Performed by	CUSTOME			02/18/22 13:25	
	pH	7.24	Std. Units		02/18/22 13:25	
EPA 6010D	Potassium	1.9	mg/L	0.20	03/01/22 02:45	
EPA 6010D	Sodium	1.5	mg/L	1.0	03/01/22 02:45	
EPA 6010D	Calcium	29.3	mg/L	1.0	03/01/22 02:45	
EPA 6010D	Magnesium	10.9	mg/L	0.050	03/01/22 02:45	
EPA 6020B	Barium	0.020	mg/L	0.0050	02/25/22 23:19	
EPA 6020B	Beryllium	0.000089J	mg/L	0.00050	02/25/22 23:19	
EPA 6020B	Boron	0.015J	mg/L	0.040	02/25/22 23:19	
EPA 6020B	Chromium	0.0053	mg/L	0.0050	02/25/22 23:19	
SM 2540C-2015	Total Dissolved Solids	119	mg/L	10.0	02/23/22 16:01	
SM 2320B	Alkalinity, Total as CaCO3	109	mg/L	5.0	02/25/22 11:45	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	109	mg/L	5.0	02/25/22 11:45	
EPA 300.0 Rev 2.1 1993	Chloride	3.1	mg/L	1.0	02/25/22 08:51	
EPA 300.0 Rev 2.1 1993	Sulfate	6.9	mg/L	1.0	02/25/22 08:51	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWA-1		Lab ID: 92586436001		Collected: 02/01/22 14:50		Received: 02/04/22 11:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:49		
pH	7.52	Std. Units			1		02/07/22 10:49		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 15:52	7440-66-6	
Potassium	1.3	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 15:52	7440-09-7	
Sodium	6.5	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 15:52	7440-23-5	
Calcium	34.1	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 15:52	7440-70-2	
Magnesium	16.4	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 15:52	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0028J	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 14:39	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 14:39	7440-38-2	
Barium	0.015	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 14:39	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 14:39	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 14:39	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 14:39	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 14:39	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 14:39	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 14:39	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 14:39	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 14:39	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 14:39	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 14:39	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 14:39	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 14:39	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:09	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	143	mg/L	10.0	10.0	1		02/07/22 17:20		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	161	mg/L	5.0	1.8	1		02/10/22 16:44		
Alkalinity,Bicarbonate (CaCO3)	161	mg/L	5.0	1.8	1		02/10/22 16:44		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 16:44		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWA-1 **Lab ID: 92586436001** Collected: 02/01/22 14:50 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.2	mg/L	1.0	0.60	1		02/12/22 19:54	16887-00-6	M1
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 19:54	16984-48-8	M1
Sulfate	0.93J	mg/L	1.0	0.50	1		02/12/22 19:54	14808-79-8	M1

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWA-2 **Lab ID: 92586436002** Collected: 02/01/22 14:44 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:50		
pH	6.30	Std. Units			1		02/07/22 10:50		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 15:56	7440-66-6	
Potassium	0.88	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 15:56	7440-09-7	
Sodium	1.9	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 15:56	7440-23-5	
Calcium	48.0	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 15:56	7440-70-2	M1
Magnesium	14.0	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 15:56	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 14:45	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 14:45	7440-38-2	
Barium	0.026	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 14:45	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 14:45	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 14:45	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 14:45	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 14:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 14:45	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 14:45	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 14:45	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 14:45	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 14:45	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 14:45	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 14:45	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 14:45	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:11	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	202	mg/L	10.0	10.0	1		02/07/22 17:21		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	80.9	mg/L	5.0	1.8	1		02/10/22 17:00		
Alkalinity,Bicarbonate (CaCO3)	80.9	mg/L	5.0	1.8	1		02/10/22 17:00		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 17:00		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWA-2 **Lab ID: 92586436002** Collected: 02/01/22 14:44 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.4	mg/L	1.0	0.60	1		02/12/22 21:04	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 21:04	16984-48-8	
Sulfate	86.1	mg/L	1.0	0.50	1		02/12/22 21:04	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWA-2R		Lab ID: 92586436003		Collected: 02/01/22 15:45		Received: 02/04/22 11:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:50		
pH	6.62	Std. Units			1		02/07/22 10:50		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 16:16	7440-66-6	
Potassium	0.67	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 16:16	7440-09-7	
Sodium	1.1	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 16:16	7440-23-5	
Calcium	34.1	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 16:16	7440-70-2	
Magnesium	11.1	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 16:16	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0029J	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 14:51	7440-36-0	
Arsenic	0.0053	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 14:51	7440-38-2	
Barium	0.024	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 14:51	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 14:51	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 14:51	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 14:51	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 14:51	7440-47-3	
Cobalt	0.00093J	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 14:51	7440-48-4	
Copper	0.00096J	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 14:51	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 14:51	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 14:51	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 14:51	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 14:51	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 14:51	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 14:51	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:19	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	114	mg/L	10.0	10.0	1		02/07/22 17:21		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	122	mg/L	5.0	1.8	1		02/10/22 17:06		
Alkalinity,Bicarbonate (CaCO3)	122	mg/L	5.0	1.8	1		02/10/22 17:06		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 17:06		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWA-2R **Lab ID: 92586436003** Collected: 02/01/22 15:45 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.77J	mg/L	1.0	0.60	1		02/12/22 21:18	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 21:18	16984-48-8	
Sulfate	1.5	mg/L	1.0	0.50	1		02/12/22 21:18	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWA-50		Lab ID: 92586436004		Collected: 02/01/22 15:40		Received: 02/04/22 11:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:50		
pH	5.61	Std. Units			1		02/07/22 10:50		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 16:20	7440-66-6	
Potassium	0.25	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 16:20	7440-09-7	
Sodium	1.7	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 16:20	7440-23-5	
Calcium	1.5	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 16:20	7440-70-2	
Magnesium	0.31	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 16:20	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0015J	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 15:15	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 15:15	7440-38-2	
Barium	0.0065	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 15:15	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 15:15	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 15:15	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 15:15	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 15:15	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 15:15	7440-48-4	
Copper	0.0017J	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 15:15	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 15:15	7439-92-1	
Nickel	0.00080J	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 15:15	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 15:15	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 15:15	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 15:15	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 15:15	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:22	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	21.0	mg/L	10.0	10.0	1		02/07/22 17:21		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	4.7J	mg/L	5.0	1.8	1		02/10/22 19:19		
Alkalinity,Bicarbonate (CaCO3)	4.7J	mg/L	5.0	1.8	1		02/10/22 19:19		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 19:19		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWA-50 **Lab ID: 92586436004** Collected: 02/01/22 15:40 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.91J	mg/L	1.0	0.60	1		02/12/22 21:32	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 21:32	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/12/22 21:32	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: DUP-1		Lab ID: 92586436005		Collected: 02/01/22 00:00	Received: 02/04/22 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 16:25	7440-66-6	
Potassium	0.71	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 16:25	7440-09-7	
Sodium	1.1	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 16:25	7440-23-5	
Calcium	33.8	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 16:25	7440-70-2	
Magnesium	11.0	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 16:25	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0033	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 15:21	7440-36-0	
Arsenic	0.0037J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 15:21	7440-38-2	
Barium	0.024	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 15:21	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 15:21	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 15:21	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 15:21	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 15:21	7440-47-3	
Cobalt	0.00090J	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 15:21	7440-48-4	
Copper	0.00078J	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 15:21	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 15:21	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 15:21	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 15:21	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 15:21	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 15:21	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 15:21	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:25	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	118	mg/L	10.0	10.0	1		02/07/22 17:21		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	120	mg/L	5.0	1.8	1		02/10/22 17:15		
Alkalinity,Bicarbonate (CaCO3)	120	mg/L	5.0	1.8	1		02/10/22 17:15		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 17:15		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.77J	mg/L	1.0	0.60	1		02/12/22 21:46	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 21:46	16984-48-8	
Sulfate	1.5	mg/L	1.0	0.50	1		02/12/22 21:46	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: FB-1 **Lab ID: 92586436006** Collected: 02/01/22 16:00 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 16:39	7440-66-6	
Potassium	ND	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 16:39	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 16:39	7440-23-5	
Calcium	ND	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 16:39	7440-70-2	
Magnesium	ND	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 16:39	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 15:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 15:44	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 15:44	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 15:44	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 15:44	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 15:44	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 15:44	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 15:44	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 15:44	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 15:44	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 15:44	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 15:44	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 15:44	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 15:44	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 15:44	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:27	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/07/22 17:21		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/10/22 17:21		
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 17:21		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 17:21		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		02/12/22 22:00	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 22:00	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/12/22 22:00	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWA-3A **Lab ID: 92586436007** Collected: 02/02/22 12:08 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:50		
pH	7.94	Std. Units			1		02/07/22 10:50		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 16:44	7440-66-6	
Potassium	1.2	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 16:44	7440-09-7	
Sodium	3.5	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 16:44	7440-23-5	
Calcium	22.6	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 16:44	7440-70-2	
Magnesium	11.3	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 16:44	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 15:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 15:50	7440-38-2	
Barium	0.0064	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 15:50	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 15:50	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 15:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 15:50	7440-43-9	
Chromium	0.0069	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 15:50	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 15:50	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 15:50	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 15:50	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 15:50	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 15:50	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 15:50	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 15:50	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 15:50	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:30	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	104	mg/L	10.0	10.0	1		02/08/22 11:13		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	97.5	mg/L	5.0	1.8	1		02/10/22 20:33		
Alkalinity,Bicarbonate (CaCO3)	97.5	mg/L	5.0	1.8	1		02/10/22 20:33		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 20:33		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWA-3A **Lab ID: 92586436007** Collected: 02/02/22 12:08 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.9	mg/L	1.0	0.60	1		02/12/22 22:14	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 22:14	16984-48-8	
Sulfate	3.4	mg/L	1.0	0.50	1		02/12/22 22:14	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-5 **Lab ID: 92586436008** Collected: 02/02/22 11:34 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:50		
pH	5.90	Std. Units			1		02/07/22 10:50		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.034	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 16:49	7440-66-6	
Potassium	1.8	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 16:49	7440-09-7	
Sodium	1.7	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 16:49	7440-23-5	
Calcium	3.7	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 16:49	7440-70-2	
Magnesium	0.27	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 16:49	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 15:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 15:56	7440-38-2	
Barium	0.012	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 15:56	7440-39-3	
Beryllium	0.00075	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 15:56	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 15:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 15:56	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 15:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 15:56	7440-48-4	
Copper	0.024	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 15:56	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 15:56	7439-92-1	
Nickel	0.0088	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 15:56	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 15:56	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 15:56	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 15:56	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 15:56	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:32	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	32.0	mg/L	10.0	10.0	1		02/08/22 11:13		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	11.9	mg/L	5.0	1.8	1		02/10/22 21:53		
Alkalinity,Bicarbonate (CaCO3)	11.9	mg/L	5.0	1.8	1		02/10/22 21:53		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 21:53		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-5 **Lab ID: 92586436008** Collected: 02/02/22 11:34 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.66J	mg/L	1.0	0.60	1		02/12/22 22:27	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 22:27	16984-48-8	
Sulfate	1.0	mg/L	1.0	0.50	1		02/12/22 22:27	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-6		Lab ID: 92586436009		Collected: 02/02/22 15:22		Received: 02/04/22 11:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:51		
pH	7.40	Std. Units			1		02/07/22 10:51		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 16:54	7440-66-6	
Potassium	1.1	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 16:54	7440-09-7	
Sodium	1.0	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 16:54	7440-23-5	
Calcium	15.5	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 16:54	7440-70-2	
Magnesium	7.6	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 16:54	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 16:02	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:02	7440-38-2	
Barium	0.0064	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 16:02	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 16:02	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 16:02	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 16:02	7440-43-9	
Chromium	0.0026J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:02	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 16:02	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 16:02	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 16:02	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 16:02	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 16:02	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 16:02	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 16:02	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 16:02	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:35	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	73.0	mg/L	10.0	10.0	1		02/08/22 11:13		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	63.7	mg/L	5.0	1.8	1		02/10/22 20:40		
Alkalinity,Bicarbonate (CaCO3)	63.7	mg/L	5.0	1.8	1		02/10/22 20:40		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 20:40		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-6 **Lab ID: 92586436009** Collected: 02/02/22 15:22 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.1	mg/L	1.0	0.60	1		02/12/22 22:41	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 22:41	16984-48-8	
Sulfate	1.7	mg/L	1.0	0.50	1		02/12/22 22:41	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWC-6RZ		Lab ID: 92586436010		Collected: 02/02/22 14:00	Received: 02/04/22 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:51		
pH	6.80	Std. Units			1		02/07/22 10:51		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 16:58	7440-66-6	
Potassium	0.79	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 16:58	7440-09-7	
Sodium	1.6	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 16:58	7440-23-5	
Calcium	10.5	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 16:58	7440-70-2	
Magnesium	5.4	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 16:58	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 16:08	7440-36-0	
Arsenic	0.0012J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:08	7440-38-2	
Barium	0.0066	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 16:08	7440-39-3	
Beryllium	0.000070J	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 16:08	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 16:08	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 16:08	7440-43-9	
Chromium	0.0024J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:08	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 16:08	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 16:08	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 16:08	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 16:08	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 16:08	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 16:08	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 16:08	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 16:08	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:38	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	51.0	mg/L	10.0	10.0	1		02/08/22 11:13		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	43.6	mg/L	5.0	1.8	1		02/10/22 20:44		
Alkalinity,Bicarbonate (CaCO3)	43.6	mg/L	5.0	1.8	1		02/10/22 20:44		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 20:44		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-6RZ **Lab ID: 92586436010** Collected: 02/02/22 14:00 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.3	mg/L	1.0	0.60	1		02/12/22 22:55	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/12/22 22:55	16984-48-8	
Sulfate	1.5	mg/L	1.0	0.50	1		02/12/22 22:55	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWC-7Z		Lab ID: 92586436011		Collected: 02/02/22 12:15	Received: 02/04/22 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:51		
pH	7.54	Std. Units			1		02/07/22 10:51		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 17:03	7440-66-6	
Potassium	0.97	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 17:03	7440-09-7	
Sodium	2.7	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 17:03	7440-23-5	
Calcium	26.9	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 17:03	7440-70-2	
Magnesium	13.4	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 17:03	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00093J	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 16:14	7440-36-0	
Arsenic	0.0020J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:14	7440-38-2	
Barium	0.015	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 16:14	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 16:14	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 16:14	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 16:14	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:14	7440-47-3	
Cobalt	0.00042J	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 16:14	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 16:14	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 16:14	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 16:14	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 16:14	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 16:14	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 16:14	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 16:14	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:46	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	115	mg/L	10.0	10.0	1		02/08/22 11:14		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	123	mg/L	5.0	1.8	1		02/10/22 20:48		
Alkalinity,Bicarbonate (CaCO3)	123	mg/L	5.0	1.8	1		02/10/22 20:48		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 20:48		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-7Z **Lab ID: 92586436011** Collected: 02/02/22 12:15 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.76J	mg/L	1.0	0.60	1		02/13/22 00:05	16887-00-6	M1
Fluoride	ND	mg/L	0.10	0.050	1		02/13/22 00:05	16984-48-8	M1
Sulfate	1.3	mg/L	1.0	0.50	1		02/13/22 00:05	14808-79-8	M1

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWC-8Z **Lab ID: 92586436012** Collected: 02/02/22 14:24 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:51		
pH	8.92	Std. Units			1		02/07/22 10:51		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 17:08	7440-66-6	
Potassium	1.8	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 17:08	7440-09-7	
Sodium	2.1	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 17:08	7440-23-5	
Calcium	20.8	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 17:08	7440-70-2	
Magnesium	7.0	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 17:08	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 16:20	7440-36-0	
Arsenic	0.0011J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:20	7440-38-2	
Barium	0.024	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 16:20	7440-39-3	
Beryllium	0.000064J	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 16:20	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 16:20	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 16:20	7440-43-9	
Chromium	0.0021J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:20	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 16:20	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 16:20	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 16:20	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 16:20	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 16:20	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 16:20	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 16:20	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 16:20	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:48	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	85.0	mg/L	10.0	10.0	1		02/08/22 11:14		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	76.7	mg/L	5.0	1.8	1		02/10/22 20:52		
Alkalinity,Bicarbonate (CaCO3)	76.7	mg/L	5.0	1.8	1		02/10/22 20:52		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 20:52		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-8Z **Lab ID: 92586436012** Collected: 02/02/22 14:24 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.4	mg/L	1.0	0.60	1		02/13/22 00:47	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/13/22 00:47	16984-48-8	
Sulfate	0.72J	mg/L	1.0	0.50	1		02/13/22 00:47	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWC-8RR		Lab ID: 92586436013		Collected: 02/02/22 16:16		Received: 02/04/22 11:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:51		
pH	8.13	Std. Units			1		02/07/22 10:51		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 17:13	7440-66-6	
Potassium	1.3	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 17:13	7440-09-7	
Sodium	0.81J	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 17:13	7440-23-5	
Calcium	23.9	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 17:13	7440-70-2	
Magnesium	11.0	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 17:13	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0015J	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 16:26	7440-36-0	
Arsenic	0.0013J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:26	7440-38-2	
Barium	0.013	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 16:26	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 16:26	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 16:26	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 16:26	7440-43-9	
Chromium	0.0015J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:26	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 16:26	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 16:26	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 16:26	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 16:26	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 16:26	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 16:26	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 16:26	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 16:26	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:51	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	102	mg/L	10.0	10.0	1		02/08/22 11:14		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	102	mg/L	5.0	1.8	1		02/10/22 21:12		
Alkalinity,Bicarbonate (CaCO3)	102	mg/L	5.0	1.8	1		02/10/22 21:12		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 21:12		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-8RR **Lab ID: 92586436013** Collected: 02/02/22 16:16 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.77J	mg/L	1.0	0.60	1		02/13/22 01:01	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/13/22 01:01	16984-48-8	
Sulfate	0.72J	mg/L	1.0	0.50	1		02/13/22 01:01	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWC-9		Lab ID: 92586436014		Collected: 02/02/22 15:02		Received: 02/04/22 11:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:51		
pH	4.81	Std. Units			1		02/07/22 10:51		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 17:17	7440-66-6	
Potassium	0.92	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 17:17	7440-09-7	
Sodium	1.2	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 17:17	7440-23-5	
Calcium	2.2	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 17:17	7440-70-2	
Magnesium	1.2	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 17:17	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 16:32	7440-36-0	
Arsenic	0.0013J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:32	7440-38-2	
Barium	0.044	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 16:32	7440-39-3	
Beryllium	0.00018J	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 16:32	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 16:32	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 16:32	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:32	7440-47-3	
Cobalt	0.00043J	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 16:32	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 16:32	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 16:32	7439-92-1	
Nickel	0.0011J	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 16:32	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 16:32	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 16:32	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 16:32	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 16:32	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:53	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	21.0	mg/L	10.0	10.0	1		02/08/22 11:14		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	2.5J	mg/L	5.0	1.8	1		02/10/22 21:57		
Alkalinity,Bicarbonate (CaCO3)	2.5J	mg/L	5.0	1.8	1		02/10/22 21:57		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 21:57		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-9 **Lab ID: 92586436014** Collected: 02/02/22 15:02 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.1	mg/L	1.0	0.60	1		02/13/22 01:15	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/13/22 01:15	16984-48-8	
Sulfate	2.5	mg/L	1.0	0.50	1		02/13/22 01:15	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWC-12		Lab ID: 92586436015		Collected: 02/02/22 15:55	Received: 02/04/22 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:52		
pH	6.35	Std. Units			1		02/07/22 10:52		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.019J	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 17:22	7440-66-6	
Potassium	1.1	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 17:22	7440-09-7	
Sodium	2.1	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 17:22	7440-23-5	
Calcium	8.4	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 17:22	7440-70-2	
Magnesium	4.4	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 17:22	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 16:38	7440-36-0	
Arsenic	0.0027J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:38	7440-38-2	
Barium	0.023	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 16:38	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 16:38	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 16:38	7440-42-8	
Cadmium	0.0012	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 16:38	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 16:38	7440-47-3	
Cobalt	0.0034J	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 16:38	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 16:38	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 16:38	7439-92-1	
Nickel	0.0025J	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 16:38	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 16:38	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 16:38	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 16:38	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 16:38	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:56	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	54.0	mg/L	10.0	10.0	1		02/08/22 11:14		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	55.9	mg/L	5.0	1.8	1		02/10/22 21:19		
Alkalinity,Bicarbonate (CaCO3)	55.9	mg/L	5.0	1.8	1		02/10/22 21:19		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 21:19		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-12 **Lab ID: 92586436015** Collected: 02/02/22 15:55 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.79J	mg/L	1.0	0.60	1		02/13/22 01:28	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/13/22 01:28	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/13/22 01:28	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWA-50R		Lab ID: 92586436016		Collected: 02/02/22 10:12		Received: 02/04/22 11:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:52		
pH	5.17	Std. Units			1		02/07/22 10:52		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 17:36	7440-66-6	
Potassium	0.20	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 17:36	7440-09-7	
Sodium	0.94J	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 17:36	7440-23-5	
Calcium	0.93J	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 17:36	7440-70-2	
Magnesium	0.34	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 17:36	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 17:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 17:13	7440-38-2	
Barium	0.0090	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 17:13	7440-39-3	
Beryllium	0.000055J	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 17:13	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 17:13	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 17:13	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 17:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 17:13	7440-48-4	
Copper	0.0033J	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 17:13	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 17:13	7439-92-1	
Nickel	0.00089J	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 17:13	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 17:13	7782-49-2	
Silver	0.0012J	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 17:13	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 17:13	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 17:13	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 11:59	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	15.0	mg/L	10.0	10.0	1		02/08/22 11:15		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	2.9J	mg/L	5.0	1.8	1		02/10/22 22:00		
Alkalinity,Bicarbonate (CaCO3)	2.9J	mg/L	5.0	1.8	1		02/10/22 22:00		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 22:00		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWA-50R **Lab ID: 92586436016** Collected: 02/02/22 10:12 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.70J	mg/L	1.0	0.60	1		02/13/22 01:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/13/22 01:42	16984-48-8	
Sulfate	0.53J	mg/L	1.0	0.50	1		02/13/22 01:42	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: DUP-2		Lab ID: 92586436017		Collected: 02/02/22 00:00	Received: 02/04/22 11:45	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 17:41	7440-66-6	
Potassium	0.97	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 17:41	7440-09-7	
Sodium	1.2	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 17:41	7440-23-5	
Calcium	2.3	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 17:41	7440-70-2	
Magnesium	1.2	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 17:41	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 17:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 17:19	7440-38-2	
Barium	0.045	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 17:19	7440-39-3	
Beryllium	0.00018J	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 17:19	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 17:19	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 17:19	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 17:19	7440-47-3	
Cobalt	0.00042J	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 17:19	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 17:19	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 17:19	7439-92-1	
Nickel	0.0011J	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 17:19	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 17:19	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 17:19	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 17:19	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 17:19	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 12:01	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	27.0	mg/L	10.0	10.0	1		02/08/22 11:15		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	2.6J	mg/L	5.0	1.8	1		02/10/22 22:03		
Alkalinity,Bicarbonate (CaCO3)	2.6J	mg/L	5.0	1.8	1		02/10/22 22:03		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 22:03		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.1	mg/L	1.0	0.60	1		02/13/22 01:56	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/13/22 01:56	16984-48-8	
Sulfate	2.5	mg/L	1.0	0.50	1		02/13/22 01:56	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: FB-2		Lab ID: 92586436018		Collected: 02/02/22 16:14	Received: 02/04/22 11:45	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:02	02/18/22 17:46	7440-66-6		
Potassium	ND	mg/L	0.20	0.15	1	02/18/22 08:02	02/18/22 17:46	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	02/18/22 08:02	02/18/22 17:46	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	02/18/22 08:02	02/18/22 17:46	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	02/18/22 08:02	02/18/22 17:46	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 17:25	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 17:25	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 17:25	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 17:25	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 17:25	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 17:25	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 17:25	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 17:25	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 17:25	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 17:25	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 17:25	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 17:25	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 17:25	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 17:25	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 17:25	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 12:46	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/08/22 11:15			
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/10/22 21:29			
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 21:29			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 21:29			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		02/13/22 02:38	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		02/13/22 02:38	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		02/13/22 02:38	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWA-4RZ		Lab ID: 92586436019		Collected: 02/03/22 10:55		Received: 02/04/22 11:45		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/07/22 10:52		
pH	7.20	Std. Units			1		02/07/22 10:52		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 18:15	7440-66-6	
Potassium	0.88	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 18:15	7440-09-7	
Sodium	3.8	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 18:15	7440-23-5	
Calcium	57.7	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 18:15	7440-70-2	M1
Magnesium	24.6	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 18:15	7439-95-4	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 17:31	7440-36-0	
Arsenic	0.0034J	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 17:31	7440-38-2	
Barium	0.063	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 17:31	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 17:31	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 17:31	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 17:31	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 17:31	7440-47-3	
Cobalt	0.0059	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 17:31	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 17:31	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 17:31	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 17:31	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 17:31	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 17:31	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 17:31	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 17:31	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 12:49	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	243	mg/L	10.0	10.0	1		02/09/22 10:14		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	221	mg/L	5.0	1.8	1		02/15/22 17:21		
Alkalinity,Bicarbonate (CaCO3)	221	mg/L	5.0	1.8	1		02/15/22 17:21		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/15/22 17:21		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWA-4RZ **Lab ID: 92586436019** Collected: 02/03/22 10:55 Received: 02/04/22 11:45 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.6	mg/L	1.0	0.60	1		02/13/22 02:52	16887-00-6	
Fluoride	0.15	mg/L	0.10	0.050	1		02/13/22 02:52	16984-48-8	
Sulfate	20.7	mg/L	1.0	0.50	1		02/13/22 02:52	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: FB-3		Lab ID: 92586436020		Collected: 02/03/22 12:00	Received: 02/04/22 11:45	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 18:44	7440-66-6		
Potassium	ND	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 18:44	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 18:44	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 18:44	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 18:44	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 07:59	02/18/22 17:43	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 17:43	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	02/18/22 07:59	02/18/22 17:43	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 07:59	02/18/22 17:43	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 07:59	02/18/22 17:43	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 07:59	02/18/22 17:43	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 07:59	02/18/22 17:43	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 07:59	02/18/22 17:43	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 07:59	02/18/22 17:43	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 07:59	02/18/22 17:43	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 07:59	02/18/22 17:43	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 07:59	02/18/22 17:43	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 07:59	02/18/22 17:43	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 07:59	02/18/22 17:43	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 07:59	02/18/22 17:43	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 12:51	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	12.0	mg/L	10.0	10.0	1		02/09/22 10:14			
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/15/22 17:26			
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/15/22 17:26			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/15/22 17:26			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		02/13/22 03:06	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		02/13/22 03:06	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		02/13/22 03:06	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: **GWC-10** Lab ID: **92586436021** Collected: 02/04/22 11:15 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/08/22 10:30		
pH	6.53	Std. Units			1		02/08/22 10:30		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 18:48	7440-66-6	
Potassium	0.51	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 18:48	7440-09-7	
Sodium	2.1	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 18:48	7440-23-5	
Calcium	21.3	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 18:48	7440-70-2	
Magnesium	9.0	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 18:48	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 08:01	02/18/22 19:37	7440-36-0	
Arsenic	0.0023J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 19:37	7440-38-2	B
Barium	0.022	mg/L	0.0050	0.00067	1	02/18/22 08:01	02/18/22 19:37	7440-39-3	
Beryllium	0.00021J	mg/L	0.00050	0.000054	1	02/18/22 08:01	02/18/22 19:37	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 08:01	02/18/22 19:37	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 08:01	02/18/22 19:37	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 19:37	7440-47-3	
Cobalt	0.0018J	mg/L	0.0050	0.00039	1	02/18/22 08:01	02/18/22 19:37	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 08:01	02/18/22 19:37	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 08:01	02/18/22 19:37	7439-92-1	
Nickel	0.0014J	mg/L	0.0050	0.00071	1	02/18/22 08:01	02/18/22 19:37	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 08:01	02/18/22 19:37	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 08:01	02/18/22 19:37	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 08:01	02/18/22 19:37	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 08:01	02/18/22 19:37	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 12:54	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	102	mg/L	10.0	10.0	1		02/11/22 10:44		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	88.6	mg/L	5.0	1.8	1		02/10/22 20:43		
Alkalinity,Bicarbonate (CaCO3)	88.6	mg/L	5.0	1.8	1		02/10/22 20:43		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 20:43		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-10 **Lab ID: 92586436021** Collected: 02/04/22 11:15 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.9	mg/L	1.0	0.60	1		02/14/22 12:50	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/14/22 12:50	16984-48-8	
Sulfate	1.2	mg/L	1.0	0.50	1		02/14/22 12:50	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-10R		Lab ID: 92586436022		Collected: 02/04/22 12:40		Received: 02/08/22 08:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/08/22 10:31		
pH	7.69	Std. Units			1		02/08/22 10:31		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 18:53	7440-66-6	
Potassium	0.71	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 18:53	7440-09-7	
Sodium	2.0	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 18:53	7440-23-5	
Calcium	46.3	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 18:53	7440-70-2	
Magnesium	8.9	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 18:53	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0016J	mg/L	0.0030	0.00078	1	02/18/22 08:01	02/18/22 20:00	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:00	7440-38-2	B
Barium	0.028	mg/L	0.0050	0.00067	1	02/18/22 08:01	02/18/22 20:00	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 08:01	02/18/22 20:00	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 08:01	02/18/22 20:00	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 08:01	02/18/22 20:00	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 08:01	02/18/22 20:00	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 08:01	02/18/22 20:00	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 08:01	02/18/22 20:00	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 08:01	02/18/22 20:00	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 08:01	02/18/22 20:00	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 08:01	02/18/22 20:00	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 08:01	02/18/22 20:00	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 08:01	02/18/22 20:00	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 12:56	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	156	mg/L	10.0	10.0	1		02/11/22 10:44		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	144	mg/L	5.0	1.8	1		02/10/22 20:49		
Alkalinity,Bicarbonate (CaCO3)	144	mg/L	5.0	1.8	1		02/10/22 20:49		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 20:49		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-10R **Lab ID: 92586436022** Collected: 02/04/22 12:40 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.2	mg/L	1.0	0.60	1		02/14/22 13:04	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/14/22 13:04	16984-48-8	
Sulfate	1.1	mg/L	1.0	0.50	1		02/14/22 13:04	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: **GWC-11** Lab ID: **92586436023** Collected: 02/04/22 12:33 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/08/22 10:31		
pH	7.20	Std. Units			1		02/08/22 10:31		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 18:58	7440-66-6	
Potassium	0.83	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 18:58	7440-09-7	
Sodium	1.4	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 18:58	7440-23-5	
Calcium	19.2	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 18:58	7440-70-2	
Magnesium	10.2	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 18:58	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 08:01	02/18/22 20:06	7440-36-0	
Arsenic	0.0023J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:06	7440-38-2	B
Barium	0.010	mg/L	0.0050	0.00067	1	02/18/22 08:01	02/18/22 20:06	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 08:01	02/18/22 20:06	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 08:01	02/18/22 20:06	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 08:01	02/18/22 20:06	7440-43-9	
Chromium	0.0071	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 08:01	02/18/22 20:06	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 08:01	02/18/22 20:06	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 08:01	02/18/22 20:06	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 08:01	02/18/22 20:06	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 08:01	02/18/22 20:06	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 08:01	02/18/22 20:06	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 08:01	02/18/22 20:06	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 08:01	02/18/22 20:06	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 12:59	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	120	mg/L	10.0	10.0	1		02/11/22 10:44		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	99.4	mg/L	5.0	1.8	1		02/10/22 20:56		
Alkalinity,Bicarbonate (CaCO3)	99.4	mg/L	5.0	1.8	1		02/10/22 20:56		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 20:56		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-11 **Lab ID: 92586436023** Collected: 02/04/22 12:33 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.1	mg/L	1.0	0.60	1		02/14/22 18:49	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/14/22 18:49	16984-48-8	
Sulfate	1.7	mg/L	1.0	0.50	1		02/14/22 18:49	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-11R		Lab ID: 92586436024		Collected: 02/04/22 10:45		Received: 02/08/22 08:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/08/22 10:31		
pH	7.58	Std. Units			1		02/08/22 10:31		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 19:03	7440-66-6	
Potassium	1.1	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 19:03	7440-09-7	
Sodium	0.96J	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 19:03	7440-23-5	
Calcium	34.8	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 19:03	7440-70-2	
Magnesium	18.7	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 19:03	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 08:01	02/18/22 20:12	7440-36-0	
Arsenic	0.0035J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:12	7440-38-2	B
Barium	0.021	mg/L	0.0050	0.00067	1	02/18/22 08:01	02/18/22 20:12	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 08:01	02/18/22 20:12	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 08:01	02/18/22 20:12	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 08:01	02/18/22 20:12	7440-43-9	
Chromium	0.0042J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:12	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 08:01	02/18/22 20:12	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 08:01	02/18/22 20:12	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 08:01	02/18/22 20:12	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 08:01	02/18/22 20:12	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 08:01	02/18/22 20:12	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 08:01	02/18/22 20:12	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 08:01	02/18/22 20:12	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 08:01	02/18/22 20:12	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 13:02	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	157	mg/L	10.0	10.0	1		02/11/22 10:44		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	147	mg/L	5.0	1.8	1		02/10/22 21:03		
Alkalinity,Bicarbonate (CaCO3)	147	mg/L	5.0	1.8	1		02/10/22 21:03		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 21:03		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-11R **Lab ID: 92586436024** Collected: 02/04/22 10:45 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.4	mg/L	1.0	0.60	1		02/14/22 19:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/14/22 19:34	16984-48-8	
Sulfate	1.5	mg/L	1.0	0.50	1		02/14/22 19:34	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-13RZ **Lab ID: 92586436025** Collected: 02/04/22 09:44 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	CUSTOMER				1		02/08/22 10:31		
pH	7.46	Std. Units			1		02/08/22 10:31		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 19:07	7440-66-6	
Potassium	1.0	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 19:07	7440-09-7	
Sodium	24.1	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 19:07	7440-23-5	
Calcium	43.9	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 19:07	7440-70-2	
Magnesium	18.7	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 19:07	7439-95-4	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 08:01	02/18/22 20:18	7440-36-0	
Arsenic	0.0035J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:18	7440-38-2	B
Barium	0.11	mg/L	0.0050	0.00067	1	02/18/22 08:01	02/18/22 20:18	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 08:01	02/18/22 20:18	7440-41-7	
Boron	0.017J	mg/L	0.040	0.0086	1	02/18/22 08:01	02/18/22 20:18	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 08:01	02/18/22 20:18	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:18	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 08:01	02/18/22 20:18	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 08:01	02/18/22 20:18	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 08:01	02/18/22 20:18	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 08:01	02/18/22 20:18	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 08:01	02/18/22 20:18	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 08:01	02/18/22 20:18	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 08:01	02/18/22 20:18	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 08:01	02/18/22 20:18	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 13:04	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	262	mg/L	10.0	10.0	1		02/11/22 10:44		
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2320B Alkalinity

Analytical Method: SM 2320B
Pace Analytical Services - Minneapolis

Alkalinity, Total as CaCO3	159	mg/L	5.0	1.8	1		02/10/22 21:11		
Alkalinity,Bicarbonate (CaCO3)	159	mg/L	5.0	1.8	1		02/10/22 21:11		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/10/22 21:11		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWC-13RZ **Lab ID: 92586436025** Collected: 02/04/22 09:44 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	6.1	mg/L	1.0	0.60	1		02/14/22 19:49	16887-00-6	
Fluoride	0.13	mg/L	0.10	0.050	1		02/14/22 19:49	16984-48-8	
Sulfate	63.1	mg/L	1.0	0.50	1		02/14/22 19:49	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-14Z	Lab ID: 92586436026	Collected: 02/04/22 11:30	Received: 02/08/22 08:10	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/08/22 10:31		
pH	6.06	Std. Units			1		02/08/22 10:31		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 19:12	7440-66-6	
Potassium	1.2	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 19:12	7440-09-7	
Sodium	3.3	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 19:12	7440-23-5	
Calcium	14.3	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 19:12	7440-70-2	
Magnesium	6.3	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 19:12	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 08:01	02/18/22 20:36	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:36	7440-38-2	B
Barium	0.014	mg/L	0.0050	0.00067	1	02/18/22 08:01	02/18/22 20:36	7440-39-3	
Beryllium	0.00011J	mg/L	0.00050	0.000054	1	02/18/22 08:01	02/18/22 20:36	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 08:01	02/18/22 20:36	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 08:01	02/18/22 20:36	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 08:01	02/18/22 20:36	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 08:01	02/18/22 20:36	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 08:01	02/18/22 20:36	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 08:01	02/18/22 20:36	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 08:01	02/18/22 20:36	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 08:01	02/18/22 20:36	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 08:01	02/18/22 20:36	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 08:01	02/18/22 20:36	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 13:12	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	92.0	mg/L	10.0	10.0	1		02/11/22 10:45		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	49.6	mg/L	5.0	1.8	1		02/15/22 16:45		
Alkalinity,Bicarbonate (CaCO3)	49.6	mg/L	5.0	1.8	1		02/15/22 16:45		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/15/22 16:45		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-14Z **Lab ID: 92586436026** Collected: 02/04/22 11:30 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.6	mg/L	1.0	0.60	1		02/14/22 20:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/14/22 20:34	16984-48-8	
Sulfate	6.4	mg/L	1.0	0.50	1		02/14/22 20:34	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: **GWC-15R** Lab ID: **92586436027** Collected: 02/04/22 13:14 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	CUSTOMER				1		02/08/22 10:31		
pH	7.61	Std. Units			1		02/08/22 10:31		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 19:26	7440-66-6	
Potassium	0.97	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 19:26	7440-09-7	
Sodium	1.1	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 19:26	7440-23-5	
Calcium	41.7	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 19:26	7440-70-2	
Magnesium	20.1	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 19:26	7439-95-4	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 08:01	02/18/22 20:42	7440-36-0	
Arsenic	0.0026J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:42	7440-38-2	B
Barium	0.017	mg/L	0.0050	0.00067	1	02/18/22 08:01	02/18/22 20:42	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 08:01	02/18/22 20:42	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 08:01	02/18/22 20:42	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 08:01	02/18/22 20:42	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:42	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 08:01	02/18/22 20:42	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 08:01	02/18/22 20:42	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 08:01	02/18/22 20:42	7439-92-1	
Nickel	0.00093J	mg/L	0.0050	0.00071	1	02/18/22 08:01	02/18/22 20:42	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 08:01	02/18/22 20:42	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 08:01	02/18/22 20:42	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 08:01	02/18/22 20:42	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 08:01	02/18/22 20:42	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 13:15	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	162	mg/L	10.0	10.0	1		02/11/22 11:39		
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2320B Alkalinity

Analytical Method: SM 2320B
Pace Analytical Services - Minneapolis

Alkalinity, Total as CaCO3	162	mg/L	5.0	1.8	1		02/15/22 16:49		
Alkalinity,Bicarbonate (CaCO3)	162	mg/L	5.0	1.8	1		02/15/22 16:49		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/15/22 16:49		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-15R **Lab ID: 92586436027** Collected: 02/04/22 13:14 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.2	mg/L	1.0	0.60	1		02/14/22 21:19	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/14/22 21:19	16984-48-8	
Sulfate	8.3	mg/L	1.0	0.50	1		02/14/22 21:19	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: DUP-3 **Lab ID: 92586436028** Collected: 02/04/22 00:00 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 19:31	7440-66-6	
Potassium	1.0	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 19:31	7440-09-7	
Sodium	0.95J	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 19:31	7440-23-5	
Calcium	33.7	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 19:31	7440-70-2	
Magnesium	17.8	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 19:31	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.00094J	mg/L	0.0030	0.00078	1	02/18/22 08:01	02/18/22 20:48	7440-36-0	
Arsenic	0.0035J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:48	7440-38-2	B
Barium	0.020	mg/L	0.0050	0.00067	1	02/18/22 08:01	02/18/22 20:48	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 08:01	02/18/22 20:48	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 08:01	02/18/22 20:48	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 08:01	02/18/22 20:48	7440-43-9	
Chromium	0.0041J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:48	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 08:01	02/18/22 20:48	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 08:01	02/18/22 20:48	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 08:01	02/18/22 20:48	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 08:01	02/18/22 20:48	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 08:01	02/18/22 20:48	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 08:01	02/18/22 20:48	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 08:01	02/18/22 20:48	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 08:01	02/18/22 20:48	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 13:17	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	162	mg/L	10.0	10.0	1		02/11/22 11:39		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	148	mg/L	5.0	1.8	1		02/15/22 16:53		
Alkalinity,Bicarbonate (CaCO3)	148	mg/L	5.0	1.8	1		02/15/22 16:53		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/15/22 16:53		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	1.3	mg/L	1.0	0.60	1		02/14/22 21:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/14/22 21:34	16984-48-8	
Sulfate	1.5	mg/L	1.0	0.50	1		02/14/22 21:34	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: FB-4 **Lab ID: 92586436029** Collected: 02/04/22 13:15 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 19:36	7440-66-6	
Potassium	ND	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 19:36	7440-09-7	
Sodium	ND	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 19:36	7440-23-5	
Calcium	ND	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 19:36	7440-70-2	
Magnesium	ND	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 19:36	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 08:01	02/18/22 20:54	7440-36-0	
Arsenic	0.0019J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:54	7440-38-2	B
Barium	ND	mg/L	0.0050	0.00067	1	02/18/22 08:01	02/18/22 20:54	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 08:01	02/18/22 20:54	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 08:01	02/18/22 20:54	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 08:01	02/18/22 20:54	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 20:54	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 08:01	02/18/22 20:54	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 08:01	02/18/22 20:54	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 08:01	02/18/22 20:54	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 08:01	02/18/22 20:54	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 08:01	02/18/22 20:54	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 08:01	02/18/22 20:54	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 08:01	02/18/22 20:54	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 08:01	02/18/22 20:54	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 13:20	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/11/22 11:40		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/15/22 16:58		
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/15/22 16:58		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/15/22 16:58		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		02/14/22 21:49	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/14/22 21:49	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		02/14/22 21:49	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWC-15Z		Lab ID: 92586436030		Collected: 02/07/22 10:13		Received: 02/08/22 08:10		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/08/22 10:31		
pH	7.83	Std. Units			1		02/08/22 10:31		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 19:41	7440-66-6	
Potassium	0.96	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 19:41	7440-09-7	
Sodium	3.0	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 19:41	7440-23-5	
Calcium	26.1	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 19:41	7440-70-2	
Magnesium	14.0	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 19:41	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 08:01	02/18/22 21:00	7440-36-0	
Arsenic	0.0025J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 21:00	7440-38-2	B
Barium	0.012	mg/L	0.0050	0.00067	1	02/18/22 08:01	02/18/22 21:00	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 08:01	02/18/22 21:00	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 08:01	02/18/22 21:00	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 08:01	02/18/22 21:00	7440-43-9	
Chromium	0.0011J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 21:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 08:01	02/18/22 21:00	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 08:01	02/18/22 21:00	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 08:01	02/18/22 21:00	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 08:01	02/18/22 21:00	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 08:01	02/18/22 21:00	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 08:01	02/18/22 21:00	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 08:01	02/18/22 21:00	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 08:01	02/18/22 21:00	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/15/22 15:15	02/16/22 13:23	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	121	mg/L	10.0	10.0	1		02/11/22 11:40		
2320B Alkalinity									
Analytical Method: SM 2320B									
Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	123	mg/L	5.0	1.8	1		02/15/22 17:01		
Alkalinity,Bicarbonate (CaCO3)	123	mg/L	5.0	1.8	1		02/15/22 17:01		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/15/22 17:01		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-15Z **Lab ID: 92586436030** Collected: 02/07/22 10:13 Received: 02/08/22 08:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.60J	mg/L	1.0	0.60	1		02/14/22 22:04	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/14/22 22:04	16984-48-8	
Sulfate	0.64J	mg/L	1.0	0.50	1		02/14/22 22:04	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: FB-5		Lab ID: 92586436031		Collected: 02/07/22 11:30	Received: 02/08/22 08:10	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	02/18/22 08:05	02/18/22 19:46	7440-66-6		
Potassium	ND	mg/L	0.20	0.15	1	02/18/22 08:05	02/18/22 19:46	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	02/18/22 08:05	02/18/22 19:46	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	02/18/22 08:05	02/18/22 19:46	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	02/18/22 08:05	02/18/22 19:46	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	02/18/22 08:01	02/18/22 21:12	7440-36-0		
Arsenic	0.0018J	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 21:12	7440-38-2	B	
Barium	ND	mg/L	0.0050	0.00067	1	02/18/22 08:01	02/18/22 21:12	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	02/18/22 08:01	02/18/22 21:12	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	02/18/22 08:01	02/18/22 21:12	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	02/18/22 08:01	02/18/22 21:12	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	02/18/22 08:01	02/18/22 21:12	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	02/18/22 08:01	02/18/22 21:12	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	02/18/22 08:01	02/18/22 21:12	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	02/18/22 08:01	02/18/22 21:12	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	02/18/22 08:01	02/18/22 21:12	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	02/18/22 08:01	02/18/22 21:12	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	02/18/22 08:01	02/18/22 21:12	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	02/18/22 08:01	02/18/22 21:12	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	02/18/22 08:01	02/18/22 21:12	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/16/22 08:30	02/16/22 13:31	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/11/22 11:40			
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO3	ND	mg/L	5.0	1.8	1		02/15/22 17:05			
Alkalinity,Bicarbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/15/22 17:05			
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/15/22 17:05			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		02/14/22 22:19	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		02/14/22 22:19	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		02/14/22 22:19	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: GWC-13	Lab ID: 92586436032	Collected: 02/17/22 13:06	Received: 02/18/22 09:52	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		02/18/22 13:25		
pH	7.24	Std. Units			1		02/18/22 13:25		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	02/25/22 10:43	03/01/22 02:45	7440-66-6	
Potassium	1.9	mg/L	0.20	0.15	1	02/25/22 10:43	03/01/22 02:45	7440-09-7	
Sodium	1.5	mg/L	1.0	0.58	1	02/25/22 10:43	03/01/22 02:45	7440-23-5	
Calcium	29.3	mg/L	1.0	0.12	1	02/25/22 10:43	03/01/22 02:45	7440-70-2	
Magnesium	10.9	mg/L	0.050	0.012	1	02/25/22 10:43	03/01/22 02:45	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	02/25/22 10:38	02/25/22 23:19	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0011	1	02/25/22 10:38	02/25/22 23:19	7440-38-2	
Barium	0.020	mg/L	0.0050	0.00067	1	02/25/22 10:38	02/25/22 23:19	7440-39-3	
Beryllium	0.000089J	mg/L	0.00050	0.000054	1	02/25/22 10:38	02/25/22 23:19	7440-41-7	
Boron	0.015J	mg/L	0.040	0.0086	1	02/25/22 10:38	02/25/22 23:19	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	02/25/22 10:38	02/25/22 23:19	7440-43-9	
Chromium	0.0053	mg/L	0.0050	0.0011	1	02/25/22 10:38	02/25/22 23:19	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	02/25/22 10:38	02/25/22 23:19	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	02/25/22 10:38	02/25/22 23:19	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	02/25/22 10:38	02/25/22 23:19	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	02/25/22 10:38	02/25/22 23:19	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	02/25/22 10:38	02/25/22 23:19	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	02/25/22 10:38	02/25/22 23:19	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	02/25/22 10:38	02/25/22 23:19	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	02/25/22 10:38	02/25/22 23:19	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	02/28/22 10:30	02/28/22 15:09	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	119	mg/L	10.0	10.0	1		02/23/22 16:01		
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO3	109	mg/L	5.0	1.8	1		02/25/22 11:45		
Alkalinity,Bicarbonate (CaCO3)	109	mg/L	5.0	1.8	1		02/25/22 11:45		
Alkalinity,Carbonate (CaCO3)	ND	mg/L	5.0	1.8	1		02/25/22 11:45		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Sample: GWC-13 **Lab ID: 92586436032** Collected: 02/17/22 13:06 Received: 02/18/22 09:52 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.1	mg/L	1.0	0.60	1		02/25/22 08:51	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		02/25/22 08:51	16984-48-8	
Sulfate	6.9	mg/L	1.0	0.50	1		02/25/22 08:51	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Sample: FB-6		Lab ID: 92586436033		Collected: 02/17/22 13:40	Received: 02/18/22 09:52	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	02/25/22 10:43	03/01/22 02:55	7440-66-6		
Potassium	ND	mg/L	0.20	0.15	1	02/25/22 10:43	03/01/22 02:55	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	02/25/22 10:43	03/01/22 02:55	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	02/25/22 10:43	03/01/22 02:55	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	02/25/22 10:43	03/01/22 02:55	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	02/25/22 10:38	02/25/22 23:31	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0011	1	02/25/22 10:38	02/25/22 23:31	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	02/25/22 10:38	02/25/22 23:31	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	02/25/22 10:38	02/25/22 23:31	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	02/25/22 10:38	02/25/22 23:31	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	02/25/22 10:38	02/25/22 23:31	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	02/25/22 10:38	02/25/22 23:31	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	02/25/22 10:38	02/25/22 23:31	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	02/25/22 10:38	02/25/22 23:31	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	02/25/22 10:38	02/25/22 23:31	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	02/25/22 10:38	02/25/22 23:31	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	02/25/22 10:38	02/25/22 23:31	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	02/25/22 10:38	02/25/22 23:31	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	02/25/22 10:38	02/25/22 23:31	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	02/25/22 10:38	02/25/22 23:31	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	02/28/22 10:30	02/28/22 15:12	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		02/23/22 16:01			
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	1.8	1		02/25/22 11:48			
Alkalinity, Bicarbonate (CaCO ₃)	ND	mg/L	5.0	1.8	1		02/25/22 11:48			
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	1.8	1		02/25/22 11:48			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		02/25/22 09:07	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		02/25/22 09:07	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		02/25/22 09:07	14808-79-8		

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 679147 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018

METHOD BLANK: 3553757 Matrix: Water
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	02/18/22 15:42	
Magnesium	mg/L	ND	0.050	0.012	02/18/22 15:42	
Potassium	mg/L	ND	0.20	0.15	02/18/22 15:42	
Sodium	mg/L	ND	1.0	0.58	02/18/22 15:42	
Zinc	mg/L	ND	0.020	0.0085	02/18/22 15:42	

LABORATORY CONTROL SAMPLE: 3553758

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	108	80-120	
Magnesium	mg/L	1	1.1	107	80-120	
Potassium	mg/L	1	1.1	106	80-120	
Sodium	mg/L	1	1.1	110	80-120	
Zinc	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553759 3553760

Parameter	Units	MS		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Spike Conc.	Result	Spike Conc.	Result	% Rec	% Rec						
Calcium	mg/L	48.0	1	1	49.4	48.9	137	89	75-125	1	20	M1	
Magnesium	mg/L	14.0	1	1	15.2	14.8	124	80	75-125	3	20		
Potassium	mg/L	0.88	1	1	2.0	2.0	109	113	75-125	2	20		
Sodium	mg/L	1.9	1	1	3.0	3.0	112	112	75-125	0	20		
Zinc	mg/L	ND	1	1	1.1	1.1	107	109	75-125	2	20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch:	679167	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436019, 92586436020, 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

METHOD BLANK: 3553950 Matrix: Water
Associated Lab Samples: 92586436019, 92586436020, 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	02/18/22 18:05	
Magnesium	mg/L	ND	0.050	0.012	02/18/22 18:05	
Potassium	mg/L	ND	0.20	0.15	02/18/22 18:05	
Sodium	mg/L	ND	1.0	0.58	02/18/22 18:05	
Zinc	mg/L	ND	0.020	0.0085	02/18/22 18:05	

LABORATORY CONTROL SAMPLE: 3553951

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	110	80-120	
Magnesium	mg/L	1	1.1	108	80-120	
Potassium	mg/L	1	1.1	111	80-120	
Sodium	mg/L	1	1.1	111	80-120	
Zinc	mg/L	1	1.1	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3553952 3553953

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92586436019 Result	Spike Conc.	Spike Conc.	MS Result						
Calcium	mg/L	57.7	1	1	59.5	60.5	179	272	75-125	2	20 M1
Magnesium	mg/L	24.6	1	1	25.7	26.4	117	185	75-125	3	20 M1
Potassium	mg/L	0.88	1	1	2.0	2.0	114	112	75-125	1	20
Sodium	mg/L	3.8	1	1	5.0	5.1	115	122	75-125	2	20
Zinc	mg/L	ND	1	1	1.1	1.1	108	107	75-125	1	20

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 680899 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 3562225 Matrix: Water
Associated Lab Samples: 92586436032, 92586436033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	03/01/22 00:25	
Magnesium	mg/L	ND	0.050	0.012	03/01/22 00:25	
Potassium	mg/L	ND	0.20	0.15	03/02/22 14:55	
Sodium	mg/L	ND	1.0	0.58	03/01/22 00:25	
Zinc	mg/L	ND	0.020	0.0085	03/01/22 00:25	

LABORATORY CONTROL SAMPLE: 3562226

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Potassium	mg/L	1	1.0	100	80-120	
Sodium	mg/L	1	0.99J	99	80-120	
Zinc	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3562227 3562228

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92587322013	Spike Conc.	Spike Conc.	Result								
Calcium	mg/L	167	1	1	164	165	-228	-156	75-125	0	20	M1	
Magnesium	mg/L	31.8	1	1	31.7	31.5	-10	-34	75-125	1	20	M1	
Potassium	mg/L	1.5	1	1	2.5	2.3	97	78	75-125	8	20		
Sodium	mg/L	56.6	1	1	55.8	55.7	-88	-93	75-125	0	20	M1	
Zinc	mg/L	ND	1	1	1.0	1.1	105	105	75-125	0	20		

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 679148 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018, 92586436019, 92586436020

METHOD BLANK: 3553776 Matrix: Water
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018, 92586436019, 92586436020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	02/18/22 14:27	
Arsenic	mg/L	ND	0.0050	0.0011	02/18/22 14:27	
Barium	mg/L	ND	0.0050	0.00067	02/18/22 14:27	
Beryllium	mg/L	ND	0.00050	0.000054	02/18/22 14:27	
Boron	mg/L	ND	0.040	0.0086	02/18/22 14:27	
Cadmium	mg/L	ND	0.00050	0.00011	02/18/22 14:27	
Chromium	mg/L	ND	0.0050	0.0011	02/18/22 14:27	
Cobalt	mg/L	ND	0.0050	0.00039	02/18/22 14:27	
Copper	mg/L	ND	0.0050	0.00050	02/18/22 14:27	
Lead	mg/L	ND	0.0010	0.00089	02/18/22 14:27	
Nickel	mg/L	ND	0.0050	0.00071	02/18/22 14:27	
Selenium	mg/L	ND	0.0050	0.0014	02/18/22 14:27	
Silver	mg/L	ND	0.0050	0.00044	02/18/22 14:27	
Thallium	mg/L	ND	0.0010	0.00018	02/18/22 14:27	
Vanadium	mg/L	ND	0.010	0.0019	02/18/22 14:27	

LABORATORY CONTROL SAMPLE: 3553777

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	110	80-120	
Arsenic	mg/L	0.1	0.10	102	80-120	
Barium	mg/L	0.1	0.10	104	80-120	
Beryllium	mg/L	0.1	0.11	105	80-120	
Boron	mg/L	1	1.1	107	80-120	
Cadmium	mg/L	0.1	0.10	105	80-120	
Chromium	mg/L	0.1	0.11	109	80-120	
Cobalt	mg/L	0.1	0.11	106	80-120	
Copper	mg/L	0.1	0.099	99	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Nickel	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Silver	mg/L	0.1	0.10	103	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	
Vanadium	mg/L	0.1	0.11	106	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Parameter	Units	92586436003		3553778		3553779		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MS Spike Conc.	MS Result	MSD Result	MS % Rec							
Antimony	mg/L	0.0029J	0.1	0.1	0.11	0.11	106	110	75-125	4	20			
Arsenic	mg/L	0.0053	0.1	0.1	0.10	0.10	99	100	75-125	0	20			
Barium	mg/L	0.024	0.1	0.1	0.13	0.13	103	108	75-125	4	20			
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	102	103	75-125	1	20			
Boron	mg/L	ND	1	1	1.0	1.1	104	107	75-125	3	20			
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	103	101	75-125	3	20			
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	104	101	75-125	3	20			
Cobalt	mg/L	0.00093J	0.1	0.1	0.099	0.097	98	96	75-125	2	20			
Copper	mg/L	0.00096J	0.1	0.1	0.096	0.095	95	94	75-125	1	20			
Lead	mg/L	ND	0.1	0.1	0.095	0.094	95	94	75-125	1	20			
Nickel	mg/L	ND	0.1	0.1	0.098	0.097	97	97	75-125	0	20			
Selenium	mg/L	ND	0.1	0.1	0.096	0.098	96	98	75-125	2	20			
Silver	mg/L	ND	0.1	0.1	0.099	0.10	99	102	75-125	3	20			
Thallium	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20			
Vanadium	mg/L	ND	0.1	0.1	0.10	0.10	104	103	75-125	1	20			

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch:	679169	Analysis Method:	EPA 6020B
QC Batch Method:	EPA 3005A	Analysis Description:	6020 MET
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

METHOD BLANK: 3553959 Matrix: Water
Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	02/18/22 19:25	
Arsenic	mg/L	0.0019J	0.0050	0.0011	02/18/22 19:25	
Barium	mg/L	ND	0.0050	0.00067	02/18/22 19:25	
Beryllium	mg/L	ND	0.00050	0.000054	02/18/22 19:25	
Boron	mg/L	ND	0.040	0.0086	02/18/22 19:25	
Cadmium	mg/L	ND	0.00050	0.00011	02/18/22 19:25	
Chromium	mg/L	ND	0.0050	0.0011	02/18/22 19:25	
Cobalt	mg/L	ND	0.0050	0.00039	02/18/22 19:25	
Copper	mg/L	ND	0.0050	0.00050	02/18/22 19:25	
Lead	mg/L	ND	0.0010	0.00089	02/18/22 19:25	
Nickel	mg/L	ND	0.0050	0.00071	02/18/22 19:25	
Selenium	mg/L	ND	0.0050	0.0014	02/18/22 19:25	
Silver	mg/L	ND	0.0050	0.00044	02/18/22 19:25	
Thallium	mg/L	ND	0.0010	0.00018	02/18/22 19:25	
Vanadium	mg/L	ND	0.010	0.0019	02/18/22 19:25	

LABORATORY CONTROL SAMPLE: 3553960

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	107	80-120	
Arsenic	mg/L	0.1	0.11	107	80-120	
Barium	mg/L	0.1	0.10	102	80-120	
Beryllium	mg/L	0.1	0.11	111	80-120	
Boron	mg/L	1	1.0	105	80-120	
Cadmium	mg/L	0.1	0.11	106	80-120	
Chromium	mg/L	0.1	0.10	100	80-120	
Cobalt	mg/L	0.1	0.10	104	80-120	
Copper	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.10	104	80-120	
Nickel	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.10	102	80-120	
Silver	mg/L	0.1	0.098	98	80-120	
Thallium	mg/L	0.1	0.10	102	80-120	
Vanadium	mg/L	0.1	0.10	104	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Parameter	Units	92586436021		3553961		3553962		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	110	106	75-125	4	20			
Arsenic	mg/L	0.0023J	0.1	0.1	0.11	0.10	104	101	75-125	3	20			
Barium	mg/L	0.022	0.1	0.1	0.12	0.12	99	95	75-125	3	20			
Beryllium	mg/L	0.00021J	0.1	0.1	0.11	0.10	108	104	75-125	4	20			
Boron	mg/L	ND	1	1	1.0	0.99	104	98	75-125	6	20			
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	102	103	75-125	1	20			
Chromium	mg/L	ND	0.1	0.1	0.10	0.098	102	98	75-125	4	20			
Cobalt	mg/L	0.0018J	0.1	0.1	0.10	0.10	102	98	75-125	4	20			
Copper	mg/L	ND	0.1	0.1	0.099	0.095	99	94	75-125	4	20			
Lead	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	1	20			
Nickel	mg/L	0.0014J	0.1	0.1	0.10	0.097	101	95	75-125	5	20			
Selenium	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20			
Silver	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20			
Thallium	mg/L	ND	0.1	0.1	0.10	0.096	100	96	75-125	4	20			
Vanadium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20			

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 680871	Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A	Analysis Description: 6020 MET
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 3562117 Matrix: Water

Associated Lab Samples: 92586436032, 92586436033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	02/25/22 20:37	
Arsenic	mg/L	ND	0.0050	0.0011	02/25/22 20:37	
Barium	mg/L	ND	0.0050	0.00067	02/25/22 20:37	
Beryllium	mg/L	ND	0.00050	0.000054	02/25/22 20:37	
Boron	mg/L	ND	0.040	0.0086	02/25/22 20:37	
Cadmium	mg/L	ND	0.00050	0.00011	02/25/22 20:37	
Chromium	mg/L	ND	0.0050	0.0011	02/25/22 20:37	
Cobalt	mg/L	ND	0.0050	0.00039	02/25/22 20:37	
Copper	mg/L	ND	0.0050	0.00050	02/25/22 20:37	
Lead	mg/L	ND	0.0010	0.00089	02/25/22 20:37	
Nickel	mg/L	ND	0.0050	0.00071	02/25/22 20:37	
Selenium	mg/L	ND	0.0050	0.0014	02/25/22 20:37	
Silver	mg/L	ND	0.0050	0.00044	02/25/22 20:37	
Thallium	mg/L	ND	0.0010	0.00018	02/25/22 20:37	
Vanadium	mg/L	ND	0.010	0.0019	02/25/22 20:37	

LABORATORY CONTROL SAMPLE: 3562118

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.098	98	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.11	109	80-120	
Boron	mg/L	1	1.1	112	80-120	
Cadmium	mg/L	0.1	0.099	99	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.096	96	80-120	
Copper	mg/L	0.1	0.095	95	80-120	
Lead	mg/L	0.1	0.095	95	80-120	
Nickel	mg/L	0.1	0.097	97	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Silver	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.096	96	80-120	
Vanadium	mg/L	0.1	0.10	100	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3562119 3562120												
Parameter	Units	92587322014		MS	MSD	MS		MSD		% Rec Limits	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec			
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	104	106	75-125	2	20	
Arsenic	mg/L	0.0046J	0.1	0.1	0.11	0.12	106	110	75-125	4	20	
Barium	mg/L	0.046	0.1	0.1	0.15	0.15	105	109	75-125	3	20	
Beryllium	mg/L	0.00011J	0.1	0.1	0.10	0.10	100	104	75-125	4	20	
Boron	mg/L	10.5	1	1	11.0	11.5	50	104	75-125	5	20	M1
Cadmium	mg/L	0.00024J	0.1	0.1	0.094	0.099	94	99	75-125	5	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.11	99	106	75-125	7	20	
Cobalt	mg/L	0.031	0.1	0.1	0.12	0.13	93	99	75-125	4	20	
Copper	mg/L	ND	0.1	0.1	0.095	0.093	95	93	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.085	0.087	85	87	75-125	3	20	
Nickel	mg/L	0.011	0.1	0.1	0.10	0.11	93	97	75-125	4	20	
Selenium	mg/L	ND	0.1	0.1	0.11	0.11	104	108	75-125	4	20	
Silver	mg/L	ND	0.1	0.1	0.087	0.088	87	88	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.087	0.090	87	90	75-125	3	20	
Vanadium	mg/L	ND	0.1	0.1	0.10	0.11	103	109	75-125	6	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch:	678396	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017

METHOD BLANK: 3550157 Matrix: Water
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	02/16/22 10:48	

LABORATORY CONTROL SAMPLE: 3550158

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	92	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3550159 3550160

Parameter	Units	92586342010 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0021	0.0023	85	92	75-125	8	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 678399

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436018, 92586436019, 92586436020, 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030

METHOD BLANK: 3550166

Matrix: Water

Associated Lab Samples: 92586436018, 92586436019, 92586436020, 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	02/16/22 12:04	

LABORATORY CONTROL SAMPLE: 3550167

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0023	93	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3550168 3550169

Parameter	Units	92586342013 Result	MS	MSD	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	Spike Conc.								
Mercury	mg/L	ND	0.0025	0.0025	0.0021	0.0022	82	87	75-125	6	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 678404	Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A	Analysis Description: 7470 Mercury
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436031

METHOD BLANK: 3550196 Matrix: Water

Associated Lab Samples: 92586436031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	02/16/22 13:25	

LABORATORY CONTROL SAMPLE: 3550197

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0021	86	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3550198 3550199

Parameter	Units	3550198		3550199		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	92586436031 ND	0.0025	0.0025	0.0020	0.0023	78	93	75-125	18	20

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 681261

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 3564035

Matrix: Water

Associated Lab Samples: 92586436032, 92586436033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	02/28/22 14:00	

LABORATORY CONTROL SAMPLE: 3564036

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0025	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3564037 3564038

Parameter	Units	3564037		3564038		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	92588620001 ND	0.0025	0.0025	0.0025	97	97	75-125	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch:	676439	Analysis Method:	SM 2540C-2015
QC Batch Method:	SM 2540C-2015	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006

METHOD BLANK: 3540519 Matrix: Water

Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/07/22 17:19	

LABORATORY CONTROL SAMPLE: 3540520

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	374	94	80-120	

SAMPLE DUPLICATE: 3540521

Parameter	Units	92585555019 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	180	181	1	25	

SAMPLE DUPLICATE: 3540522

Parameter	Units	92585920011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	96.0	94.0	2	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 676566

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018

METHOD BLANK: 3541419

Matrix: Water

Associated Lab Samples: 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/08/22 11:11	

LABORATORY CONTROL SAMPLE: 3541420

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	390	98	80-120	

SAMPLE DUPLICATE: 3541421

Parameter	Units	92585920025 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	65.0	46.0	34	25	D6

SAMPLE DUPLICATE: 3541422

Parameter	Units	92586436013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	102	103	1	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 676886	Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436019, 92586436020

METHOD BLANK: 3542886 Matrix: Water

Associated Lab Samples: 92586436019, 92586436020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/09/22 10:12	

LABORATORY CONTROL SAMPLE: 3542887

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	374	94	80-120	

SAMPLE DUPLICATE: 3542888

Parameter	Units	92585920029 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	538	574	6	25	

SAMPLE DUPLICATE: 3542889

Parameter	Units	92585979010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1380	1350	2	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 677214 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026

METHOD BLANK: 3544553 Matrix: Water
Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025, 92586436026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/11/22 10:42	

LABORATORY CONTROL SAMPLE: 3544554

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	383	96	80-120	

SAMPLE DUPLICATE: 3544555

Parameter	Units	92586430002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		25	

SAMPLE DUPLICATE: 3544556

Parameter	Units	92586613010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	225	217	4	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch:	677216	Analysis Method:	SM 2540C-2015
QC Batch Method:	SM 2540C-2015	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

METHOD BLANK: 3544560 Matrix: Water
Associated Lab Samples: 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/11/22 11:39	

LABORATORY CONTROL SAMPLE: 3544561

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	381	95	80-120	

SAMPLE DUPLICATE: 3544562

Parameter	Units	92586436027 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	162	168	4	25	

SAMPLE DUPLICATE: 3544563

Parameter	Units	92586613016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	161	155	4	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 680301 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 3559080 Matrix: Water
Associated Lab Samples: 92586436032, 92586436033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	02/23/22 15:59	

LABORATORY CONTROL SAMPLE: 3559081

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	354	88	80-120	

SAMPLE DUPLICATE: 3559082

Parameter	Units	92587881053 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		25	

SAMPLE DUPLICATE: 3559083

Parameter	Units	92589518001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2270	2130	6	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 798119 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006

METHOD BLANK: 4240829 Matrix: Water
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	02/10/22 14:33	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	02/10/22 14:33	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	02/10/22 14:33	

LABORATORY CONTROL SAMPLE & LCSD: 4240830 4240831

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	40.3	39.9	101	100	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240832 4240833

Parameter	Units	92585727002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	2.8J	40	40	43.8	43.8	102	103	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4240834 4240835

Parameter	Units	10596422001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	29.9	40	40	69.2	69.5	98	99	80-120	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 798366 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018

METHOD BLANK: 4241914 Matrix: Water
Associated Lab Samples: 92586436007, 92586436008, 92586436009, 92586436010, 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	02/10/22 19:52	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	02/10/22 19:52	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	02/10/22 19:52	

LABORATORY CONTROL SAMPLE & LCSD: 4241915 4241916

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	41.9	42.2	105	105	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4241917 4241918

Parameter	Units	10597082001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	23.0	40	40	62.8	63.0	100	100	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4241919 4241920

Parameter	Units	92586436012 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	76.7	40	40	116	116	98	99	80-120	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch:	798367	Analysis Method:	SM 2320B
QC Batch Method:	SM 2320B	Analysis Description:	2320B Alkalinity
		Laboratory:	Pace Analytical Services - Minneapolis

Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025

METHOD BLANK: 4241924 Matrix: Water

Associated Lab Samples: 92586436021, 92586436022, 92586436023, 92586436024, 92586436025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	ND	5.0	1.8	02/10/22 19:24	
Alkalinity,Bicarbonate (CaCO ₃)	mg/L	ND	5.0	1.8	02/10/22 19:24	
Alkalinity,Carbonate (CaCO ₃)	mg/L	ND	5.0	1.8	02/10/22 19:24	

LABORATORY CONTROL SAMPLE & LCSD: 4241925 4241926

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	40	42.6	42.3	106	106	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4241927 4241928

Parameter	Units	10596573001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO ₃	mg/L	133	40	40	173	172	100	100	80-120	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 798903 Analysis Method: SM 2320B
QC Batch Method: SM 2320B Analysis Description: 2320B Alkalinity
Laboratory: Pace Analytical Services - Minneapolis
Associated Lab Samples: 92586436019, 92586436020, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

METHOD BLANK: 4244463 Matrix: Water
Associated Lab Samples: 92586436019, 92586436020, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	02/15/22 15:58	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	02/15/22 15:58	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	02/15/22 15:58	

LABORATORY CONTROL SAMPLE & LCSD: 4244464 4244465

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	40.1	40.6	100	102	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4244466 4244467

Parameter	Units	10597383001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	22.2	40	40	62.0	62.0	100	100	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4244468 4244469

Parameter	Units	10597488002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	29.6	40	40	69.4	69.6	99	100	80-120	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

QC Batch: 800675

Analysis Method: SM 2320B

QC Batch Method: SM 2320B

Analysis Description: 2320B Alkalinity

Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 4252517

Matrix: Water

Associated Lab Samples: 92586436032, 92586436033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	02/25/22 11:20	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	02/25/22 11:20	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	02/25/22 11:20	

LABORATORY CONTROL SAMPLE & LCSD: 4252518

4252519

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	42.1	42.4	105	106	90-110	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4252520

4252521

Parameter	Units	10598316001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	31.9	40	40	71.6	72.2	99	101	80-120	1	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4252522

4252523

Parameter	Units	10598521001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	288	40	40	325	328	93	98	80-120	1	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 677743 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010

METHOD BLANK: 3547238 Matrix: Water
Associated Lab Samples: 92586436001, 92586436002, 92586436003, 92586436004, 92586436005, 92586436006, 92586436007, 92586436008, 92586436009, 92586436010

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/12/22 16:11	
Fluoride	mg/L	ND	0.10	0.050	02/12/22 16:11	
Sulfate	mg/L	ND	1.0	0.50	02/12/22 16:11	

LABORATORY CONTROL SAMPLE: 3547239

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.1	102	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	50.2	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547240 3547241

Parameter	Units	9258555014		3547241		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	4.3	50	50	60.1	60.2	112	112	90-110	0	10 M1
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	110	111	90-110	1	10 M1
Sulfate	mg/L	6.1	50	50	62.6	62.4	113	113	90-110	0	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547242 3547243

Parameter	Units	92586436001		3547243		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	1.2	50	50	57.3	57.5	112	113	90-110	0	10 M1
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	110	111	90-110	1	10 M1
Sulfate	mg/L	0.93J	50	50	57.2	57.7	113	114	90-110	1	10 M1

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 677747 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018, 92586436019, 92586436020

METHOD BLANK: 3547262 Matrix: Water
Associated Lab Samples: 92586436011, 92586436012, 92586436013, 92586436014, 92586436015, 92586436016, 92586436017, 92586436018, 92586436019, 92586436020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/12/22 23:09	
Fluoride	mg/L	ND	0.10	0.050	02/12/22 23:09	
Sulfate	mg/L	ND	1.0	0.50	02/12/22 23:09	

LABORATORY CONTROL SAMPLE: 3547263

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.2	104	90-110	
Fluoride	mg/L	2.5	2.6	103	90-110	
Sulfate	mg/L	50	51.6	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547264 3547265

Parameter	Units	92586436011		3547265		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	0.76J	50	50	57.0	57.0	112	113	90-110	0	10 M1
Fluoride	mg/L	ND	2.5	2.5	2.8	2.8	111	111	90-110	0	10 M1
Sulfate	mg/L	1.3	50	50	57.8	58.2	113	114	90-110	1	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3547266 3547267

Parameter	Units	92585200001		3547267		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	43.4	50	50	98.7	98.5	111	110	90-110	0	10 M1
Fluoride	mg/L	0.058J	2.5	2.5	2.9	2.9	112	112	90-110	0	10 M1
Sulfate	mg/L	14.5	50	50	71.1	70.8	113	113	90-110	0	10 M1

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 678003 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92586436021, 92586436022

METHOD BLANK: 3548358 Matrix: Water
Associated Lab Samples: 92586436021, 92586436022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/14/22 05:52	
Fluoride	mg/L	ND	0.10	0.050	02/14/22 05:52	
Sulfate	mg/L	ND	1.0	0.50	02/14/22 05:52	

LABORATORY CONTROL SAMPLE: 3548359

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.5	105	90-110	
Fluoride	mg/L	2.5	2.6	102	90-110	
Sulfate	mg/L	50	52.0	104	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548360 3548361

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92587763018	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	50	50	52.4	52.5	105	105	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	104	105	90-110	0	10		
Sulfate	mg/L	ND	50	50	52.3	52.4	105	105	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548362 3548363

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92585375006	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	9.3	50	50	61.7	62.1	105	105	90-110	1	10		
Fluoride	mg/L	0.13	2.5	2.5	2.7	2.7	103	104	90-110	1	10		
Sulfate	mg/L	70.0	50	50	103	104	67	68	90-110	1	10 M1		

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch:	678004	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

METHOD BLANK: 3548365 Matrix: Water
Associated Lab Samples: 92586436023, 92586436024, 92586436025, 92586436026, 92586436027, 92586436028, 92586436029, 92586436030, 92586436031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/14/22 18:19	
Fluoride	mg/L	ND	0.10	0.050	02/14/22 18:19	
Sulfate	mg/L	ND	1.0	0.50	02/14/22 18:19	

LABORATORY CONTROL SAMPLE: 3548366

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.8	100	90-110	
Fluoride	mg/L	2.5	2.5	98	90-110	
Sulfate	mg/L	50	48.6	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548367 3548368

Parameter	Units	92586436023		3548368		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	1.1	50	50	51.6	51.8	101	101	90-110	0	10
Fluoride	mg/L	ND	2.5	2.5	2.6	2.6	103	104	90-110	1	10
Sulfate	mg/L	1.7	50	50	52.1	52.3	101	101	90-110	0	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3548369 3548370

Parameter	Units	92586807001		3548370		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Chloride	mg/L	664	50	50	700	708	72	88	90-110	1	10 M1
Fluoride	mg/L	0.69	2.5	2.5	3.4	3.4	106	110	90-110	2	10
Sulfate	mg/L	87.3	50	50	132	134	89	93	90-110	1	10 M1

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

QC Batch: 680699 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92586436032, 92586436033

METHOD BLANK: 3561036 Matrix: Water
Associated Lab Samples: 92586436032, 92586436033

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	02/25/22 01:54	
Fluoride	mg/L	ND	0.10	0.050	02/25/22 01:54	
Sulfate	mg/L	ND	1.0	0.50	02/25/22 01:54	

LABORATORY CONTROL SAMPLE: 3561037

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.9	96	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	47.2	94	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3561040 3561041

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92588973012	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	19.4	50	50	70.5	71.6	102	104	90-110	1	10		
Fluoride	mg/L	ND	2.5	2.5	2.7	2.8	107	110	90-110	3	10		
Sulfate	mg/L	94.0	50	50	138	137	88	87	90-110	0	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3561344 3561345

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92588973003	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	1.6	50	50	52.8	53.5	102	104	90-110	1	10		
Fluoride	mg/L	0.052J	2.5	2.5	2.7	2.9	105	115	90-110	8	10	M1	
Sulfate	mg/L	53.5	50	50	98.8	99.1	90	91	90-110	0	10		

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QUALIFIERS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92586436001	GWA-1				
92586436002	GWA-2				
92586436003	GWA-2R				
92586436004	GWA-50				
92586436007	GWA-3A				
92586436008	GWC-5				
92586436009	GWC-6				
92586436010	GWC-6RZ				
92586436011	GWC-7Z				
92586436012	GWC-8Z				
92586436013	GWC-8RR				
92586436014	GWC-9				
92586436015	GWC-12				
92586436016	GWA-50R				
92586436019	GWA-4RZ				
92586436021	GWC-10				
92586436022	GWC-10R				
92586436023	GWC-11				
92586436024	GWC-11R				
92586436025	GWC-13RZ				
92586436026	GWC-14Z				
92586436027	GWC-15R				
92586436030	GWC-15Z				
92586436032	GWC-13				
92586436001	GWA-1	EPA 3010A	679147	EPA 6010D	679327
92586436002	GWA-2	EPA 3010A	679147	EPA 6010D	679327
92586436003	GWA-2R	EPA 3010A	679147	EPA 6010D	679327
92586436004	GWA-50	EPA 3010A	679147	EPA 6010D	679327
92586436005	DUP-1	EPA 3010A	679147	EPA 6010D	679327
92586436006	FB-1	EPA 3010A	679147	EPA 6010D	679327
92586436007	GWA-3A	EPA 3010A	679147	EPA 6010D	679327
92586436008	GWC-5	EPA 3010A	679147	EPA 6010D	679327
92586436009	GWC-6	EPA 3010A	679147	EPA 6010D	679327
92586436010	GWC-6RZ	EPA 3010A	679147	EPA 6010D	679327
92586436011	GWC-7Z	EPA 3010A	679147	EPA 6010D	679327
92586436012	GWC-8Z	EPA 3010A	679147	EPA 6010D	679327
92586436013	GWC-8RR	EPA 3010A	679147	EPA 6010D	679327
92586436014	GWC-9	EPA 3010A	679147	EPA 6010D	679327
92586436015	GWC-12	EPA 3010A	679147	EPA 6010D	679327
92586436016	GWA-50R	EPA 3010A	679147	EPA 6010D	679327
92586436017	DUP-2	EPA 3010A	679147	EPA 6010D	679327
92586436018	FB-2	EPA 3010A	679147	EPA 6010D	679327
92586436019	GWA-4RZ	EPA 3010A	679167	EPA 6010D	679340
92586436020	FB-3	EPA 3010A	679167	EPA 6010D	679340
92586436021	GWC-10	EPA 3010A	679167	EPA 6010D	679340
92586436022	GWC-10R	EPA 3010A	679167	EPA 6010D	679340
92586436023	GWC-11	EPA 3010A	679167	EPA 6010D	679340
92586436024	GWC-11R	EPA 3010A	679167	EPA 6010D	679340

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92586436025	GWC-13RZ	EPA 3010A	679167	EPA 6010D	679340
92586436026	GWC-14Z	EPA 3010A	679167	EPA 6010D	679340
92586436027	GWC-15R	EPA 3010A	679167	EPA 6010D	679340
92586436028	DUP-3	EPA 3010A	679167	EPA 6010D	679340
92586436029	FB-4	EPA 3010A	679167	EPA 6010D	679340
92586436030	GWC-15Z	EPA 3010A	679167	EPA 6010D	679340
92586436031	FB-5	EPA 3010A	679167	EPA 6010D	679340
92586436032	GWC-13	EPA 3010A	680899	EPA 6010D	681055
92586436033	FB-6	EPA 3010A	680899	EPA 6010D	681055
92586436001	GWA-1	EPA 3005A	679148	EPA 6020B	679359
92586436002	GWA-2	EPA 3005A	679148	EPA 6020B	679359
92586436003	GWA-2R	EPA 3005A	679148	EPA 6020B	679359
92586436004	GWA-50	EPA 3005A	679148	EPA 6020B	679359
92586436005	DUP-1	EPA 3005A	679148	EPA 6020B	679359
92586436006	FB-1	EPA 3005A	679148	EPA 6020B	679359
92586436007	GWA-3A	EPA 3005A	679148	EPA 6020B	679359
92586436008	GWC-5	EPA 3005A	679148	EPA 6020B	679359
92586436009	GWC-6	EPA 3005A	679148	EPA 6020B	679359
92586436010	GWC-6RZ	EPA 3005A	679148	EPA 6020B	679359
92586436011	GWC-7Z	EPA 3005A	679148	EPA 6020B	679359
92586436012	GWC-8Z	EPA 3005A	679148	EPA 6020B	679359
92586436013	GWC-8RR	EPA 3005A	679148	EPA 6020B	679359
92586436014	GWC-9	EPA 3005A	679148	EPA 6020B	679359
92586436015	GWC-12	EPA 3005A	679148	EPA 6020B	679359
92586436016	GWA-50R	EPA 3005A	679148	EPA 6020B	679359
92586436017	DUP-2	EPA 3005A	679148	EPA 6020B	679359
92586436018	FB-2	EPA 3005A	679148	EPA 6020B	679359
92586436019	GWA-4RZ	EPA 3005A	679148	EPA 6020B	679359
92586436020	FB-3	EPA 3005A	679148	EPA 6020B	679359
92586436021	GWC-10	EPA 3005A	679169	EPA 6020B	679363
92586436022	GWC-10R	EPA 3005A	679169	EPA 6020B	679363
92586436023	GWC-11	EPA 3005A	679169	EPA 6020B	679363
92586436024	GWC-11R	EPA 3005A	679169	EPA 6020B	679363
92586436025	GWC-13RZ	EPA 3005A	679169	EPA 6020B	679363
92586436026	GWC-14Z	EPA 3005A	679169	EPA 6020B	679363
92586436027	GWC-15R	EPA 3005A	679169	EPA 6020B	679363
92586436028	DUP-3	EPA 3005A	679169	EPA 6020B	679363
92586436029	FB-4	EPA 3005A	679169	EPA 6020B	679363
92586436030	GWC-15Z	EPA 3005A	679169	EPA 6020B	679363
92586436031	FB-5	EPA 3005A	679169	EPA 6020B	679363
92586436032	GWC-13	EPA 3005A	680871	EPA 6020B	681052
92586436033	FB-6	EPA 3005A	680871	EPA 6020B	681052
92586436001	GWA-1	EPA 7470A	678396	EPA 7470A	678613
92586436002	GWA-2	EPA 7470A	678396	EPA 7470A	678613
92586436003	GWA-2R	EPA 7470A	678396	EPA 7470A	678613
92586436004	GWA-50	EPA 7470A	678396	EPA 7470A	678613

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92586436

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92586436005	DUP-1	EPA 7470A	678396	EPA 7470A	678613
92586436006	FB-1	EPA 7470A	678396	EPA 7470A	678613
92586436007	GWA-3A	EPA 7470A	678396	EPA 7470A	678613
92586436008	GWC-5	EPA 7470A	678396	EPA 7470A	678613
92586436009	GWC-6	EPA 7470A	678396	EPA 7470A	678613
92586436010	GWC-6RZ	EPA 7470A	678396	EPA 7470A	678613
92586436011	GWC-7Z	EPA 7470A	678396	EPA 7470A	678613
92586436012	GWC-8Z	EPA 7470A	678396	EPA 7470A	678613
92586436013	GWC-8RR	EPA 7470A	678396	EPA 7470A	678613
92586436014	GWC-9	EPA 7470A	678396	EPA 7470A	678613
92586436015	GWC-12	EPA 7470A	678396	EPA 7470A	678613
92586436016	GWA-50R	EPA 7470A	678396	EPA 7470A	678613
92586436017	DUP-2	EPA 7470A	678396	EPA 7470A	678613
92586436018	FB-2	EPA 7470A	678399	EPA 7470A	678663
92586436019	GWA-4RZ	EPA 7470A	678399	EPA 7470A	678663
92586436020	FB-3	EPA 7470A	678399	EPA 7470A	678663
92586436021	GWC-10	EPA 7470A	678399	EPA 7470A	678663
92586436022	GWC-10R	EPA 7470A	678399	EPA 7470A	678663
92586436023	GWC-11	EPA 7470A	678399	EPA 7470A	678663
92586436024	GWC-11R	EPA 7470A	678399	EPA 7470A	678663
92586436025	GWC-13RZ	EPA 7470A	678399	EPA 7470A	678663
92586436026	GWC-14Z	EPA 7470A	678399	EPA 7470A	678663
92586436027	GWC-15R	EPA 7470A	678399	EPA 7470A	678663
92586436028	DUP-3	EPA 7470A	678399	EPA 7470A	678663
92586436029	FB-4	EPA 7470A	678399	EPA 7470A	678663
92586436030	GWC-15Z	EPA 7470A	678399	EPA 7470A	678663
92586436031	FB-5	EPA 7470A	678404	EPA 7470A	678664
92586436032	GWC-13	EPA 7470A	681261	EPA 7470A	681332
92586436033	FB-6	EPA 7470A	681261	EPA 7470A	681332
92586436001	GWA-1	SM 2540C-2015	676439		
92586436002	GWA-2	SM 2540C-2015	676439		
92586436003	GWA-2R	SM 2540C-2015	676439		
92586436004	GWA-50	SM 2540C-2015	676439		
92586436005	DUP-1	SM 2540C-2015	676439		
92586436006	FB-1	SM 2540C-2015	676439		
92586436007	GWA-3A	SM 2540C-2015	676566		
92586436008	GWC-5	SM 2540C-2015	676566		
92586436009	GWC-6	SM 2540C-2015	676566		
92586436010	GWC-6RZ	SM 2540C-2015	676566		
92586436011	GWC-7Z	SM 2540C-2015	676566		
92586436012	GWC-8Z	SM 2540C-2015	676566		
92586436013	GWC-8RR	SM 2540C-2015	676566		
92586436014	GWC-9	SM 2540C-2015	676566		
92586436015	GWC-12	SM 2540C-2015	676566		
92586436016	GWA-50R	SM 2540C-2015	676566		
92586436017	DUP-2	SM 2540C-2015	676566		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92586436018	FB-2	SM 2540C-2015	676566		
92586436019	GWA-4RZ	SM 2540C-2015	676886		
92586436020	FB-3	SM 2540C-2015	676886		
92586436021	GWC-10	SM 2540C-2015	677214		
92586436022	GWC-10R	SM 2540C-2015	677214		
92586436023	GWC-11	SM 2540C-2015	677214		
92586436024	GWC-11R	SM 2540C-2015	677214		
92586436025	GWC-13RZ	SM 2540C-2015	677214		
92586436026	GWC-14Z	SM 2540C-2015	677214		
92586436027	GWC-15R	SM 2540C-2015	677216		
92586436028	DUP-3	SM 2540C-2015	677216		
92586436029	FB-4	SM 2540C-2015	677216		
92586436030	GWC-15Z	SM 2540C-2015	677216		
92586436031	FB-5	SM 2540C-2015	677216		
92586436032	GWC-13	SM 2540C-2015	680301		
92586436033	FB-6	SM 2540C-2015	680301		
92586436001	GWA-1	SM 2320B	798119		
92586436002	GWA-2	SM 2320B	798119		
92586436003	GWA-2R	SM 2320B	798119		
92586436004	GWA-50	SM 2320B	798119		
92586436005	DUP-1	SM 2320B	798119		
92586436006	FB-1	SM 2320B	798119		
92586436007	GWA-3A	SM 2320B	798366		
92586436008	GWC-5	SM 2320B	798366		
92586436009	GWC-6	SM 2320B	798366		
92586436010	GWC-6RZ	SM 2320B	798366		
92586436011	GWC-7Z	SM 2320B	798366		
92586436012	GWC-8Z	SM 2320B	798366		
92586436013	GWC-8RR	SM 2320B	798366		
92586436014	GWC-9	SM 2320B	798366		
92586436015	GWC-12	SM 2320B	798366		
92586436016	GWA-50R	SM 2320B	798366		
92586436017	DUP-2	SM 2320B	798366		
92586436018	FB-2	SM 2320B	798366		
92586436019	GWA-4RZ	SM 2320B	798903		
92586436020	FB-3	SM 2320B	798903		
92586436021	GWC-10	SM 2320B	798367		
92586436022	GWC-10R	SM 2320B	798367		
92586436023	GWC-11	SM 2320B	798367		
92586436024	GWC-11R	SM 2320B	798367		
92586436025	GWC-13RZ	SM 2320B	798367		
92586436026	GWC-14Z	SM 2320B	798903		
92586436027	GWC-15R	SM 2320B	798903		
92586436028	DUP-3	SM 2320B	798903		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92586436

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92586436029	FB-4	SM 2320B	798903		
92586436030	GWC-15Z	SM 2320B	798903		
92586436031	FB-5	SM 2320B	798903		
92586436032	GWC-13	SM 2320B	800675		
92586436033	FB-6	SM 2320B	800675		
92586436001	GWA-1	EPA 300.0 Rev 2.1 1993	677743		
92586436002	GWA-2	EPA 300.0 Rev 2.1 1993	677743		
92586436003	GWA-2R	EPA 300.0 Rev 2.1 1993	677743		
92586436004	GWA-50	EPA 300.0 Rev 2.1 1993	677743		
92586436005	DUP-1	EPA 300.0 Rev 2.1 1993	677743		
92586436006	FB-1	EPA 300.0 Rev 2.1 1993	677743		
92586436007	GWA-3A	EPA 300.0 Rev 2.1 1993	677743		
92586436008	GWC-5	EPA 300.0 Rev 2.1 1993	677743		
92586436009	GWC-6	EPA 300.0 Rev 2.1 1993	677743		
92586436010	GWC-6RZ	EPA 300.0 Rev 2.1 1993	677743		
92586436011	GWC-7Z	EPA 300.0 Rev 2.1 1993	677747		
92586436012	GWC-8Z	EPA 300.0 Rev 2.1 1993	677747		
92586436013	GWC-8RR	EPA 300.0 Rev 2.1 1993	677747		
92586436014	GWC-9	EPA 300.0 Rev 2.1 1993	677747		
92586436015	GWC-12	EPA 300.0 Rev 2.1 1993	677747		
92586436016	GWA-50R	EPA 300.0 Rev 2.1 1993	677747		
92586436017	DUP-2	EPA 300.0 Rev 2.1 1993	677747		
92586436018	FB-2	EPA 300.0 Rev 2.1 1993	677747		
92586436019	GWA-4RZ	EPA 300.0 Rev 2.1 1993	677747		
92586436020	FB-3	EPA 300.0 Rev 2.1 1993	677747		
92586436021	GWC-10	EPA 300.0 Rev 2.1 1993	678003		
92586436022	GWC-10R	EPA 300.0 Rev 2.1 1993	678003		
92586436023	GWC-11	EPA 300.0 Rev 2.1 1993	678004		
92586436024	GWC-11R	EPA 300.0 Rev 2.1 1993	678004		
92586436025	GWC-13RZ	EPA 300.0 Rev 2.1 1993	678004		
92586436026	GWC-14Z	EPA 300.0 Rev 2.1 1993	678004		
92586436027	GWC-15R	EPA 300.0 Rev 2.1 1993	678004		
92586436028	DUP-3	EPA 300.0 Rev 2.1 1993	678004		
92586436029	FB-4	EPA 300.0 Rev 2.1 1993	678004		
92586436030	GWC-15Z	EPA 300.0 Rev 2.1 1993	678004		
92586436031	FB-5	EPA 300.0 Rev 2.1 1993	678004		
92586436032	GWC-13	EPA 300.0 Rev 2.1 1993	680699		
92586436033	FB-6	EPA 300.0 Rev 2.1 1993	680699		

REPORT OF LABORATORY ANALYSIS

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Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
 Page 1 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition
 Upon Receipt

Client Name:
GA POWER

Project #: **WO# : 92586436**

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



92586436

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: JPE 2/17/22

Packing Material: Bubble Wrap Bubble Bags None Other
 Thermometer: IR Gun ID: 230 Type of Ice: Wet Blue None

Biological Tissue Frozen?
 Yes No N/A

Cooler Temp: 5.5 Correction Factor: Add/Subtract (°C) +2

Temp should be above freezing to 6°C
 Samples out of temp criteria Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 5.7

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		9.
-Includes Date/Time/ID/Analysis Matrix:	<u>WT</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
 Page 2 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.
 Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

Project #

WO# : 92586436

PM: NMG

Due Date: 02/18/22

CLIENT: GA-GA Power

**Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGfU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	2	1																										
2	2	1																										
3	2	1																										
4	2	1																										
5	2	1																										
6	2	1																										
7	2	1																										
8	2	1																										
9	2	1																										
10	2	1																										
11	2	1																										
12	2	1																										

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No.:
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
 Page 2 of 2

Issuing Authority:
 Quality Office

Project #

WO# : 92586436

PM: NMG

Due Date: 02/18/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHG

**Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-S035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		2	1																										
2		2	1																										
3		2	1																										
4		2	1																										
5		2	1																										
6		2	1																										
7		2	1																										
8		2	1																										
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

CHAIN-OF-CUSTODY / Analytical Request Document

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



Section A Required Client Information Company: GA POWER Address: 1003 Weatherstone Parkway Woodstock, Ga 30188 Email To: Kevin.Stephenson@Resoluteenv.com Phone: (678)5489415 Requested Due Date/TAT: 10 Day	Section B Required Project Information Report To: Kristen Junkko Copy To: Rhonda Quinn Purchase Order No Project Name: Plant Bowen Landfill Cell 1 & 2 Project Number
Section C Invoice Information Attention: Southern Co Company Name Address P.O. Box Reference Project Manager Pace Project # 2928	REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> Site Location STATE: GA

ITEM #	Valid Matrix Codes MATRIX CODE DRINKING WATER DW WATER WT WASTE WATER WW PRODUCT P SOLID S OIL OL WIRE WP AIR AR OTHER OT TISSUE TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	
				DATE	TIME							
1	GWA-1	WT G	2/11/22	1456		4	3	1	X	X	X	Pace Project No./ Lab I.D. 7.52 6.30 6.62
2	GWA-2	WT G	2/11/22	1444		4	3	1	X	X	X	
3	GWA-2R	WT G	2/11/22	1545		4	3	1	X	X	X	
4	GWA-3											
5	GWA-4RZ											
6	GWA-5											
7	GWA-6											
8	GWA-6RZ											
9	GWA-7Z											
10	GWA-8Z											
11	GWA-8RR											
12	GWA-9											

ADDITIONAL COMMENTS State Metals include Sb, As, Ba, Be, Cd, Ga, Cr, Cu, Pb, Ni, Se, Ag, Tl, V, Zn, Co	RELINQUISHED BY / AFFILIATION William Locker Atoya Garner Ryan Williams / Pa
ACCEPTED BY / AFFILIATION Atoya Garner Ryan Williams / Pa	SAMPLE CONDITIONS Temp in °C Received on Ice (Y/N) Custody Sealed Cooler (Y/N) Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Meredith Dorean, Will Locker, Kevin Stephenson, Robert Mull SIGNATURE of SAMPLER: <i>Meredith Dorean</i>	DATE Signed (MM/DD/YYYY): 2/11/22
---	-----------------------------------

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020rev 07 15-Feb-2007



Section A
 Required Client Information:
 Company: GA Power
 Address: 1003 Weatherstone Parkway
 Woodstock, Ga 30188
 Copy To: Rhonda Quinn
 Section B
 Required Project Information:
 Report To: Kristen Jurinko
 Purchase Order No.:
 Project Name: Plant Bowen Landfill
 Project Number:
 Section C
 Invoice Information:
 Attention: Southern Co.
 Company Name:
 Address:
 Project Reference:
 Site Profile #: 2928
 Regulatory Agency:
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER
 Site Location: GA
 STATE: GA
 Page: 2 of 3

Section D
 Required Client Information
 Valid Matrix Codes
 MATRIX CODE (see valid codes to left)
 SAMPLE TYPE (G=GRAB C=COMP)
 DATE TIME DATE TIME
 SAMPLE TEMP AT COLLECTION
 # OF CONTAINERS
 Unpreserved
 H₂SO₄
 HNO₃
 HCl
 NaOH
 Na₂S₂O₃
 Methanol
 Other
 Analysis Test
 Metals + State Metals
 Cl, F, SO₄
 Total/Carb/Bicarb Alk
 TDS
 Requested Analysis Filtered (Y/N)
 Residual Chlorine (Y/N)
 Pace Project No./ Lab I.D.
 Section E
 Relinquished By / Affiliation
 Date
 Time
 Accepted By / Affiliation
 Date
 Time
 Sample Conditions
 Temp in °C
 Received on Ice (Y/N)
 Custody Sealed Cooler (Y/N)
 Samples Intact (Y/N)

ITEM #	MATRIX CODE	SAMPLE TYPE	DATE	TIME	DATE	TIME	DATE	TIME	DATE	TIME	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
1	-GWC-10-													
2	-GWC-10R-													
3	-GWC-11-													
4	-GWC-11R-													
5	-GWC-12-													
6	-GWC-12-													
7	-GWC-13RZ-													
8	-GWC-14Z-													
9	-GWC-15Z-													
10	-GWC-16R-													
11	GWA-50	WT G	2/11/22	1540		4	3	1						5.61
12	-GWA-50R-													

Additional Comments:
 Relinquished By / Affiliation: William Leaker
 Date: 2/14/22
 Time: 0800
 Accepted By / Affiliation: Atoya Garner
 Date: 2/14/22
 Time: 1145
 Signature: Atoya Garner
 Date Signed: 2/14/22
 Signature: Ryan Williams
 Date Signed: 2/14/22
 Signature: Ryan Williams
 Date Signed: 2/14/22
 Signature: William Leaker
 Date Signed: 2/14/22
 Signature: Atoya Garner
 Date Signed: 2/14/22



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

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company: GA Power	Report To: Kristen Jurmko	Report To: Rhonda Quinn	Company Name: Southern Co.	Address:	REGULATORY AGENCY
1003 Weatherstone Parkway	Copy To: Rhonda Quinn	Purchase Order No:	Company Name:	Address:	NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> DRINKING WATER <input type="checkbox"/>
Woodstock, GA 30188	Copy To: Rhonda Quinn	Project Name: Plant Bowen Landfill	Company Name:	Address:	UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER <input checked="" type="checkbox"/>
Mail To: Kevin.Stephenson@Resoluteenergy.com	Project Name: Plant Bowen Landfill	Project Number:	Company Name:	Address:	Site Location: <u>GA</u>
Phone: (678)5489415	Project Name: Plant Bowen Landfill	Requested Date Data/TAT: 10 Day	Company Name:	Address:	STATE: <u>GA</u>
Fax:	Project Name: Plant Bowen Landfill		Company Name:	Address:	
Requested Date Data/TAT: 10 Day	Project Number:		Company Name:	Address:	

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
				DATE	TIME			DATE	TIME	H ₂ SO ₄	HNO ₃	HCl	NaOH							
1	-DUP-1	WT	G	2/1/22			4													
2	-DUP-2	WT	G	2/1/22			3													
3	-DUP-3																			
4	-FBL FB-1	WT	G	2/1/22	1600		4													
5	-FBL						3													
6	-FBL																			
7	-EQBL																			
8	-EQBL																			
9	-EQBL																			
10																				
11																				
12																				

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		ACCEPTED BY / AFFILIATION	
Additional Metals include: Sb, As, Ba, Be, Cd, Ca, Cr, Cu, Pb, Ni, Se, Li, V, Zn, Co		William Laker		Atoya Garner	
		Atoya Garner		Atoya Garner	
		Kevin Williams / Pace		Kevin Williams / Pace	
		2/4/22 0800		2/4/22 1145	
		2/4/22 1908		2/4/22 1900	

SAMPLER NAME AND SIGNATURE		DATE SIGNED (MM/DD/YY)	
PRINT Name of SAMPLER: Meredith Duncan, William Laker, Kevin Stephenson, Robert Moll		DATE SIGNED (MM/DD/YY): 2/1/22	
SIGNATURE of SAMPLER: Meredith Duncan			



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information Company: GA Power Address: 1003 Weatherstone Parkway Woodstock, Ga 30188	Section B Required Project Information Report To: Kristen Juriniko Copy To: Rhonda Qurnm	Section C Invoice Information Attention: Southern Co Company Name:	Page: 1 of 3
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Email To: Kevin.Stephenson@Resoluteenv.com Phone: (678)5489415 Requested Due Date/TAT: 10 Day	Purchase Order No: Project Name: Plant Bowen Landfill Project Number:	Pace Quote Reference: Pace Project Manager: Pace Profile # 2928	REGULATORY AGENCY NPDES UST GROUND WATER RCCA OTHER <input checked="" type="checkbox"/> DRINKING WATER
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ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	DATE	TIME	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS		
														MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)
1	-GWA-1							4		X	X	X	5.90		
2	-GWA-2							4		X	X	X	7.40		
3	-GWA-2R							4		X	X	X	6.80		
4	GWA-3A							4		X	X	X	7.54		
5	-GWA-4RZ							4		X	X	X	8.13		
6	GWC-5							4		X	X	X	4.81		
7	GWC-6							4		X	X	X			
8	GWC-6RZ							4		X	X	X			
9	GWC-7Z							4		X	X	X			
10	GWC-8Z							4		X	X	X			
11	GWC-8RR							4		X	X	X			
12	GWC-9							4		X	X	X			

Relinquished by / Affiliation	DATE	TIME	Accepted by / Affiliation	DATE	TIME
William Leaker	2/4/22	0800	Arya Garner	2/4/22	0800
Arya Garner	2/4/22	11:45	Ryan Williams	2/4/22	1145
Ryan Williams	2/4/22	1900	Ryan Williams	2/4/22	1900

State Metals include Sb, As, Ba, Be, Cd, Ca, Cr, Cu, Pb, Ni, Se Ag, Tl, V, Zn, Co	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

*Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days.

F-ALL-Q-020(rev 07 15-Feb-2007)



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

Section A Required Client Information: Company GA Power, Address 1003 Weatherstone Parkway Woodstock, Ga 30188, Phone (678)5489415, Fax, Requested Due Date/TAT: 10 Day

Section B Required Project Information: Report To Kristen Juritko, Copy To Rhonda Quinn, Purchase Order No., Project Name Plant Bowen Landfill Cells land 2, Project Number

Section C Invoice Information: Attention Southern Co., Company Name, Address, Contact Person Nicole D'oleo, Reference, Project Name, Message, Trace Profile # 2928, Regulatory Agency NPDES, GROUND WATER, DRINKING WATER, UST, RCRA, OTHER, Site Location GA

SAMPLE ID (AZ, 091, A)
Sample IDs MUST BE UNIQUE

Table with columns: ITEM #, Section D Required Client Information, Valid Matrix Codes, MATRIX CODE, SAMPLE TYPE, DATE, TIME, SAMPLE TEMP AT COLLECTION, # OF CONTAINERS, Preservatives, Analysis Test, Requested Analysis Filtered (Y/N), Residual Chlorine (Y/N), and SAMPLE CONDITIONS.

Section D Additional Comments: William Lanker, Atoya Garner, Ryan Williams / Pace, Date 2/4/22, Time 0800, Date 2/4/22, Time 1145, Date 2/4/22, Time 1900

Sampler Name and Signature: PRINT Name of SAMPLER: Robert M.L. Lanker, Signature of SAMPLER: Robert M.L. Lanker, DATE Signed (MM/DD/YYYY): 02/02/22



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

Section A Required Client Information: Company: GA Power Address: 1003 Weatherstone Parkway Woodstock, Ga 30188	Section B Required Project Information: Report To: Kristen Junnko Copy To: Rhonda Quinn Purchase Order No. _____	Section C Invoice Information: Attention: Southern Co. Company Name: _____ Address: _____ Face Quote Reference: _____ Face Project Manager: Nicole D'oleo Face Profile #: 2928
Phone: (678)5489415 Requested Due Date/TAT: 10 Day	Project Name: Plant Bowen Landfill Project Number: _____	REGULATORY AGENCY: <input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER Site Location: _____ STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE <small>DOMESTIC WATER DW WASTEWATER WW WASTE WATER WWV PRODUCT P SEWAGE S OIL O WIRE W AIR A OTHER OT TISSUE TS</small>	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
					DATE	TIME							
1	-BPP-1												
2	DUP-2		B-2	2/2/22						X			
3	-BPP-3												
4	FB-2		UT 6	2/2/22	1145		4	3	1				
5	-FBL-									X			
6	-FBL-									X			
7	-EGBL-									X			
8	-EGBL-									X			
9	-EGBL-									X			
10													
11													
12													

ADDITIONAL COMMENTS Data Matrix include Sd As Ba, Ba, Cd, Cr, Cu, Pb, Ni, Se JE, Ti, V, Zn, Co	RELINQUISHED BY / AFFILIATION William Locker Ayoja Garner Lyn Williams / Pace
DATE	TIME
2/4/22	0800
2/4/22	1145
2/4/22	1900

ACCEPTED BY / AFFILIATION Ayoja Garner Lyn Williams / Pace	DATE
	TIME
	2/4/22 0800
	2/4/22 1145
	2/4/22 1900

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: Kristin Junnko, William Locker, Nicole D'oleo	DATE Signed (MM/DD/YY): 02/02/22
SIGNATURE of SAMPLER: Kristin Junnko	

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

Section A Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information

Company: GA Power Report To: Kristen Jurhiko Attention: Southern Co.
Address: 1003 Weatherstone Parkway Copy To: Rhonda Quinn
Woodstock, Ga 30188

Project Name: Plant Bowen Landfill Cells 1 & 2 POC Name: N Cole D'oleo
Purchase Order No. POC Title: Manager POC Phone: 2928
Requested Due Date/TAT: 10 Day Project Number

REGULATORY AGENCY

NPDES GROUND WATER DRINKING WATER

 UST RCRA OTHER

Site Location: GA
 STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
			DATE	TIME							
1	GWA-1	MT G 2/3/22 1055	4	3	1	X X X X	7.20				
2	GWA-2										
3	GWA-2R										
4	GWA-3										
5	GWA-4RZ										
6	GWA-5										
7	GWA-6										
8	GWA-6RZ										
9	GWA-7Z										
10	GWA-8Z										
11	GWA-8RR										
12	GWA-9										

ADDITIONAL COMMENTS

Relinquished by / Affiliation: William Laaker Date: 2/4/22 Time: 0800
 Accepted by / Affiliation: Atoya Garner Date: 2/4/22 Time: 1146

Relinquished by / Affiliation: Atoya Garner
 Ryan Williams / Pace Date: 2/4/22 Time: 1900
 Ryan Williams / Pace Date: 2/4/22 Time: 1900

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Meredith Duncan, Mill Laaker, Kevin Stephenson, Robert Mull
 SIGNATURE of SAMPLER: Meredith Duncan, Ryan Williams, Atoya Garner
 DATE Signed (MM/DD/YYYY): 02/03/22

Important Note: By signing this form you are accepting Pace's NET 30 day payment terms and agreeing to late charges of 1.5% per month for any invoices not paid within 30 days
 F-ALL-Q-020rev 07, 15-Feb-2007



Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	GA Power	Report To:	Kristen Juritko	Attention:	Southern Co.
Address:	1003 Weatherstone Parkway Woodstock, Ga 30188	Company Name:		Company Name:	
Ref To:	Kevin. Stephenson@Resoluteenv.com	Purchase Order No.:		Address:	
Phone:	(878)5489415	Project Name:	Plant Bowen Landfill Cells 1 & 2	State Code Reference:	Nicole D'oleo
Requested Due Date/TAT:	10 Day	Project Number:		Project Name:	Nicole D'oleo
				Project Profile #:	2928

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE	MATR X CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED			SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)		Residual Chlorine (Y/N)	Pace Project No./ Lab ID.
					DATE	TIME	DATE					TIME	Y		
1	SAMPLE ID (A-Z, 0-9/.) Sample IDs MUST BE UNIQUE	DRINKING WATER WASTE WATER WASTE WATER PRODUCT SOIL/SOLID OK WIPE AIR OTHER TISSUE													
2	BWP-4														
3	BWP-2														
4	BWP-3		WT G	2/3/22	1200			4	3	1					
5	FBL														
6	FBL														
7	EQBL														
8	EQBL														
9	EQBL														
10															
11															
12															

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
Site Metals include Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Ti, V, Zn, Co		William Leaker		2/4/22		0800		Atoya Garner		2/4/22		0800			
		Atoya Garner Ryan Williams / Pace		2/4/22		1445		Ryan Williams / Pace		2/4/22		1445			

SAMPLER NAME AND SIGNATURE		DATE Signed (MM/DD/YY):		Temp in °C		Received on Ice (Y/N)		Custody Sealed Cooler (Y/N)		Samples Intact (Y/N)	
PRINT Name of SAMPLER: Meredith Dorton, Will Leaker, Kevin Stephenson, Robert Mull		02/03/22									
SIGNATURE of SAMPLER: <i>Meredith Dorton</i>											

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project #: **WO# : 92586436**
 PM: _____ Due Date: 02/18/22
 CLIENT: GA-GA Power

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: JPE 2/8/22

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 083 Type of Ice: Wet Blue None

Cooler Temp: 1.1 Correction Factor: Add/Subtract (°C) +2

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 1.3

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4. <u>10 DAYS</u>
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9
-Includes Date/Time/ID/Analysis Matrix: <u>W</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers: _____

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHG

**Bottom half of box is to list number of bottles

Project #

WO# : 92586436

PM: NMG

Due Date: 02/18/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1		2	1																									
2		2	1																									
3		2	1																									
4		2	1																									
5		2	1																									
6		2	1																									
7		2	1																									
8		2	1																									
9		2	1																									
10		2	1																									
11		2	1																									
12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: 1003 Weatherstone Parkway Woodstock, Ga 30188	Section B Required Project Information: Report To: Kristen Juriniko Copy To: Rhonda Quinn Purchase Order No.: Project Name: Plant Bowen Landfill Cells 1 and 2 Project Number:	Section C Invoice Information: Attention: Southern Co. Company Name: Address: Pace Quote Reference: Pace Project Manager: Pace Profile #: 2928			
Requested Due Date/TAT: 10 Day	Requested Analysis Filtered (Y/N)	Requested Analysis Filtered (Y/N)			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 33%;"> Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> UST STATE: GA </td> <td style="width: 33%;"> <input type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> DRINKING WATER <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER ccr </td> <td style="width: 33%;"></td> </tr> </table>			Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> UST STATE: GA	<input type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> DRINKING WATER <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER ccr	
Regulatory Agency: <input type="checkbox"/> NPDES <input type="checkbox"/> UST STATE: GA	<input type="checkbox"/> GROUND WATER <input checked="" type="checkbox"/> DRINKING WATER <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER ccr				

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.	
				DATE	TIME								
1	GWC-10			2/4/22	1115		4	3	1	X	X	X	6.53
2	GWC-10R			2/4/22	1240		4	3	1	X	X	X	7.69
3	GWC-11			2/4/22	1233		4	3	1	X	X	X	7.20
4	GWC-11R			2/4/22	1045		4	3	1	X	X	X	7.58
5	GWC-12												
6	GWC-13												
7	GWC-13RZ			2/4/22	0944		4	3	1	X	X	X	7.46
8	GWC-14Z			2/4/22	1130		4	3	1	X	X	X	6.06
9	GWC-15Z												
10	GWC-15R			2/4/22	1314		4	3	1	X	X	X	7.61
11	GWC-16												
12	GWC-16R												

ADDITIONAL COMMENTS: Re Metals include: Sb, As, Ba, Be, Cd, Ca, Cr, Cu, Pb, Ni, Se, Tl, V, Zn, Co	REINQUIRED BY / AFFILIATION: William Leaker Atoya Garner Ryan Williams / Pace	ACCEPTED BY / AFFILIATION: Atoya Garner Ryan Williams / Pace Ryan Williams / Pace
DATE: 2/8/22 TIME: 0800	DATE: 2/8/22 TIME: 8:10	DATE: 2/8/22 TIME: 0810
SAMPLER NAME AND SIGNATURE: PRINT Name of SAMPLER: William Leaker, Kevin Stephenson, Meredith Duncan, Robert Mull SIGNATURE of SAMPLER: <i>[Signatures]</i>		
Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)
		Samples Intact (Y/N)



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information
 Company: GA Power
 Address: 1003 Weatherstone Parkway
 City: Woodstock, Ga 30188
 Contact: Kevin. Stephenson@Resoluteenv.com
 Phone: (678)5489415
 Requested Due Date/AT: 10 Day

Section B Required Project Information
 Report To: Kristen Jurinko
 Copy To: Rhonda Quirin
 Purchase Order No: [Blank]
 Project Name: Plant Bowen Landfill Cells 1 and 2
 Project Number: [Blank]

Section C Invoice Information
 Attention: Southern Co
 Company Name: [Blank]
 Address: [Blank]
 Reference: Nicole D'oleo
 Price Profile #: 2928

Page: 3 of 3

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER CCR
 Site Location: [Blank]
 STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODES DWB WWT WV P SL CL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.	
					DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH					Na ₂ S ₂ O ₃
1	-BPP-1				2/4/22	1315		4	3	1										
2	-BPP-2				2/4/22	1315		4	3	1										
3	-DUP-3				2/4/22	1315		4	3	1										
4	-FB-4																			
5	-FB-																			
6	-FB-																			
7	-FB-																			
8	-FB-																			
9	-FB-																			
10	-FB-																			
11																				
12																				

ADDITIONAL COMMENTS
 Relinquished by / Affiliation: William Leaker
 Date: 2/8/22
 Time: 0800
 Accepted by / Affiliation: Atoya Garner
 Date: 2/8/22
 Time: 0810
 Relinquished by / Affiliation: Ryan Williams / Pace
 Date: 2/8/22
 Time: 0948

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: William Leaker
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed (MM/DD/YYYY): 2/4/22

Temp in °C: [Blank]
 Received on Ice (Y/N): [Blank]
 Custody Sealed Cooler (Y/N): [Blank]
 Samples Intact (Y/N): [Blank]



CHAIN-OF-CUSTODY / Analytical Request Document

Section A Required Client Information:
 Company: GA Power
 Address: 1003 Weatherstone Parkway
 Woodstock, Ga 30188
 Phone: (678)5489415
 Fax: [blank]
 Email: Kevin.Stephenson@Resoluteenv.com
 Requested Due Date/TAT: 10 Day

Section B Required Project Information:
 Report To: Kristen Jurinko
 Copy To: Rhonda Quinn
 Purchase Order No.: [blank]
 Project Name: Plant Bowen Landfill
 Project Number: [blank]
 Call# Land 2

Section C Invoice Information:
 Attention: Southern Co.
 Company Name:
 Address:
 Reference: Nicole D'Osco
 Pace Project Manager
 Pace Profile #: 2928

REGULATORY AGENCY
 NPDES GROUND WATER DRINKING WATER
 UST RCRA OTHER

Site Location: _____ STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes				MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test				Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
		MATRIX	CODE	DRINKING WATER	WASTE WATER			PRODUCT	SOLID					COMPOSITE	DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH	Na ₂ S ₂ O ₃	Methanol	Other			
1	-GWC-10- SAMPLE ID (A-Z, 0-9/.) Sample IDs MUST BE UNIQUE																										
2	-GWC-10R																										
3	-GWC-11																										
4	-GWC-11R																										
5	-GWC-12																										
6	-GWC-12R																										
7	-GWC-13RZ																										
8	-GWC-14Z																										
9	-GWC-15Z																										
10	-GWC-15R																										
11	-GWA-50																										
12	-GWA-50R																										

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
William Laker	2/8/22	0800	Atoya Garner	2/8/22	0800	
Atoya Garner	2/8/22	8:10	Ryan Williams / Pace	2/8/22	0910	7.83
Ryan Williams / Pace	2/8/22	DATE				

Additional Comments: Metals include Sb, As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se, Tl, V, Zn, Co

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: William Laker, Meredith Duncan
 SIGNATURE of SAMPLER: [Signatures]
 DATE Signed (MM/DD/YY): 2/7/22

Temp in °C _____
 Received on Ice (Y/N) _____
 Custody Sealed Cooler (Y/N) _____
 Samples Intact (Y/N) _____



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: GA Power Address: 1003 Weatherstone Parkway Woodstock, Ga 30188 Mail To: Kevin. Stephenson@resoluteenv.com Phone: (678)5489415 Requested Due Date/TAT: 10 Day	Section B Required Project Information: Report To: Kristen Junnko Copy To: Rhonda Quirin Purchase Order No.: Project Name: Plant Bowen Landfill Project Number:	Section C Invoice Information: Attention: Southern Co. Company Name: Address: Pace Quote Reference: Pace Project Manager: Pace Profile #: 2928	REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> Site Location: <input type="checkbox"/> OTHER <input checked="" type="checkbox"/> STATE: <u>GA</u>
---	--	--	---

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./ Lab I.D.
				DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH				
1	-BPP-1																	
2	-BPP-2																	
3	-BPP-3																	
4	-FBL FR-5			2/7/22	1130		4	3	1									
5	-FBL																	
6	-FBL																	
7	-FBL																	
8	-FBL																	
9	-FBL																	
10																		
11																		
12																		

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS			
Metals include Sb, As, Ba, Be, Cd, Ca, Cr, Cu, Pb, Ni, Se, Tl, V, Zn, Co		William Looker		2/8/22	0800	Atoya Garner		2/8/22	0800	Temp in °C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
		Atoya Garner		2/8/22	8:10	Ryan Williams / Pace		2/8/22	0810				
		Ryan Williams / Pace		2/8/22	0949			2/7/22	0949				

SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER: William Looker Meredith Duncan	DATE Signed (MM/DD/YY): 2/7/22
SIGNATURE of SAMPLER:			

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92586436

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

PM: NMG Due Date: 02/18/22
 CLIENT: GA-GA Power

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *2/18/22 COA*

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Thermometer: If Gun ID: 083 Wet Blue None

Yes No N/A

Cooler Temp: 3.1 Type of Ice: Wet
 Correction Factor: Add/Subtract (°C) +0.2

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.3

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)?
 Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		9.
-Includes Date/Time/ID/Analysis Matrix:	<u>W</u>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers: _____

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

WO# : 92586436

PM: NMG

Due Date: 02/18/22

CLIENT: GA-GA Power

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		2	1			1																								
2		2	1			1																								
3																														
4																														
5																														
6																														
7																														
8																														
9																														
10																														
11																														
12																														

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Kevin Stephenson
GA POWER

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

Page **2** of **3**

Section A Required Client Information		Section B Required Project Information		Section C Invoice Information	
Company	GA Power	Report To	Kristen Jurmko	Attention	Southern Co
Address	1003 Weatherstone Parkway Woodstock Ga 30188	Copy To	Rhonda Quinn	Company Name	
Email To	Kevin Stephenson@resoluteenv.com	Purchase Order No		Address	
Phone	(678)5489415 Fax	Project Name	Plant Bowen Landfill	Price Quote Reference	
Requested Due Date/TAT:	10 Day	Project Number		Price Project Manager	Nicole Doleo
				Price Profile #	2928
REGULATORY AGENCY			Requested Analysis Filtered (Y/N)		
<input type="checkbox"/> NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> OTHER			<input type="checkbox"/> Metals + State Metals <input type="checkbox"/> Cl F SO4 <input type="checkbox"/> Total/Carb/B-carb Alk <input type="checkbox"/> TDS		
Site Location STATE: GA			Residual Chlorine (Y/N)		

ITEM #	Valid Matrix Codes Drinking Water WATER WASTE WATER PRODUCT SOLID/SLURRY DIE WIP MATERIAL OTHER TISSUE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	Pace Project No./Lab I.D.
				DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH				
1	-GWA-10																	
2	-GWA-10R																	
3	-GWA-11																	
4	-GWA-11R																	
5	-GWA-12																	
6	-GWA-12R																	
7	-GWA-13			2/17/22	1306		4	3	1									724
8	-GWA-13R																	
9	-GWA-14																	
10	-GWA-14R																	
11	-GWA-50																	
12	-GWA-50R																	

ADDITIONAL COMMENTS
State Metals include Sb, Ar, Ba, Be, Cd, Ca, Cr, Cu, Pb, Ni, Sr, Ag, Tl, V, Zn, Co

RELINQUISHED BY / AFFILIATION: Kevin Stephenson, GA Power, 2/18/22, 11:56 AM
ACCEPTED BY / AFFILIATION: Bryan Cox, GA Power, 2/18/22, 09:58 AM

SAMPLER NAME AND SIGNATURE
PRINT Name of SAMPLER: Kevin Stephenson, William Locker
SIGNATURE of SAMPLER: *Kevin Stephenson*, *William Locker*
DATE Signed (MM/DD/YYYY): 2/17/22

Temp in °C: _____
Received on Ice (Y/N): _____
Custody Sealed Cooler (Y/N): _____
Samples Intact (Y/N): _____

Kevin Stephenson

CHAIN-OF-CUSTODY / Analytical Request Document

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

Page: 3 of 3

Section A Required Client Information Company: GA Power Address: 1003 Weatherstone Parkway Woodstock, Ga 30188 Email To: Kevin.Stephenson@Resoluteenv.com Phone: (678)5489415 Requested Due Date/TAT: 10 Day	Section B Required Project Information Report To: Kristen Juniko Copy To: Rhonda Quinn Purchase Order No: Project Name: Plant Bowen Landfill Project Number:
Section C Invoice Information Attention: Southern Co Company Name: Address: Reference: Price Project Manager: Price Point # 2928	REGULATORY AGENCY NPDES <input type="checkbox"/> GROUND WATER <input type="checkbox"/> UST <input type="checkbox"/> RCRA <input type="checkbox"/> Site Location: _____ STATE: GA

ITEM #	Section D Required Client Information	Valid Matrix Codes MATRIX CODE DATE TIME	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Filled (Y/N)	Residual Chlorine (Y/N)	Page Project No./ Lab I.D.
			DATE	TIME			DATE	TIME	Unpreserved	H ₂ SO ₄	HNO ₃	HCl	NaOH				
1	-BUP-4																
2	-BUP-2																
3	-BUP-3																
4	-FB-6		2/17/22	1340		4	3	1									
5	-FB-																
6	-FB-																
7	-FB-																
8	-FB-																
9	-FB-																
10																	
11																	
12																	

ADDITIONAL COMMENTS State Metals include So As, Ba, Be, Cd, Cr, Cu, Pb, Ni, Se Ag, H, V, Zn, Co	
RELINQUISHED BY / AFFILIATION Kevin Stephenson - Invt 2/18/22	DATE 2/18/22
ACCEPTED BY / AFFILIATION Kevin Stephenson - Invt 2/17/22	DATE 2/17/22
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Kevin Stephenson, William Leaber SIGNATURE of SAMPLER: <i>Kevin Stephenson</i> DATE Signed (MM/DD/YY): 2/17/22	
Temp in °C	Received on Ice (Y/N)
Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)

April 19, 2022

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 3&4
Pace Project No.: 92597519

Dear Joju Abraham:

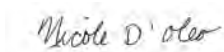
Enclosed are the analytical results for sample(s) received by the laboratory on April 06, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA
- Pace Analytical Services - Minneapolis

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Michelle Barker, WOOD E&I
Kristen Jurinko
Ms. Lauren Petty, Southern Company
Rhonda Quinn, WOOD E&I
Greg Wrenn, WOOD E&I



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92597519

Pace Analytical Services, LLC - Minneapolis MN

1700 Elm Street SE, Minneapolis, MN 55414
1800 Elm Street SE, Minneapolis, MN 55414--Satellite Air Lab

A2LA Certification #: 2926.01*
Alabama Certification #: 40770
Alaska Contaminated Sites Certification #: 17-009*
Alaska DW Certification #: MN00064
Arizona Certification #: AZ0014*
Arkansas DW Certification #: MN00064
Arkansas WW Certification #: 88-0680
California Certification #: 2929
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8 Tribal Water Systems+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605*
Georgia Certification #: 959
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: AI-03086*
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064*
Maryland Certification #: 322
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137*
Minnesota Dept of Ag Approval: via MN 027-053-137
Minnesota Petrofund Registration #: 1240*
Mississippi Certification #: MN00064

Missouri Certification #: 10100
Montana Certification #: CERT0092
Nebraska Certification #: NE-OS-18-06
Nevada Certification #: MN00064
New Hampshire Certification #: 2081*
New Jersey Certification #: MN002
New York Certification #: 11647*
North Carolina DW Certification #: 27700
North Carolina WW Certification #: 530
North Dakota Certification (A2LA) #: R-036
North Dakota Certification (MN) #: R-036
Ohio DW Certification #: 41244
Ohio VAP Certification (1700) #: CL101
Ohio VAP Certification (1800) #: CL110*
Oklahoma Certification #: 9507*
Oregon Primary Certification #: MN300001
Oregon Secondary Certification #: MN200001*
Pennsylvania Certification #: 68-00563*
Puerto Rico Certification #: MN00064
South Carolina Certification #:74003001
Tennessee Certification #: TN02818
Texas Certification #: T104704192*
Utah Certification #: MN00064*
Vermont Certification #: VT-027053137
Virginia Certification #: 460163*
Washington Certification #: C486*
West Virginia DEP Certification #: 382
West Virginia DW Certification #: 9952 C
Wisconsin Certification #: 999407970
Wyoming UST Certification #: via A2LA 2926.01
USDA Permit #: P330-19-00208
Please Note: Applicable air certifications are denoted with an asterisk ().

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006
9800 Kinsey Ave. Ste 100, Huntersville, NC 28078
North Carolina Drinking Water Certification #: 37706
North Carolina Field Services Certification #: 5342
North Carolina Wastewater Certification #: 12
South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001
South Carolina Drinking Water Cert. #: 99006003
Florida/NELAP Certification #: E87627
Kentucky UST Certification #: 84
Louisiana DoH Drinking Water #: LA029
Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804
Florida/NELAP Certification #: E87648
North Carolina Drinking Water Certification #: 37712
North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030
South Carolina Certification #: 99030001
Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092
Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812
North Carolina Certification #: 381

REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92597519

Pace Analytical Services Peachtree Corners
South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92597519001	GWA-36A	Water	04/06/22 11:46	04/06/22 14:10
92597519002	FB-1	Water	04/06/22 12:20	04/06/22 14:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
92597519001	GWA-36A	EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2320B	AB3	3	PASI-M
		SM 2540C-2011	ZMC	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A
92597519002	FB-1	EPA 6010D	KH	5	PASI-GA
		EPA 6020B	CW1	15	PASI-GA
		EPA 7470A	VB	1	PASI-GA
		SM 2320B	AB3	3	PASI-M
		SM 2540C-2011	ZMC	1	PASI-A
		EPA 300.0 Rev 2.1 1993	CDC	3	PASI-A

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

PASI-M = Pace Analytical Services - Minneapolis

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92597519001	GWA-36A					
	Performed by	CUSTOME R			04/06/22 15:49	
	pH	6.82	Std. Units		04/06/22 15:49	
EPA 6010D	Zinc	0.012J	mg/L	0.020	04/07/22 21:01	
EPA 6010D	Potassium	1.6	mg/L	0.20	04/07/22 21:01	
EPA 6010D	Sodium	1.2	mg/L	1.0	04/07/22 21:01	
EPA 6010D	Calcium	48.7	mg/L	1.0	04/07/22 21:01	M1
EPA 6010D	Magnesium	24.4	mg/L	0.050	04/07/22 21:01	M1
EPA 6020B	Arsenic	0.0018J	mg/L	0.0050	04/11/22 17:06	
EPA 6020B	Barium	0.041	mg/L	0.0050	04/11/22 17:06	
EPA 6020B	Beryllium	0.000061J	mg/L	0.00050	04/11/22 17:06	
EPA 6020B	Boron	0.032J	mg/L	0.040	04/11/22 17:06	
SM 2320B	Alkalinity, Total as CaCO3	192	mg/L	5.0	04/16/22 12:20	
SM 2320B	Alkalinity,Bicarbonate (CaCO3)	192	mg/L	5.0	04/16/22 12:20	
SM 2540C-2011	Total Dissolved Solids	238	mg/L	25.0	04/07/22 15:39	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	04/08/22 06:55	
EPA 300.0 Rev 2.1 1993	Sulfate	21.2	mg/L	1.0	04/08/22 06:55	
92597519002	FB-1					
EPA 6020B	Antimony	0.0013J	mg/L	0.0030	04/11/22 17:30	
EPA 6020B	Arsenic	0.0016J	mg/L	0.0050	04/11/22 17:30	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92597519

Sample: GWA-36A	Lab ID: 92597519001	Collected: 04/06/22 11:46	Received: 04/06/22 14:10	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		04/06/22 15:49		
pH	6.82	Std. Units			1		04/06/22 15:49		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.012J	mg/L	0.020	0.0085	1	04/07/22 10:57	04/07/22 21:01	7440-66-6	
Potassium	1.6	mg/L	0.20	0.15	1	04/07/22 10:57	04/07/22 21:01	7440-09-7	
Sodium	1.2	mg/L	1.0	0.58	1	04/07/22 10:57	04/07/22 21:01	7440-23-5	
Calcium	48.7	mg/L	1.0	0.12	1	04/07/22 10:57	04/07/22 21:01	7440-70-2	M1
Magnesium	24.4	mg/L	0.050	0.012	1	04/07/22 10:57	04/07/22 21:01	7439-95-4	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	04/11/22 12:02	04/11/22 17:06	7440-36-0	
Arsenic	0.0018J	mg/L	0.0050	0.0011	1	04/11/22 12:02	04/11/22 17:06	7440-38-2	
Barium	0.041	mg/L	0.0050	0.00067	1	04/11/22 12:02	04/11/22 17:06	7440-39-3	
Beryllium	0.000061J	mg/L	0.00050	0.000054	1	04/11/22 12:02	04/11/22 17:06	7440-41-7	
Boron	0.032J	mg/L	0.040	0.0086	1	04/11/22 12:02	04/11/22 17:06	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	04/11/22 12:02	04/11/22 17:06	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	04/11/22 12:02	04/11/22 17:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	04/11/22 12:02	04/11/22 17:06	7440-48-4	
Copper	ND	mg/L	0.0050	0.00050	1	04/11/22 12:02	04/11/22 17:06	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	04/11/22 12:02	04/11/22 17:06	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	04/11/22 12:02	04/11/22 17:06	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	04/11/22 12:02	04/11/22 17:06	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	04/11/22 12:02	04/11/22 17:06	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	04/11/22 12:02	04/11/22 17:06	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	04/11/22 12:02	04/11/22 17:06	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	04/18/22 10:15	04/18/22 13:15	7439-97-6	
2320B Alkalinity									
Analytical Method: SM 2320B Pace Analytical Services - Minneapolis									
Alkalinity, Total as CaCO ₃	192	mg/L	5.0	1.8	1		04/16/22 12:20		
Alkalinity, Bicarbonate (CaCO ₃)	192	mg/L	5.0	1.8	1		04/16/22 12:20		
Alkalinity, Carbonate (CaCO ₃)	ND	mg/L	5.0	1.8	1		04/16/22 12:20		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2011 Pace Analytical Services - Asheville									
Total Dissolved Solids	238	mg/L	25.0	25.0	1		04/07/22 15:39		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

Sample: GWA-36A **Lab ID: 92597519001** Collected: 04/06/22 11:46 Received: 04/06/22 14:10 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.4	mg/L	1.0	0.60	1		04/08/22 06:55	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		04/08/22 06:55	16984-48-8	
Sulfate	21.2	mg/L	1.0	0.50	1		04/08/22 06:55	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92597519

Sample: FB-1		Lab ID: 92597519002		Collected: 04/06/22 12:20	Received: 04/06/22 14:10	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	04/07/22 10:57	04/07/22 21:21	7440-66-6		
Potassium	ND	mg/L	0.20	0.15	1	04/07/22 10:57	04/07/22 21:21	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	04/07/22 10:57	04/07/22 21:21	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	04/07/22 10:57	04/07/22 21:21	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	04/07/22 10:57	04/07/22 21:21	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	0.0013J	mg/L	0.0030	0.00078	1	04/11/22 12:02	04/11/22 17:30	7440-36-0		
Arsenic	0.0016J	mg/L	0.0050	0.0011	1	04/11/22 12:02	04/11/22 17:30	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	04/11/22 12:02	04/11/22 17:30	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	04/11/22 12:02	04/11/22 17:30	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	04/11/22 12:02	04/11/22 17:30	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	04/11/22 12:02	04/11/22 17:30	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	04/11/22 12:02	04/11/22 17:30	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	04/11/22 12:02	04/11/22 17:30	7440-48-4		
Copper	ND	mg/L	0.0050	0.00050	1	04/11/22 12:02	04/11/22 17:30	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	04/11/22 12:02	04/11/22 17:30	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	04/11/22 12:02	04/11/22 17:30	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	04/11/22 12:02	04/11/22 17:30	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	04/11/22 12:02	04/11/22 17:30	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	04/11/22 12:02	04/11/22 17:30	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	04/11/22 12:02	04/11/22 17:30	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	04/18/22 10:15	04/18/22 13:18	7439-97-6		
2320B Alkalinity		Analytical Method: SM 2320B Pace Analytical Services - Minneapolis								
Alkalinity, Total as CaCO ₃	ND	mg/L	5.0	1.8	1		04/16/22 12:26			
Alkalinity,Bicarbonate (CaCO ₃)	ND	mg/L	5.0	1.8	1		04/16/22 12:26			
Alkalinity,Carbonate (CaCO ₃)	ND	mg/L	5.0	1.8	1		04/16/22 12:26			
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2011 Pace Analytical Services - Asheville								
Total Dissolved Solids	ND	mg/L	25.0	25.0	1		04/07/22 15:39			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		04/08/22 07:11	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		04/08/22 07:11	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		04/08/22 07:11	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

QC Batch: 690039	Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A	Analysis Description: 6010D ATL
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 3605646 Matrix: Water

Associated Lab Samples: 92597519001, 92597519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	04/07/22 20:37	
Magnesium	mg/L	ND	0.050	0.012	04/07/22 20:37	
Potassium	mg/L	ND	0.20	0.15	04/07/22 20:37	
Sodium	mg/L	ND	1.0	0.58	04/07/22 20:37	
Zinc	mg/L	ND	0.020	0.0085	04/07/22 20:37	

LABORATORY CONTROL SAMPLE: 3605647

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	102	80-120	
Magnesium	mg/L	1	1.1	106	80-120	
Potassium	mg/L	1	1.0	103	80-120	
Sodium	mg/L	1	1.0	103	80-120	
Zinc	mg/L	1	1.0	104	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3605728 3605729

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92597519001 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L	48.7	1	1	48.4	49.3	-27	68	75-125	2	20 M1
Magnesium	mg/L	24.4	1	1	24.7	25.4	30	102	75-125	3	20 M1
Potassium	mg/L	1.6	1	1	2.6	2.6	99	101	75-125	1	20
Sodium	mg/L	1.2	1	1	2.2	2.2	103	105	75-125	1	20
Zinc	mg/L	0.012J	1	1	1.1	1.1	105	105	75-125	1	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92597519

QC Batch: 690695 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 3609206 Matrix: Water

Associated Lab Samples: 92597519001, 92597519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	04/11/22 16:54	
Arsenic	mg/L	ND	0.0050	0.0011	04/11/22 16:54	
Barium	mg/L	ND	0.0050	0.00067	04/11/22 16:54	
Beryllium	mg/L	ND	0.00050	0.000054	04/11/22 16:54	
Boron	mg/L	ND	0.040	0.0086	04/11/22 16:54	
Cadmium	mg/L	ND	0.00050	0.00011	04/11/22 16:54	
Chromium	mg/L	ND	0.0050	0.0011	04/11/22 16:54	
Cobalt	mg/L	ND	0.0050	0.00039	04/11/22 16:54	
Copper	mg/L	ND	0.0050	0.00050	04/11/22 16:54	
Lead	mg/L	ND	0.0010	0.00089	04/11/22 16:54	
Nickel	mg/L	ND	0.0050	0.00071	04/11/22 16:54	
Selenium	mg/L	ND	0.0050	0.0014	04/11/22 16:54	
Silver	mg/L	ND	0.0050	0.00044	04/11/22 16:54	
Thallium	mg/L	ND	0.0010	0.00018	04/11/22 16:54	
Vanadium	mg/L	ND	0.010	0.0019	04/11/22 16:54	

LABORATORY CONTROL SAMPLE: 3609207

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.099	99	80-120	
Arsenic	mg/L	0.1	0.094	94	80-120	
Barium	mg/L	0.1	0.096	96	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.1	105	80-120	
Cadmium	mg/L	0.1	0.095	95	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.096	96	80-120	
Copper	mg/L	0.1	0.095	95	80-120	
Lead	mg/L	0.1	0.093	93	80-120	
Nickel	mg/L	0.1	0.095	95	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Silver	mg/L	0.1	0.099	99	80-120	
Thallium	mg/L	0.1	0.093	93	80-120	
Vanadium	mg/L	0.1	0.096	96	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

Parameter	Units	3609208		3609209		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Antimony	mg/L	ND	0.1	0.1	0.099	0.10	99	100	75-125	1	20	
Arsenic	mg/L	0.0018J	0.1	0.1	0.096	0.096	95	94	75-125	0	20	
Barium	mg/L	0.041	0.1	0.1	0.14	0.14	100	100	75-125	0	20	
Beryllium	mg/L	0.000061J	0.1	0.1	0.10	0.11	103	111	75-125	7	20	
Boron	mg/L	0.032J	1	1	1.1	1.2	102	112	75-125	9	20	
Cadmium	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	0	20	
Cobalt	mg/L	ND	0.1	0.1	0.097	0.098	97	98	75-125	1	20	
Copper	mg/L	ND	0.1	0.1	0.095	0.097	94	96	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.094	0.096	94	96	75-125	2	20	
Nickel	mg/L	ND	0.1	0.1	0.096	0.097	96	97	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.094	0.096	93	96	75-125	3	20	
Silver	mg/L	ND	0.1	0.1	0.098	0.10	98	100	75-125	2	20	
Thallium	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	1	20	
Vanadium	mg/L	ND	0.1	0.1	0.10	0.10	102	101	75-125	1	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92597519

QC Batch: 691983 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 3615683 Matrix: Water
Associated Lab Samples: 92597519001, 92597519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	04/18/22 12:42	

LABORATORY CONTROL SAMPLE: 3615684

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3615685 3615686

Parameter	Units	3615685		3615686		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0024	0.0037	96	148	75-125	42	20	M1,R1

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

QC Batch: 809654	Analysis Method: SM 2320B
QC Batch Method: SM 2320B	Analysis Description: 2320B Alkalinity
	Laboratory: Pace Analytical Services - Minneapolis

Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 4296151 Matrix: Water

Associated Lab Samples: 92597519001, 92597519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	ND	5.0	1.8	04/16/22 10:19	
Alkalinity,Bicarbonate (CaCO3)	mg/L	ND	5.0	1.8	04/16/22 10:19	
Alkalinity,Carbonate (CaCO3)	mg/L	ND	5.0	1.8	04/16/22 10:19	

LABORATORY CONTROL SAMPLE & LCSD: 4296152 4296153

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	40	43.4	43.2	109	108	90-110	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4296154 4296155

Parameter	Units	10603644007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	596	40	40	638	638	104	104	80-120	0	20	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 4296156 4296157

Parameter	Units	10604355001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Alkalinity, Total as CaCO3	mg/L	27.3	40	40	67.8	68.0	101	102	80-120	0	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

QC Batch: 689939

Analysis Method: SM 2540C-2011

QC Batch Method: SM 2540C-2011

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 3605276

Matrix: Water

Associated Lab Samples: 92597519001, 92597519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	04/07/22 15:36	

LABORATORY CONTROL SAMPLE: 3605277

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	250	262	105	90-110	

SAMPLE DUPLICATE: 3605278

Parameter	Units	92597190001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	2310	1800	25	25	H1

SAMPLE DUPLICATE: 3605279

Parameter	Units	92596970004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	642	638	1	25	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92597519

QC Batch: 690113 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92597519001, 92597519002

METHOD BLANK: 3606393 Matrix: Water
Associated Lab Samples: 92597519001, 92597519002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/08/22 00:47	
Fluoride	mg/L	ND	0.10	0.050	04/08/22 00:47	
Sulfate	mg/L	ND	1.0	0.50	04/08/22 00:47	

LABORATORY CONTROL SAMPLE: 3606394

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.7	99	90-110	
Fluoride	mg/L	2.5	2.5	99	90-110	
Sulfate	mg/L	50	48.8	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606395 3606396

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92596921010	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	12.7	50	50	64.6	64.6	104	104	90-110	0	10		
Fluoride	mg/L	ND	2.5	2.5	3.0	3.0	117	117	90-110	0	10	M1	
Sulfate	mg/L	84.8	50	50	128	124	86	79	90-110	3	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3606397 3606398

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92596921017	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	50	50	50.3	51.0	100	102	90-110	2	10		
Fluoride	mg/L	ND	2.5	2.5	2.5	2.6	101	102	90-110	2	10		
Sulfate	mg/L	ND	50	50	49.5	50.4	99	101	90-110	2	10		

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

H1 Analysis conducted outside the EPA method holding time.

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

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92597519

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92597519001	GWA-36A				
92597519001	GWA-36A	EPA 3010A	690039	EPA 6010D	690107
92597519002	FB-1	EPA 3010A	690039	EPA 6010D	690107
92597519001	GWA-36A	EPA 3005A	690695	EPA 6020B	690794
92597519002	FB-1	EPA 3005A	690695	EPA 6020B	690794
92597519001	GWA-36A	EPA 7470A	691983	EPA 7470A	692272
92597519002	FB-1	EPA 7470A	691983	EPA 7470A	692272
92597519001	GWA-36A	SM 2320B	809654		
92597519002	FB-1	SM 2320B	809654		
92597519001	GWA-36A	SM 2540C-2011	689939		
92597519002	FB-1	SM 2540C-2011	689939		
92597519001	GWA-36A	EPA 300.0 Rev 2.1 1993	690113		
92597519002	FB-1	EPA 300.0 Rev 2.1 1993	690113		

REPORT OF LABORATORY ANALYSIS

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Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: G A Power

Project #: **WO#: 92597519**

Courier: Commercial Fed Ex Pace UPS USPS Other: Client



Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 4/6/22
COH

Packing Material: Bubble Wrap Bubble Bags None Other
Thermometer: IR Gun ID: 083 Type of Ice: Wet Blue None

Biological Tissue Frozen? Yes No N/A

Cooler Temp: 3.0 Correction Factor: Add/Subtract (°C) +0.2

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.2

USDA Regulated Soil (N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	<u>W</u>	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

CLIENT NOTIFICATION/RESOLUTION

Lot ID of split containers:

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Sample Condition Upon Receipt (SCUR)

Document No.:
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
Page 2 of 2

Issuing Authority:
Pace Carolinas Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

WO#: 92597519

PM: NMG

Due Date: 04/20/22

CLIENT: GA-GA Power

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFLU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1		21				15																							
2		21				15																							
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:

Company: Georgia Power	Report To: Kristen Jurinko	Attention: Southern Co.
Address: 1003 Weatherstone Parkway Woodstock, GA 30188	Copy To: Rhonda Quinn	Company Name:
Email To: kevin.stephenson@resoluteenv.com	Purchase Order #:	Address:
Phone: (678) 548-9415 Fax:	Project Name: Plant Bowen Landfill Cells 3&4	Price Quote:
Requested Due Date: Standard	Project Number:	Price Project Manager: Nicole D'olio
		Price Profile #: 2928
		Regulatory Agency
		State / Location

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Requested Analytes Filtered (Y/N)	Residual Chlorine (Y/N)	pH	
			START DATE	END DATE			H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other					Metals + State Metals
1	GWA-36A		WT G	4/6/22 1146		4	3	1										
2	FB - 1		WT G	4/6/22 1220		4	3	1										
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		

RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS	
William Laaker		4/6/22	1410	OWD		4/6/22	1410		

State Metals include Sb, As, Ba, Be, Cd, Ca, Cr, Cu, Pb, Ni, Se, Ag, Tl, V, Zn, Co

SAMPLER NAME AND SIGNATURE		TEMP in C
PRINT Name of SAMPLER: William Laaker		Received on Ice (Y/N)
SIGNATURE of SAMPLER: <i>William Laaker</i>	DATE Signed: 4/6/22	Custody Sealed Cooler (Y/N)
		Samples Intact (Y/N)

May 04, 2022

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: BOWEN LANDFILL
Pace Project No.: 92601912

Dear Joju Abraham:

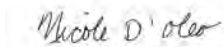
Enclosed are the analytical results for sample(s) received by the laboratory on April 29, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Michelle Barker, WOOD E&I
Kristen Jurinko
Ms. Lauren Petty, Southern Company
Rhonda Quinn, WOOD E&I
Greg Wrenn, WOOD E&I



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN LANDFILL

Pace Project No.: 92601912

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92601912001	GWC-5	Water	04/28/22 10:52	04/29/22 10:15
92601912002	GWC-12	Water	04/28/22 12:05	04/29/22 10:15
92601912003	GWC-48	Water	04/28/22 10:45	04/29/22 10:15
92601912004	FB-1	Water	04/28/22 12:40	04/29/22 10:15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LANDFILL

Pace Project No.: 92601912

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92601912001	GWC-5	EPA 6020B	CW1	1
92601912002	GWC-12	EPA 6020B	CW1	1
92601912003	GWC-48	EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JCM	1
92601912004	FB-1	EPA 6020B	CW1	2
		EPA 7470A	VB	1
		EPA 300.0 Rev 2.1 1993	JCM	1

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LANDFILL

Pace Project No.: 92601912

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92601912001	GWC-5					
	Performed by	CUSTOME			04/29/22 15:15	
		R				
	pH	5.78	Std. Units		04/29/22 15:15	
EPA 6020B	Beryllium	0.00078	mg/L	0.00050	05/03/22 16:17	
92601912002	GWC-12					
	Performed by	CUSTOME			04/29/22 15:15	
		R				
	pH	6.33	Std. Units		04/29/22 15:15	
EPA 6020B	Cadmium	0.00067	mg/L	0.00050	05/03/22 16:23	
92601912003	GWC-48					
	Performed by	CUSTOME			04/29/22 15:15	
		R				
	pH	5.00	Std. Units		04/29/22 15:15	
EPA 7470A	Mercury	0.00040	mg/L	0.00020	05/03/22 13:09	
EPA 300.0 Rev 2.1 1993	Chloride	5.0	mg/L	1.0	04/30/22 14:13	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

Sample: GWC-5		Lab ID: 92601912001		Collected: 04/28/22 10:52	Received: 04/29/22 10:15	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	CUSTOMER				1		04/29/22 15:15		
pH	5.78	Std. Units			1		04/29/22 15:15		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Beryllium	0.00078	mg/L	0.00050	0.000054	1	05/03/22 10:14	05/03/22 16:17	7440-41-7	

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ANALYTICAL RESULTS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

Sample: GWC-12		Lab ID: 92601912002		Collected: 04/28/22 12:05	Received: 04/29/22 10:15	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data	Analytical Method: Pace Analytical Services - Charlotte								
Performed by	CUSTOMER				1		04/29/22 15:15		
pH	6.33	Std. Units			1		04/29/22 15:15		
6020 MET ICPMS	Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Cadmium	0.00067	mg/L	0.00050	0.00011	1	05/03/22 10:14	05/03/22 16:23	7440-43-9	

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ANALYTICAL RESULTS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

Sample: GWC-48		Lab ID: 92601912003		Collected: 04/28/22 10:45	Received: 04/29/22 10:15	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		04/29/22 15:15		
pH	5.00	Std. Units			1		04/29/22 15:15		
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.00040	mg/L	0.00020	0.00013	1	05/03/22 08:00	05/03/22 13:09	7439-97-6	
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.0	mg/L	1.0	0.60	1		04/30/22 14:13	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

Sample: FB-1		Lab ID: 92601912004		Collected: 04/28/22 12:40	Received: 04/29/22 10:15	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Beryllium	ND	mg/L	0.00050	0.000054	1	05/03/22 10:14	05/03/22 16:29	7440-41-7	
Cadmium	ND	mg/L	0.00050	0.00011	1	05/03/22 10:14	05/03/22 16:29	7440-43-9	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	05/03/22 08:00	05/03/22 13:11	7439-97-6	
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		04/30/22 14:27	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LANDFILL
Pace Project No.: 92601912

QC Batch: 695563 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92601912001, 92601912002, 92601912004

METHOD BLANK: 3632873 Matrix: Water
Associated Lab Samples: 92601912001, 92601912002, 92601912004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Beryllium	mg/L	ND	0.00050	0.000054	05/03/22 14:49	
Cadmium	mg/L	ND	0.00050	0.00011	05/03/22 14:49	

LABORATORY CONTROL SAMPLE: 3632874

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Beryllium	mg/L	0.1	0.10	101	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3632875 3632876

Parameter	Units	92595615001		3632876		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Beryllium	mg/L	0.063J ug/L	0.1	0.1	0.10	0.10	101	102	75-125	0	20
Cadmium	mg/L	ND	0.1	0.1	0.10	0.11	101	106	75-125	5	20

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LANDFILL
Pace Project No.: 92601912

QC Batch: 695457 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92601912003, 92601912004

METHOD BLANK: 3632603 Matrix: Water
Associated Lab Samples: 92601912003, 92601912004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	05/03/22 12:16	

LABORATORY CONTROL SAMPLE: 3632604

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	95	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3632605 3632606

Parameter	Units	3632605		3632606		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	92600073002 ND	0.0025	0.0025	0.00099	0.00089	39	35	75-125	10	20 M1

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LANDFILL

Pace Project No.: 92601912

QC Batch: 695206 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92601912003, 92601912004

METHOD BLANK: 3631421 Matrix: Water

Associated Lab Samples: 92601912003, 92601912004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	04/30/22 13:45	

LABORATORY CONTROL SAMPLE: 3631422

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.0	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3631423 3631424

Parameter	Units	92601535009		3631423		3631424		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result				
Chloride	mg/L	92.1	50	50	123	123	63	61	90-110	1	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3631425 3631426

Parameter	Units	92601782003		3631425		3631426		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result				
Chloride	mg/L	1.7	50	50	53.9	54.7	104	106	90-110	1	10

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN LANDFILL

Pace Project No.: 92601912

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE


Project: BOWEN LANDFILL

Pace Project No.: 92601912

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92601912001	GWC-5				
92601912002	GWC-12				
92601912003	GWC-48				
92601912001	GWC-5	EPA 3005A	695563	EPA 6020B	695646
92601912002	GWC-12	EPA 3005A	695563	EPA 6020B	695646
92601912004	FB-1	EPA 3005A	695563	EPA 6020B	695646
92601912003	GWC-48	EPA 7470A	695457	EPA 7470A	695609
92601912004	FB-1	EPA 7470A	695457	EPA 7470A	695609
92601912003	GWC-48	EPA 300.0 Rev 2.1 1993	695206		
92601912004	FB-1	EPA 300.0 Rev 2.1 1993	695206		

REPORT OF LABORATORY ANALYSIS

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	Document Name: Sample Condition Upon Receipt (SCUR)	Document Revised: November 15, 2021 Page 1 of 2
	Document No.: F-CAR-CS-033-Rev.08	Issuing Authority: Pace Carolinas Quality Office

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92601912

Courier: Fed Ex UPS USPS Client
 Pace Other: _____



Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: *4/29/22*
COF

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: *214* Type of Ice: Wet Blue None

Cooler Temp: *3.3* Correction Factor: Add/Subtract (°C) *+0.1*

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): *3.4*

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	1	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9	
-Includes Date/Time/ID/Analysis Matrix:	<i>W</i>		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



Document Name:
Sample Condition Upon Receipt (SCUR)
 Document No:
F-CAR-CS-033-Rev.08

Document Revised: November 15, 2021
 Page 2 of 2
 Issuing Authority:
 Pace Carolinas Quality Office

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

Project #

WO# : 92601912

PM: NMG

Due Date: 05/06/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	AG3A(DG3A)-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9P-40 mL VOA H3PO4 (N/A)	VOAK (3 vials per kit)-5035 kit (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3A-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved vials (N/A)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: Georgia Power - Coal Combustion Residuals Address: 2480 Marer Road Atlanta, GA 30339 Email: kjuntink@southemco.com Phone: 4708990633 Requested Due Date: 5 Day TAT

Section B Required Project Information: Report To: Kristen Juniko, Florida Guinn Copy To: Purchase Order #: Project Name: Plant Bowen Landfill Project #:

Section C Invoice Information: Attention: Company Name: Address: Face Project Manager: Pace Profile #: 315 GA

Page : 1 Of 1

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Y/N	Requested Analysis Returned (Y/N)	Residual Chlorine (Y/N)	PH
			START DATE	END DATE			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol					
1	GWC-5	DW	4/23/22	1052		1												PH 5.78
2	GWC-12	WV	4/23/22	1205		1												PH 6.33
3	GWC-48	SL	4/23/22	1045		2												PH 5.00
4	FB-1	WP	4/23/22	1240		2												
5		AR																
6		CT																
7		TS																
8																		
9																		
10																		
11																		
12																		

ADDITIONAL COMMENTS

REACQUIRED BY / AFFILIATION: William Leaker DATE: 4/23/22 TIME: 1015

ACCEPTED BY / AFFILIATION: Ryan W. Williams DATE: 4/23/22 TIME: 1306

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: William Leaker Meredith Duncan Kevin Stephenson

SIGNATURE of SAMPLER: *[Signatures]* DATE signed: 4/28/22

TEMP in C

Received on Ice (Y/N)

Custody Sealed Cooler (Y/N)

Samples Intact (Y/N)

SAMPLE CONDITIONS

August 30, 2022

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Dear Joju Abraham:

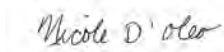
Enclosed are the analytical results for sample(s) received by the laboratory between August 08, 2022 and August 15, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Noelia Gangi, Georgia Power
Ben Hodges, Georgia Power
Kristen Jurinko
Carole Lieu, Stantec
Laura Midkiff, Georgia Power
Ms. Lauren Petty, Southern Company
Michael Smilley, Georgia Power
Brian Steele, Stantec
Andrew Stevens, Stantec
Cassidy Sutherland, Stantec



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92619171001	GWA-38	Water	08/05/22 09:40	08/08/22 09:05
92619171002	GWA-52	Water	08/05/22 10:25	08/08/22 09:05
92619171003	GWA-54	Water	08/05/22 11:15	08/08/22 09:05
92619171004	GWA-56	Water	08/05/22 12:26	08/08/22 09:05
92619171005	DUP-1	Water	08/05/22 00:00	08/08/22 09:05
92619171006	FB-1	Water	08/05/22 11:55	08/08/22 09:05
92619171007	GWA-36A	Water	08/08/22 11:08	08/11/22 09:02
92619171008	GWA-36RA	Water	08/08/22 13:03	08/11/22 09:02
92619171009	GWA-37	Water	08/08/22 15:07	08/11/22 09:02
92619171010	GWA-53	Water	08/08/22 14:35	08/11/22 09:02
92619171011	GWA-53R	Water	08/08/22 12:25	08/11/22 09:02
92619171012	GWA-55	Water	08/08/22 15:40	08/11/22 09:02
92619171013	GWA-55R	Water	08/08/22 14:34	08/11/22 09:02
92619171014	FB-2	Water	08/08/22 15:20	08/11/22 09:02
92619171015	EB-1	Water	08/08/22 15:25	08/11/22 09:02
92619171016	GWA-51RZ	Water	08/09/22 09:04	08/11/22 09:02
92619171017	GWC-19R	Water	08/09/22 10:34	08/11/22 09:02
92619171018	GWC-20R	Water	08/09/22 11:34	08/11/22 09:02
92619171019	GWC-24R	Water	08/09/22 12:52	08/11/22 09:02
92619171020	GWC-25R	Water	08/09/22 10:55	08/11/22 09:02
92619171021	DUP-2	Water	08/09/22 00:00	08/11/22 09:02
92619171022	FB-3	Water	08/09/22 15:00	08/11/22 09:02
92619171023	GWC-18	Water	08/10/22 11:55	08/11/22 09:02
92619171024	GWC-18R	Water	08/10/22 10:22	08/11/22 09:02
92619171025	GWC-21R	Water	08/10/22 11:00	08/11/22 09:02
92619171026	GWC-22R	Water	08/10/22 13:15	08/11/22 09:02
92619171027	DUP-3	Water	08/10/22 00:00	08/11/22 09:02
92619171028	FB-4	Water	08/10/22 14:00	08/11/22 09:02
92619171029	GWC-16R	Water	08/11/22 09:00	08/15/22 10:41
92619171030	GWC-17R	Water	08/11/22 09:37	08/15/22 10:41
92619171031	GWC-23R	Water	08/11/22 10:20	08/15/22 10:41
92619171032	FB-5	Water	08/11/22 16:25	08/15/22 10:41

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92619171001	GWA-38	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92619171002	GWA-52	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92619171003	GWA-54	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92619171004	GWA-56	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92619171005	DUP-1	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92619171006	FB-1	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92619171007	GWA-36A	EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92619171008	GWA-36RA	EPA 6010D	DRB	2
		EPA 6020B	CW1	15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92619171009	GWA-37	EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
92619171010	GWA-53	SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92619171011	GWA-53R	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92619171012	GWA-55	EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
92619171013	GWA-55R	EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
92619171014	FB-2	EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
92619171015	EB-1	SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92619171016	GWA-51RZ	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92619171017	GWC-19R	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92619171018	GWC-20R	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92619171019	GWC-24R	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92619171020	GWC-25R	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92619171021	DUP-2	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92619171022	FB-3	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92619171023	GWC-18	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92619171024	GWC-18R	EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
92619171025	GWC-21R	SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92619171026	GWC-22R	EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
92619171027	DUP-3	EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92619171028	FB-4	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	8
92619171029	GWC-16R	EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	8
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
92619171030	GWC-17R	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	5
		EPA 6020B	CW1	15
		EPA 7470A	VB	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92619171031	GWC-23R	SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	5
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
92619171032	FB-5	SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	5
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92619171001	GWA-38					
	Performed by	CUSTOME			08/08/22 17:08	
		R				
	pH	4.98	Std. Units		08/08/22 17:08	
EPA 6010D	Calcium	1.3	mg/L	1.0	08/11/22 19:49	
EPA 6020B	Barium	0.012	mg/L	0.0050	08/12/22 20:25	
EPA 6020B	Boron	0.0090J	mg/L	0.040	08/12/22 20:25	
EPA 6020B	Cobalt	0.00095J	mg/L	0.0050	08/12/22 20:25	
EPA 6020B	Nickel	0.00085J	mg/L	0.0050	08/12/22 20:25	
SM 2540C-2015	Total Dissolved Solids	27.0	mg/L	10.0	08/11/22 10:39	
EPA 300.0 Rev 2.1 1993	Chloride	3.1	mg/L	1.0	08/17/22 15:09	
92619171002	GWA-52					
	Performed by	CUSTOME			08/08/22 17:08	
		R				
	pH	7.35	Std. Units		08/08/22 17:08	
EPA 6010D	Calcium	29.2	mg/L	1.0	08/11/22 20:04	
EPA 6020B	Barium	0.019	mg/L	0.0050	08/12/22 20:31	
EPA 6020B	Chromium	0.0012J	mg/L	0.0050	08/12/22 20:31	
SM 2540C-2015	Total Dissolved Solids	123	mg/L	10.0	08/09/22 10:07	
EPA 300.0 Rev 2.1 1993	Chloride	1.0	mg/L	1.0	08/17/22 15:24	
EPA 300.0 Rev 2.1 1993	Fluoride	0.065J	mg/L	0.10	08/17/22 15:24	
EPA 300.0 Rev 2.1 1993	Sulfate	4.4	mg/L	1.0	08/17/22 15:24	
92619171003	GWA-54					
	Performed by	CUSTOME			08/08/22 17:08	
		R				
	pH	7.32	Std. Units		08/08/22 17:08	
EPA 6010D	Calcium	23.8	mg/L	1.0	08/11/22 20:08	
EPA 6020B	Barium	0.030	mg/L	0.0050	08/12/22 20:37	
EPA 6020B	Chromium	0.0016J	mg/L	0.0050	08/12/22 20:37	
SM 2540C-2015	Total Dissolved Solids	106	mg/L	10.0	08/11/22 10:39	
EPA 300.0 Rev 2.1 1993	Chloride	0.96J	mg/L	1.0	08/17/22 21:15	
EPA 300.0 Rev 2.1 1993	Fluoride	0.073J	mg/L	0.10	08/17/22 21:15	
EPA 300.0 Rev 2.1 1993	Sulfate	1.4	mg/L	1.0	08/17/22 21:15	
92619171004	GWA-56					
	Performed by	CUSTOME			08/08/22 17:08	
		R				
	pH	7.60	Std. Units		08/08/22 17:08	
EPA 6010D	Calcium	38.0	mg/L	1.0	08/11/22 20:13	
EPA 6020B	Barium	0.033	mg/L	0.0050	08/12/22 20:43	
EPA 6020B	Boron	0.015J	mg/L	0.040	08/12/22 20:43	
EPA 6020B	Nickel	0.00082J	mg/L	0.0050	08/12/22 20:43	
SM 2540C-2015	Total Dissolved Solids	271	mg/L	10.0	08/09/22 10:07	
EPA 300.0 Rev 2.1 1993	Chloride	5.4	mg/L	1.0	08/17/22 23:48	
EPA 300.0 Rev 2.1 1993	Fluoride	0.094J	mg/L	0.10	08/17/22 23:48	
EPA 300.0 Rev 2.1 1993	Sulfate	42.9	mg/L	1.0	08/17/22 23:48	
92619171005	DUP-1					
EPA 6020B	Barium	0.012	mg/L	0.0050	08/12/22 21:07	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92619171005	DUP-1					
EPA 6020B	Cobalt	0.00098J	mg/L	0.0050	08/12/22 21:07	
EPA 6020B	Nickel	0.00083J	mg/L	0.0050	08/12/22 21:07	
SM 2540C-2015	Total Dissolved Solids	20.0	mg/L	10.0	08/09/22 10:07	
EPA 300.0 Rev 2.1 1993	Chloride	3.4	mg/L	1.0	08/18/22 00:03	
EPA 300.0 Rev 2.1 1993	Sulfate	0.69J	mg/L	1.0	08/18/22 00:03	
92619171006	FB-1					
EPA 6010D	Calcium	1.3	mg/L	1.0	08/11/22 20:27	
92619171007	GWA-36A					
	Performed by	Customer			08/11/22 15:42	
	pH	6.79	Std. Units		08/11/22 15:42	
EPA 6010D	Zinc	0.011J	mg/L	0.020	08/18/22 16:37	
EPA 6010D	Calcium	53.1	mg/L	1.0	08/18/22 16:37	M1
EPA 6020B	Barium	0.037	mg/L	0.0050	08/24/22 15:21	
EPA 6020B	Boron	0.023J	mg/L	0.040	08/24/22 15:21	
SM 2540C-2015	Total Dissolved Solids	232	mg/L	10.0	08/12/22 08:57	
EPA 300.0 Rev 2.1 1993	Chloride	2.7	mg/L	1.0	08/20/22 22:52	
EPA 300.0 Rev 2.1 1993	Fluoride	0.063J	mg/L	0.10	08/20/22 22:52	
EPA 300.0 Rev 2.1 1993	Sulfate	23.4	mg/L	1.0	08/20/22 22:52	
92619171008	GWA-36RA					
	Performed by	Customer			08/11/22 15:42	
	pH	7.11	Std. Units		08/11/22 15:42	
EPA 6010D	Calcium	54.8	mg/L	1.0	08/18/22 17:08	
EPA 6020B	Antimony	0.0015J	mg/L	0.0030	08/24/22 15:45	B
EPA 6020B	Barium	0.038	mg/L	0.0050	08/24/22 15:45	
EPA 6020B	Boron	0.018J	mg/L	0.040	08/24/22 15:45	
EPA 6020B	Cadmium	0.00016J	mg/L	0.00050	08/24/22 15:45	
SM 2540C-2015	Total Dissolved Solids	232	mg/L	10.0	08/12/22 08:58	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	08/20/22 23:08	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.10	08/20/22 23:08	
EPA 300.0 Rev 2.1 1993	Sulfate	19.2	mg/L	1.0	08/20/22 23:08	
92619171009	GWA-37					
	Performed by	Customer			08/11/22 15:42	
	pH	5.16	Std. Units		08/11/22 15:42	
EPA 6010D	Calcium	0.74J	mg/L	1.0	08/18/22 17:13	
EPA 6020B	Antimony	0.0018J	mg/L	0.0030	08/24/22 15:51	B
EPA 6020B	Barium	0.0035J	mg/L	0.0050	08/24/22 15:51	
EPA 6020B	Cadmium	0.00032J	mg/L	0.00050	08/24/22 15:51	
EPA 6020B	Copper	0.0087	mg/L	0.0050	08/24/22 15:51	
EPA 6020B	Nickel	0.0097	mg/L	0.0050	08/24/22 15:51	
SM 2540C-2015	Total Dissolved Solids	19.0	mg/L	10.0	08/12/22 08:58	
EPA 300.0 Rev 2.1 1993	Chloride	0.64J	mg/L	1.0	08/20/22 23:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.061J	mg/L	0.10	08/20/22 23:23	
92619171010	GWA-53					
	Performed by	Customer			08/11/22 15:42	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92619171010	GWA-53					
	pH	7.66	Std. Units		08/11/22 15:42	
EPA 6010D	Calcium	30.4	mg/L	1.0	08/18/22 17:18	
EPA 6020B	Barium	0.011	mg/L	0.0050	08/24/22 15:57	
EPA 6020B	Cadmium	0.00040J	mg/L	0.00050	08/24/22 15:57	
SM 2540C-2015	Total Dissolved Solids	137	mg/L	10.0	08/12/22 08:59	
EPA 300.0 Rev 2.1 1993	Chloride	2.0	mg/L	1.0	08/21/22 00:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.067J	mg/L	0.10	08/21/22 00:09	
EPA 300.0 Rev 2.1 1993	Sulfate	1.3	mg/L	1.0	08/21/22 00:09	
92619171011	GWA-53R					
	Performed by	Customer			08/11/22 15:43	
	pH	7.61	Std. Units		08/11/22 15:43	
EPA 6010D	Calcium	31.8	mg/L	1.0	08/18/22 17:22	
EPA 6020B	Barium	0.013	mg/L	0.0050	08/24/22 16:03	
EPA 6020B	Cadmium	0.00022J	mg/L	0.00050	08/24/22 16:03	
SM 2540C-2015	Total Dissolved Solids	136	mg/L	10.0	08/12/22 08:59	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	08/21/22 00:25	
EPA 300.0 Rev 2.1 1993	Fluoride	0.066J	mg/L	0.10	08/21/22 00:25	
EPA 300.0 Rev 2.1 1993	Sulfate	1.5	mg/L	1.0	08/21/22 00:25	
92619171012	GWA-55					
	Performed by	Customer			08/11/22 15:43	
	pH	7.10	Std. Units		08/11/22 15:43	
EPA 6010D	Calcium	52.3	mg/L	1.0	08/18/22 17:27	
EPA 6020B	Barium	0.026	mg/L	0.0050	08/24/22 16:23	
EPA 6020B	Chromium	0.0011J	mg/L	0.0050	08/24/22 16:23	
EPA 6020B	Cobalt	0.00084J	mg/L	0.0050	08/24/22 16:23	
EPA 6020B	Selenium	0.0024J	mg/L	0.0050	08/24/22 16:23	
SM 2540C-2015	Total Dissolved Solids	240	mg/L	10.0	08/12/22 08:59	
EPA 300.0 Rev 2.1 1993	Chloride	4.9	mg/L	1.0	08/21/22 01:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.078J	mg/L	0.10	08/21/22 01:11	
EPA 300.0 Rev 2.1 1993	Sulfate	30.0	mg/L	1.0	08/21/22 01:11	
92619171013	GWA-55R					
	Performed by	Customer			08/11/22 15:43	
	pH	7.26	Std. Units		08/11/22 15:43	
EPA 6010D	Calcium	47.0	mg/L	1.0	08/18/22 17:32	
EPA 6020B	Barium	0.027	mg/L	0.0050	08/24/22 16:29	
EPA 6020B	Selenium	0.0015J	mg/L	0.0050	08/24/22 16:29	
SM 2540C-2015	Total Dissolved Solids	209	mg/L	10.0	08/12/22 08:59	
EPA 300.0 Rev 2.1 1993	Chloride	4.0	mg/L	1.0	08/21/22 01:27	
EPA 300.0 Rev 2.1 1993	Fluoride	0.070J	mg/L	0.10	08/21/22 01:27	
EPA 300.0 Rev 2.1 1993	Sulfate	23.5	mg/L	1.0	08/21/22 01:27	
92619171015	EB-1					
SM 2540C-2015	Total Dissolved Solids	30.0	mg/L	10.0	08/12/22 09:00	
92619171016	GWA-51RZ					
	Performed by	Customer			08/11/22 15:44	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92619171016	GWA-51RZ					
	pH	7.25	Std. Units		08/11/22 15:44	
EPA 6010D	Calcium	46.1	mg/L	1.0	08/18/22 18:01	
EPA 6020B	Barium	0.015	mg/L	0.0050	08/24/22 16:46	
EPA 6020B	Selenium	0.0051	mg/L	0.0050	08/24/22 16:46	
SM 2540C-2015	Total Dissolved Solids	208	mg/L	10.0	08/12/22 09:00	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	08/21/22 02:13	
EPA 300.0 Rev 2.1 1993	Fluoride	0.072J	mg/L	0.10	08/21/22 02:13	
EPA 300.0 Rev 2.1 1993	Sulfate	22.3	mg/L	1.0	08/21/22 02:13	
92619171017	GWC-19R					
	Performed by	Customer			08/11/22 15:44	
	pH	7.77	Std. Units		08/11/22 15:44	
EPA 6010D	Calcium	34.6	mg/L	1.0	08/18/22 18:06	
EPA 6020B	Barium	0.014	mg/L	0.0050	08/24/22 16:52	
SM 2540C-2015	Total Dissolved Solids	102	mg/L	10.0	08/12/22 09:01	D6
EPA 300.0 Rev 2.1 1993	Chloride	2.3	mg/L	1.0	08/21/22 02:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.067J	mg/L	0.10	08/21/22 02:29	
EPA 300.0 Rev 2.1 1993	Sulfate	3.7	mg/L	1.0	08/21/22 02:29	
92619171018	GWC-20R					
	Performed by	Customer			08/11/22 15:45	
	pH	7.81	Std. Units		08/11/22 15:45	
EPA 6010D	Calcium	38.7	mg/L	1.0	08/18/22 18:10	
EPA 6020B	Barium	0.029	mg/L	0.0050	08/24/22 16:58	
SM 2540C-2015	Total Dissolved Solids	171	mg/L	10.0	08/12/22 09:01	
EPA 300.0 Rev 2.1 1993	Chloride	1.7	mg/L	1.0	08/21/22 03:15	
EPA 300.0 Rev 2.1 1993	Fluoride	0.072J	mg/L	0.10	08/21/22 03:15	
EPA 300.0 Rev 2.1 1993	Sulfate	1.6	mg/L	1.0	08/21/22 03:15	
92619171019	GWC-24R					
	Performed by	Customer			08/11/22 15:45	
	pH	7.48	Std. Units		08/11/22 15:45	
EPA 6010D	Calcium	33.8	mg/L	1.0	08/18/22 18:15	
EPA 6020B	Barium	0.015	mg/L	0.0050	08/24/22 17:04	
SM 2540C-2015	Total Dissolved Solids	149	mg/L	10.0	08/12/22 09:01	
EPA 300.0 Rev 2.1 1993	Chloride	2.0	mg/L	1.0	08/21/22 03:31	
EPA 300.0 Rev 2.1 1993	Fluoride	0.072J	mg/L	0.10	08/21/22 03:31	
EPA 300.0 Rev 2.1 1993	Sulfate	2.1	mg/L	1.0	08/21/22 03:31	
92619171020	GWC-25R					
	Performed by	Customer			08/11/22 15:45	
	pH	7.60	Std. Units		08/11/22 15:45	
EPA 6010D	Calcium	37.1	mg/L	1.0	08/18/22 18:20	
EPA 6020B	Barium	0.015	mg/L	0.0050	08/24/22 17:10	
SM 2540C-2015	Total Dissolved Solids	164	mg/L	10.0	08/12/22 09:01	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	08/21/22 03:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.068J	mg/L	0.10	08/21/22 03:46	
EPA 300.0 Rev 2.1 1993	Sulfate	1.9	mg/L	1.0	08/21/22 03:46	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92619171021	DUP-2					
EPA 6010D	Calcium	38.7	mg/L	1.0	08/18/22 18:25	
EPA 6020B	Barium	0.015	mg/L	0.0050	08/24/22 17:16	
SM 2540C-2015	Total Dissolved Solids	160	mg/L	10.0	08/12/22 09:01	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	08/20/22 16:57	
EPA 300.0 Rev 2.1 1993	Sulfate	2.1	mg/L	1.0	08/20/22 16:57	
92619171023	GWC-18					
	Performed by	Customer			08/11/22 15:45	
	pH	6.53	Std. Units		08/11/22 15:45	
EPA 6010D	Calcium	18.9	mg/L	1.0	08/18/22 18:34	
EPA 6020B	Barium	0.013	mg/L	0.0050	08/24/22 17:47	
EPA 6020B	Chromium	0.0014J	mg/L	0.0050	08/24/22 17:47	
SM 2540C-2015	Total Dissolved Solids	86.0	mg/L	10.0	08/12/22 09:02	
EPA 300.0 Rev 2.1 1993	Chloride	2.3	mg/L	1.0	08/20/22 17:57	
EPA 300.0 Rev 2.1 1993	Fluoride	0.060J	mg/L	0.10	08/20/22 17:57	
EPA 300.0 Rev 2.1 1993	Sulfate	1.7	mg/L	1.0	08/20/22 17:57	
92619171024	GWC-18R					
	Performed by	Customer			08/11/22 15:46	
	pH	7.59	Std. Units		08/11/22 15:46	
EPA 6010D	Calcium	33.6	mg/L	1.0	08/18/22 18:48	
EPA 6020B	Barium	0.014	mg/L	0.0050	08/24/22 17:53	
EPA 6020B	Beryllium	0.000056J	mg/L	0.00050	08/24/22 17:53	
SM 2540C-2015	Total Dissolved Solids	147	mg/L	10.0	08/12/22 09:03	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	08/20/22 18:12	
EPA 300.0 Rev 2.1 1993	Sulfate	2.3	mg/L	1.0	08/20/22 18:12	
92619171025	GWC-21R					
	Performed by	Customer			08/11/22 15:46	
	pH	6.98	Std. Units		08/11/22 15:46	
EPA 6010D	Zinc	0.016J	mg/L	0.020	08/18/22 18:53	
EPA 6010D	Calcium	67.7	mg/L	1.0	08/18/22 18:53	
EPA 6020B	Antimony	0.0081	mg/L	0.0030	08/25/22 15:42	B
EPA 6020B	Arsenic	0.0025J	mg/L	0.0050	08/24/22 17:59	
EPA 6020B	Barium	0.030	mg/L	0.0050	08/24/22 17:59	
EPA 6020B	Chromium	0.0023J	mg/L	0.0050	08/24/22 17:59	
EPA 6020B	Nickel	0.0014J	mg/L	0.0050	08/24/22 17:59	
EPA 6020B	Thallium	0.00031J	mg/L	0.0010	08/24/22 17:59	
SM 2540C-2015	Total Dissolved Solids	286	mg/L	10.0	08/12/22 09:03	
EPA 300.0 Rev 2.1 1993	Chloride	4.1	mg/L	1.0	08/20/22 18:57	
EPA 300.0 Rev 2.1 1993	Fluoride	0.057J	mg/L	0.10	08/20/22 18:57	
EPA 300.0 Rev 2.1 1993	Sulfate	10.5	mg/L	1.0	08/20/22 18:57	
92619171026	GWC-22R					
	Performed by	Customer			08/11/22 15:46	
	pH	7.10	Std. Units		08/11/22 15:46	
EPA 6010D	Calcium	36.0	mg/L	1.0	08/18/22 18:58	
EPA 6020B	Arsenic	0.0035J	mg/L	0.0050	08/24/22 18:05	
EPA 6020B	Barium	0.042	mg/L	0.0050	08/24/22 18:05	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92619171026	GWC-22R					
EPA 6020B	Cobalt	0.00078J	mg/L	0.0050	08/24/22 18:05	
SM 2540C-2015	Total Dissolved Solids	162	mg/L	10.0	08/12/22 09:03	
EPA 300.0 Rev 2.1 1993	Chloride	2.7	mg/L	1.0	08/20/22 19:12	
EPA 300.0 Rev 2.1 1993	Fluoride	0.055J	mg/L	0.10	08/20/22 19:12	
EPA 300.0 Rev 2.1 1993	Sulfate	1.6	mg/L	1.0	08/20/22 19:12	
92619171027	DUP-3					
EPA 6010D	Calcium	32.0	mg/L	1.0	08/18/22 20:25	
EPA 6020B	Barium	0.015	mg/L	0.0050	08/26/22 20:36	
EPA 6020B	Beryllium	0.000082J	mg/L	0.00050	08/26/22 20:36	
EPA 6020B	Boron	0.019J	mg/L	0.040	08/26/22 20:36	B
SM 2540C-2015	Total Dissolved Solids	140	mg/L	10.0	08/15/22 11:24	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	08/20/22 19:27	
EPA 300.0 Rev 2.1 1993	Sulfate	2.3	mg/L	1.0	08/20/22 19:27	
92619171028	FB-4					
EPA 6020B	Antimony	0.0010J	mg/L	0.0030	08/26/22 21:00	
EPA 6020B	Boron	0.012J	mg/L	0.040	08/26/22 21:00	B
92619171029	GWC-16R					
	Performed by	Customer			08/15/22 14:19	
	pH	7.05	Std. Units		08/15/22 14:19	
EPA 6010D	Zinc	0.036	mg/L	0.020	08/22/22 18:11	M1
EPA 6010D	Potassium	2.9	mg/L	0.20	08/22/22 18:11	M1
EPA 6010D	Sodium	7.3	mg/L	1.0	08/22/22 18:11	M1
EPA 6010D	Calcium	71.6	mg/L	1.0	08/22/22 18:11	M1
EPA 6010D	Magnesium	30.8	mg/L	0.050	08/22/22 18:11	M1
EPA 6020B	Antimony	0.0099	mg/L	0.0030	08/26/22 23:11	
EPA 6020B	Barium	0.034	mg/L	0.0050	08/26/22 23:11	
EPA 6020B	Boron	0.013J	mg/L	0.040	08/26/22 23:11	B
EPA 6020B	Nickel	0.0077	mg/L	0.0050	08/26/22 23:11	
SM 2540C-2015	Total Dissolved Solids	306	mg/L	10.0	08/16/22 14:09	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	08/22/22 14:34	
EPA 300.0 Rev 2.1 1993	Fluoride	0.12	mg/L	0.10	08/22/22 14:34	
EPA 300.0 Rev 2.1 1993	Sulfate	5.0	mg/L	1.0	08/22/22 14:34	
92619171030	GWC-17R					
	Performed by	Customer			08/15/22 14:20	
	pH	7.27	Std. Units		08/15/22 14:20	
EPA 6010D	Potassium	0.73	mg/L	0.20	08/22/22 18:57	
EPA 6010D	Sodium	2.3	mg/L	1.0	08/22/22 18:57	
EPA 6010D	Calcium	70.8	mg/L	1.0	08/22/22 18:57	
EPA 6010D	Magnesium	37.1	mg/L	0.050	08/22/22 18:57	
EPA 6020B	Barium	0.017	mg/L	0.0050	08/27/22 20:08	
SM 2540C-2015	Total Dissolved Solids	296	mg/L	10.0	08/16/22 14:09	
EPA 300.0 Rev 2.1 1993	Chloride	4.7	mg/L	1.0	08/22/22 14:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.051J	mg/L	0.10	08/22/22 14:49	
EPA 300.0 Rev 2.1 1993	Sulfate	6.6	mg/L	1.0	08/22/22 14:49	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab Sample ID	Client Sample ID					
Method	Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92619171031	GWC-23R					
	Performed by	Customer			08/15/22 14:20	
	pH	7.37	Std. Units		08/15/22 14:20	
EPA 6010D	Potassium	1.6	mg/L	0.20	08/22/22 19:02	
EPA 6010D	Sodium	116	mg/L	1.0	08/22/22 19:02	
EPA 6010D	Calcium	67.0	mg/L	1.0	08/22/22 19:02	
EPA 6010D	Magnesium	34.8	mg/L	0.050	08/22/22 19:02	
EPA 6020B	Barium	0.034	mg/L	0.0050	08/27/22 20:14	
SM 2540C-2015	Total Dissolved Solids	586	mg/L	20.0	08/16/22 14:18	
EPA 300.0 Rev 2.1 1993	Chloride	2.1	mg/L	1.0	08/22/22 15:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.073J	mg/L	0.10	08/22/22 15:04	
EPA 300.0 Rev 2.1 1993	Sulfate	143	mg/L	3.0	08/23/22 04:15	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Sample: GWA-38		Lab ID: 92619171001		Collected: 08/05/22 09:40		Received: 08/08/22 09:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/08/22 17:08		
pH	4.98	Std. Units			1		08/08/22 17:08		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/11/22 09:48	08/11/22 19:49	7440-66-6	
Calcium	1.3	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 19:49	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 20:25	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 20:25	7440-38-2	
Barium	0.012	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 20:25	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 20:25	7440-41-7	
Boron	0.0090J	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 20:25	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 20:25	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 20:25	7440-47-3	
Cobalt	0.00095J	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 20:25	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/10/22 08:00	08/12/22 20:25	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 20:25	7439-92-1	
Nickel	0.00085J	mg/L	0.0050	0.00071	1	08/10/22 08:00	08/12/22 20:25	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 20:25	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/10/22 08:00	08/12/22 20:25	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 20:25	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/10/22 08:00	08/12/22 20:25	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 14:43	7439-97-6	M1,R1
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	27.0	mg/L	10.0	10.0	1		08/11/22 10:39		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.1	mg/L	1.0	0.60	1		08/17/22 15:09	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/17/22 15:09	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/17/22 15:09	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWA-52		Lab ID: 92619171002		Collected: 08/05/22 10:25	Received: 08/08/22 09:05	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/08/22 17:08		
pH	7.35	Std. Units			1		08/08/22 17:08		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/11/22 09:48	08/11/22 20:04	7440-66-6	
Calcium	29.2	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 20:04	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 20:31	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 20:31	7440-38-2	
Barium	0.019	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 20:31	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 20:31	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 20:31	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 20:31	7440-43-9	
Chromium	0.0012J	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 20:31	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 20:31	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/10/22 08:00	08/12/22 20:31	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 20:31	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/10/22 08:00	08/12/22 20:31	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 20:31	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/10/22 08:00	08/12/22 20:31	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 20:31	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/10/22 08:00	08/12/22 20:31	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 14:54	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	123	mg/L	10.0	10.0	1		08/09/22 10:07		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	1.0	mg/L	1.0	0.60	1		08/17/22 15:24	16887-00-6	
Fluoride	0.065J	mg/L	0.10	0.050	1		08/17/22 15:24	16984-48-8	
Sulfate	4.4	mg/L	1.0	0.50	1		08/17/22 15:24	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWA-54		Lab ID: 92619171003		Collected: 08/05/22 11:15		Received: 08/08/22 09:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/08/22 17:08		
pH	7.32	Std. Units			1		08/08/22 17:08		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/11/22 09:48	08/11/22 20:08	7440-66-6	
Calcium	23.8	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 20:08	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 20:37	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 20:37	7440-38-2	
Barium	0.030	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 20:37	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 20:37	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 20:37	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 20:37	7440-43-9	
Chromium	0.0016J	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 20:37	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 20:37	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/10/22 08:00	08/12/22 20:37	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 20:37	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/10/22 08:00	08/12/22 20:37	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 20:37	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/10/22 08:00	08/12/22 20:37	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 20:37	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/10/22 08:00	08/12/22 20:37	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 14:56	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	106	mg/L	10.0	10.0	1		08/11/22 10:39		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	0.96J	mg/L	1.0	0.60	1		08/17/22 21:15	16887-00-6	
Fluoride	0.073J	mg/L	0.10	0.050	1		08/17/22 21:15	16984-48-8	
Sulfate	1.4	mg/L	1.0	0.50	1		08/17/22 21:15	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWA-56		Lab ID: 92619171004		Collected: 08/05/22 12:26		Received: 08/08/22 09:05		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	CUSTOMER				1		08/08/22 17:08		
pH	7.60	Std. Units			1		08/08/22 17:08		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/11/22 09:48	08/11/22 20:13	7440-66-6	
Calcium	38.0	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 20:13	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 20:43	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 20:43	7440-38-2	
Barium	0.033	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 20:43	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 20:43	7440-41-7	
Boron	0.015J	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 20:43	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 20:43	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 20:43	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 20:43	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/10/22 08:00	08/12/22 20:43	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 20:43	7439-92-1	
Nickel	0.00082J	mg/L	0.0050	0.00071	1	08/10/22 08:00	08/12/22 20:43	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 20:43	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/10/22 08:00	08/12/22 20:43	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 20:43	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/10/22 08:00	08/12/22 20:43	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 14:59	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	271	mg/L	10.0	10.0	1		08/09/22 10:07		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.4	mg/L	1.0	0.60	1		08/17/22 23:48	16887-00-6	
Fluoride	0.094J	mg/L	0.10	0.050	1		08/17/22 23:48	16984-48-8	
Sulfate	42.9	mg/L	1.0	0.50	1		08/17/22 23:48	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: DUP-1									
Lab ID: 92619171005									
Collected: 08/05/22 00:00 Received: 08/08/22 09:05 Matrix: Water									
6010D ATL ICP Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/11/22 09:48	08/11/22 20:23	7440-66-6	
Calcium	ND	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 20:23	7440-70-2	
6020 MET ICPMS Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 21:07	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 21:07	7440-38-2	
Barium	0.012	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 21:07	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 21:07	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 21:07	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 21:07	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 21:07	7440-47-3	
Cobalt	0.00098J	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 21:07	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/10/22 08:00	08/12/22 21:07	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 21:07	7439-92-1	
Nickel	0.00083J	mg/L	0.0050	0.00071	1	08/10/22 08:00	08/12/22 21:07	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 21:07	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/10/22 08:00	08/12/22 21:07	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 21:07	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/10/22 08:00	08/12/22 21:07	7440-62-2	
7470 Mercury Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:07	7439-97-6	
2540C Total Dissolved Solids Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	20.0	mg/L	10.0	10.0	1		08/09/22 10:07		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	3.4	mg/L	1.0	0.60	1		08/18/22 00:03	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/18/22 00:03	16984-48-8	
Sulfate	0.69J	mg/L	1.0	0.50	1		08/18/22 00:03	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Sample: FB-1		Lab ID: 92619171006		Collected: 08/05/22 11:55	Received: 08/08/22 09:05	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Zinc	ND	mg/L	0.020	0.0085	1	08/11/22 09:48	08/11/22 20:27	7440-66-6	
Calcium	1.3	mg/L	1.0	0.12	1	08/11/22 09:48	08/11/22 20:27	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	08/10/22 08:00	08/12/22 21:13	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/10/22 08:00	08/12/22 21:13	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/10/22 08:00	08/12/22 21:13	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/10/22 08:00	08/12/22 21:13	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/10/22 08:00	08/12/22 21:13	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/10/22 08:00	08/12/22 21:13	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/10/22 08:00	08/12/22 21:13	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/10/22 08:00	08/12/22 21:13	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/10/22 08:00	08/12/22 21:13	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/10/22 08:00	08/12/22 21:13	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/10/22 08:00	08/12/22 21:13	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/10/22 08:00	08/12/22 21:13	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/10/22 08:00	08/12/22 21:13	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/10/22 08:00	08/12/22 21:13	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/10/22 08:00	08/12/22 21:13	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:10	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/09/22 10:12		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		08/18/22 00:18	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/18/22 00:18	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/18/22 00:18	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWA-36A	Lab ID: 92619171007	Collected: 08/08/22 11:08	Received: 08/11/22 09:02	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:42		
pH	6.79	Std. Units			1		08/11/22 15:42		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.011J	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 16:37	7440-66-6	
Calcium	53.1	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 16:37	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 15:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 15:21	7440-38-2	
Barium	0.037	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 15:21	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 15:21	7440-41-7	
Boron	0.023J	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 15:21	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 15:21	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 15:21	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 15:21	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 15:21	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 15:21	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 15:21	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 15:21	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 15:21	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 15:21	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 15:21	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:12	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	232	mg/L	10.0	10.0	1		08/12/22 08:57		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.7	mg/L	1.0	0.60	1		08/20/22 22:52	16887-00-6	
Fluoride	0.063J	mg/L	0.10	0.050	1		08/20/22 22:52	16984-48-8	
Sulfate	23.4	mg/L	1.0	0.50	1		08/20/22 22:52	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWA-36RA	Lab ID: 92619171008	Collected: 08/08/22 13:03	Received: 08/11/22 09:02	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:42		
pH	7.11	Std. Units			1		08/11/22 15:42		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 17:08	7440-66-6	
Calcium	54.8	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 17:08	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0015J	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 15:45	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 15:45	7440-38-2	
Barium	0.038	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 15:45	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 15:45	7440-41-7	
Boron	0.018J	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 15:45	7440-42-8	
Cadmium	0.00016J	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 15:45	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/25/22 15:30	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/25/22 15:30	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/25/22 15:30	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 15:45	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/25/22 15:30	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 15:45	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 15:45	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 15:45	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/25/22 15:30	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:15	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	232	mg/L	10.0	10.0	1		08/12/22 08:58		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.6	mg/L	1.0	0.60	1		08/20/22 23:08	16887-00-6	
Fluoride	0.062J	mg/L	0.10	0.050	1		08/20/22 23:08	16984-48-8	
Sulfate	19.2	mg/L	1.0	0.50	1		08/20/22 23:08	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWA-37 **Lab ID: 92619171009** Collected: 08/08/22 15:07 Received: 08/11/22 09:02 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by **Customer** 1 08/11/22 15:42
pH **5.16** Std. Units 1 08/11/22 15:42

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc ND mg/L 0.020 0.0085 1 08/18/22 11:08 08/18/22 17:13 7440-66-6
Calcium **0.74J** mg/L 1.0 0.12 1 08/18/22 11:08 08/18/22 17:13 7440-70-2

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	0.0018J	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 15:51	7440-36-0	B
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 15:51	7440-38-2	
Barium	0.0035J	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 15:51	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 15:51	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 15:51	7440-42-8	
Cadmium	0.00032J	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 15:51	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 15:51	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 15:51	7440-48-4	
Copper	0.0087	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 15:51	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 15:51	7439-92-1	
Nickel	0.0097	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 15:51	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 15:51	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 15:51	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 15:51	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 15:51	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury ND mg/L 0.00020 0.00013 1 08/29/22 10:00 08/29/22 15:18 7439-97-6

2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids **19.0** mg/L 10.0 10.0 1 08/12/22 08:58

300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	0.64J	mg/L	1.0	0.60	1	08/20/22 23:23	16887-00-6
Fluoride	0.061J	mg/L	0.10	0.050	1	08/20/22 23:23	16984-48-8
Sulfate	ND	mg/L	1.0	0.50	1	08/20/22 23:23	14808-79-8

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWA-53 **Lab ID: 92619171010** Collected: 08/08/22 14:35 Received: 08/11/22 09:02 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/11/22 15:42		
pH	7.66	Std. Units			1		08/11/22 15:42		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 17:18	7440-66-6	
Calcium	30.4	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 17:18	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 15:57	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 15:57	7440-38-2	
Barium	0.011	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 15:57	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 15:57	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 15:57	7440-42-8	
Cadmium	0.00040J	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 15:57	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 15:57	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 15:57	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 15:57	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 15:57	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 15:57	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 15:57	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 15:57	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 15:57	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 15:57	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:20	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	137	mg/L	10.0	10.0	1		08/12/22 08:59		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	2.0	mg/L	1.0	0.60	1		08/21/22 00:09	16887-00-6	
Fluoride	0.067J	mg/L	0.10	0.050	1		08/21/22 00:09	16984-48-8	
Sulfate	1.3	mg/L	1.0	0.50	1		08/21/22 00:09	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWA-53R	Lab ID: 92619171011	Collected: 08/08/22 12:25	Received: 08/11/22 09:02	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:43		
pH	7.61	Std. Units			1		08/11/22 15:43		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 17:22	7440-66-6	
Calcium	31.8	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 17:22	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 16:03	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 16:03	7440-38-2	
Barium	0.013	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 16:03	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 16:03	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 16:03	7440-42-8	
Cadmium	0.00022J	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 16:03	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 16:03	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 16:03	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 16:03	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 16:03	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 16:03	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 16:03	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 16:03	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 16:03	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 16:03	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:23	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	136	mg/L	10.0	10.0	1		08/12/22 08:59		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.2	mg/L	1.0	0.60	1		08/21/22 00:25	16887-00-6	
Fluoride	0.066J	mg/L	0.10	0.050	1		08/21/22 00:25	16984-48-8	
Sulfate	1.5	mg/L	1.0	0.50	1		08/21/22 00:25	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: GWA-55									
Lab ID: 92619171012									
Collected: 08/08/22 15:40									
Received: 08/11/22 09:02									
Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:43		
pH	7.10	Std. Units			1		08/11/22 15:43		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 17:27	7440-66-6	
Calcium	52.3	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 17:27	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 16:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 16:23	7440-38-2	
Barium	0.026	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 16:23	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 16:23	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 16:23	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 16:23	7440-43-9	
Chromium	0.0011J	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 16:23	7440-47-3	
Cobalt	0.00084J	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 16:23	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 16:23	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 16:23	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 16:23	7440-02-0	
Selenium	0.0024J	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 16:23	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 16:23	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 16:23	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 16:23	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:25	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	240	mg/L	10.0	10.0	1		08/12/22 08:59		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.9	mg/L	1.0	0.60	1		08/21/22 01:11	16887-00-6	
Fluoride	0.078J	mg/L	0.10	0.050	1		08/21/22 01:11	16984-48-8	
Sulfate	30.0	mg/L	1.0	0.50	1		08/21/22 01:11	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWA-55R	Lab ID: 92619171013	Collected: 08/08/22 14:34	Received: 08/11/22 09:02	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:43		
pH	7.26	Std. Units			1		08/11/22 15:43		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 17:32	7440-66-6	
Calcium	47.0	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 17:32	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 16:29	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 16:29	7440-38-2	
Barium	0.027	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 16:29	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 16:29	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 16:29	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 16:29	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 16:29	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 16:29	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 16:29	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 16:29	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 16:29	7440-02-0	
Selenium	0.0015J	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 16:29	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 16:29	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 16:29	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 16:29	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:28	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	209	mg/L	10.0	10.0	1		08/12/22 08:59		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.0	mg/L	1.0	0.60	1		08/21/22 01:27	16887-00-6	
Fluoride	0.070J	mg/L	0.10	0.050	1		08/21/22 01:27	16984-48-8	
Sulfate	23.5	mg/L	1.0	0.50	1		08/21/22 01:27	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: FB-2 **Lab ID: 92619171014** Collected: 08/08/22 15:20 Received: 08/11/22 09:02 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 17:51	7440-66-6	
Calcium	ND	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 17:51	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 16:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 16:34	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 16:34	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 16:34	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 16:34	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 16:34	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 16:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 16:34	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 16:34	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 16:34	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 16:34	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 16:34	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 16:34	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 16:34	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 16:34	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:36	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/12/22 08:59		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		08/21/22 01:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/21/22 01:42	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/21/22 01:42	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: EB-1	Lab ID: 92619171015		Collected: 08/08/22 15:25	Received: 08/11/22 09:02	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 17:56	7440-66-6	
Calcium	ND	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 17:56	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 16:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 16:40	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 16:40	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 16:40	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 16:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 16:40	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 16:40	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 16:40	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 16:40	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 16:40	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 16:40	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 16:40	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 16:40	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 16:40	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 16:40	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:38	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	30.0	mg/L	10.0	10.0	1		08/12/22 09:00		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		08/21/22 01:58	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/21/22 01:58	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/21/22 01:58	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWA-51RZ **Lab ID: 92619171016** Collected: 08/09/22 09:04 Received: 08/11/22 09:02 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/11/22 15:44		
pH	7.25	Std. Units			1		08/11/22 15:44		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 18:01	7440-66-6	
Calcium	46.1	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 18:01	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 16:46	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 16:46	7440-38-2	
Barium	0.015	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 16:46	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 16:46	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 16:46	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 16:46	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 16:46	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 16:46	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 16:46	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 16:46	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 16:46	7440-02-0	
Selenium	0.0051	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 16:46	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 16:46	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 16:46	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 16:46	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:42	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	208	mg/L	10.0	10.0	1		08/12/22 09:00		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	2.4	mg/L	1.0	0.60	1		08/21/22 02:13	16887-00-6	
Fluoride	0.072J	mg/L	0.10	0.050	1		08/21/22 02:13	16984-48-8	
Sulfate	22.3	mg/L	1.0	0.50	1		08/21/22 02:13	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWC-19R **Lab ID: 92619171017** Collected: 08/09/22 10:34 Received: 08/11/22 09:02 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						08/11/22 15:44
pH	7.77	Std. Units					08/11/22 15:44

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 18:06	7440-66-6
Calcium	34.6	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 18:06	7440-70-2

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 16:52	7440-36-0
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 16:52	7440-38-2
Barium	0.014	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 16:52	7440-39-3
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 16:52	7440-41-7
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 16:52	7440-42-8
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 16:52	7440-43-9
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 16:52	7440-47-3
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 16:52	7440-48-4
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 16:52	7440-50-8
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 16:52	7439-92-1
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 16:52	7440-02-0
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 16:52	7782-49-2
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 16:52	7440-22-4
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 16:52	7440-28-0
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 16:52	7440-62-2

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:45	7439-97-6
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	102	mg/L	10.0	10.0	1	08/12/22 09:01		D6
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	2.3	mg/L	1.0	0.60	1	08/21/22 02:29	16887-00-6
Fluoride	0.067J	mg/L	0.10	0.050	1	08/21/22 02:29	16984-48-8
Sulfate	3.7	mg/L	1.0	0.50	1	08/21/22 02:29	14808-79-8

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWC-20R	Lab ID: 92619171018	Collected: 08/09/22 11:34	Received: 08/11/22 09:02	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:45		
pH	7.81	Std. Units			1		08/11/22 15:45		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 18:10	7440-66-6	
Calcium	38.7	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 18:10	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 16:58	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 16:58	7440-38-2	
Barium	0.029	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 16:58	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 16:58	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 16:58	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 16:58	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 16:58	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 16:58	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 16:58	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 16:58	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 16:58	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 16:58	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 16:58	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 16:58	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 16:58	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:47	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	171	mg/L	10.0	10.0	1		08/12/22 09:01		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.7	mg/L	1.0	0.60	1		08/21/22 03:15	16887-00-6	
Fluoride	0.072J	mg/L	0.10	0.050	1		08/21/22 03:15	16984-48-8	
Sulfate	1.6	mg/L	1.0	0.50	1		08/21/22 03:15	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Sample: GWC-24R **Lab ID: 92619171019** Collected: 08/09/22 12:52 Received: 08/11/22 09:02 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/11/22 15:45		
pH	7.48	Std. Units			1		08/11/22 15:45		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 18:15	7440-66-6	
Calcium	33.8	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 18:15	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 17:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 17:04	7440-38-2	
Barium	0.015	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 17:04	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 17:04	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 17:04	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 17:04	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 17:04	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 17:04	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 17:04	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 17:04	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 17:04	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 17:04	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 17:04	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 17:04	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 17:04	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:50	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	149	mg/L	10.0	10.0	1		08/12/22 09:01		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	2.0	mg/L	1.0	0.60	1		08/21/22 03:31	16887-00-6	
Fluoride	0.072J	mg/L	0.10	0.050	1		08/21/22 03:31	16984-48-8	
Sulfate	2.1	mg/L	1.0	0.50	1		08/21/22 03:31	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWC-25R **Lab ID: 92619171020** Collected: 08/09/22 10:55 Received: 08/11/22 09:02 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/11/22 15:45		
pH	7.60	Std. Units			1		08/11/22 15:45		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 18:20	7440-66-6	
Calcium	37.1	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 18:20	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 17:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 17:10	7440-38-2	
Barium	0.015	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 17:10	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 17:10	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 17:10	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 17:10	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 17:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 17:10	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 17:10	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 17:10	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 17:10	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 17:10	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 17:10	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 17:10	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 17:10	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 10:00	08/29/22 15:52	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	164	mg/L	10.0	10.0	1		08/12/22 09:01		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	2.2	mg/L	1.0	0.60	1		08/21/22 03:46	16887-00-6	
Fluoride	0.068J	mg/L	0.10	0.050	1		08/21/22 03:46	16984-48-8	
Sulfate	1.9	mg/L	1.0	0.50	1		08/21/22 03:46	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Sample: DUP-2 **Lab ID: 92619171021** Collected: 08/09/22 00:00 Received: 08/11/22 09:02 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 18:25	7440-66-6	
Calcium	38.7	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 18:25	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 17:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 17:16	7440-38-2	
Barium	0.015	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 17:16	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/25/22 15:36	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/25/22 15:36	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 17:16	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 17:16	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 17:16	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 17:16	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 17:16	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 17:16	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 17:16	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 17:16	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 17:16	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 17:16	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 15:58	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	160	mg/L	10.0	10.0	1		08/12/22 09:01		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.6	mg/L	1.0	0.60	1		08/20/22 16:57	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/22 16:57	16984-48-8	
Sulfate	2.1	mg/L	1.0	0.50	1		08/20/22 16:57	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: FB-3		Lab ID: 92619171022		Collected: 08/09/22 15:00	Received: 08/11/22 09:02	Matrix: Water			
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 18:29	7440-66-6	
Calcium	ND	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 18:29	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 17:41	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 17:41	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 17:41	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 17:41	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 17:41	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 17:41	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 17:41	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 17:41	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 17:41	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 17:41	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 17:41	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 17:41	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 17:41	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 17:41	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 17:41	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 16:14	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/12/22 09:01		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		08/20/22 17:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/22 17:42	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/20/22 17:42	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWC-18		Lab ID: 92619171023		Collected: 08/10/22 11:55		Received: 08/11/22 09:02		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:45		
pH	6.53	Std. Units			1		08/11/22 15:45		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 18:34	7440-66-6	
Calcium	18.9	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 18:34	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 17:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 17:47	7440-38-2	
Barium	0.013	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 17:47	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 17:47	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 17:47	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 17:47	7440-43-9	
Chromium	0.0014J	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 17:47	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 17:47	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 17:47	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 17:47	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 17:47	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 17:47	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 17:47	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 17:47	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 17:47	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 16:17	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	86.0	mg/L	10.0	10.0	1		08/12/22 09:02		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.3	mg/L	1.0	0.60	1		08/20/22 17:57	16887-00-6	
Fluoride	0.060J	mg/L	0.10	0.050	1		08/20/22 17:57	16984-48-8	
Sulfate	1.7	mg/L	1.0	0.50	1		08/20/22 17:57	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWC-18R	Lab ID: 92619171024	Collected: 08/10/22 10:22	Received: 08/11/22 09:02	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:46		
pH	7.59	Std. Units			1		08/11/22 15:46		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 18:48	7440-66-6	
Calcium	33.6	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 18:48	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 17:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 17:53	7440-38-2	
Barium	0.014	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 17:53	7440-39-3	
Beryllium	0.000056J	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 17:53	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 17:53	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 17:53	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 17:53	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 17:53	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 17:53	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 17:53	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 17:53	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 17:53	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 17:53	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 17:53	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 17:53	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 16:19	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	147	mg/L	10.0	10.0	1		08/12/22 09:03		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.6	mg/L	1.0	0.60	1		08/20/22 18:12	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/22 18:12	16984-48-8	
Sulfate	2.3	mg/L	1.0	0.50	1		08/20/22 18:12	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWC-21R	Lab ID: 92619171025	Collected: 08/10/22 11:00	Received: 08/11/22 09:02	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:46		
pH	6.98	Std. Units			1		08/11/22 15:46		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.016J	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 18:53	7440-66-6	
Calcium	67.7	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 18:53	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0081	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/25/22 15:42	7440-36-0	B
Arsenic	0.0025J	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 17:59	7440-38-2	
Barium	0.030	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 17:59	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 17:59	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 17:59	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 17:59	7440-43-9	
Chromium	0.0023J	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 17:59	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 17:59	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 17:59	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 17:59	7439-92-1	
Nickel	0.0014J	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 17:59	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 17:59	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 17:59	7440-22-4	
Thallium	0.00031J	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 17:59	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 17:59	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 16:22	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	286	mg/L	10.0	10.0	1		08/12/22 09:03		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	4.1	mg/L	1.0	0.60	1		08/20/22 18:57	16887-00-6	
Fluoride	0.057J	mg/L	0.10	0.050	1		08/20/22 18:57	16984-48-8	
Sulfate	10.5	mg/L	1.0	0.50	1		08/20/22 18:57	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWC-22R **Lab ID: 92619171026** Collected: 08/10/22 13:15 Received: 08/11/22 09:02 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/11/22 15:46		
pH	7.10	Std. Units			1		08/11/22 15:46		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:08	08/18/22 18:58	7440-66-6	
Calcium	36.0	mg/L	1.0	0.12	1	08/18/22 11:08	08/18/22 18:58	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	08/19/22 11:21	08/24/22 18:05	7440-36-0	
Arsenic	0.0035J	mg/L	0.0050	0.0022	1	08/19/22 11:21	08/24/22 18:05	7440-38-2	
Barium	0.042	mg/L	0.0050	0.00067	1	08/19/22 11:21	08/24/22 18:05	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/19/22 11:21	08/24/22 18:05	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/19/22 11:21	08/24/22 18:05	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/19/22 11:21	08/24/22 18:05	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/19/22 11:21	08/24/22 18:05	7440-47-3	
Cobalt	0.00078J	mg/L	0.0050	0.00039	1	08/19/22 11:21	08/24/22 18:05	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/19/22 11:21	08/24/22 18:05	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/19/22 11:21	08/24/22 18:05	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/19/22 11:21	08/24/22 18:05	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/19/22 11:21	08/24/22 18:05	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/19/22 11:21	08/24/22 18:05	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/19/22 11:21	08/24/22 18:05	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/19/22 11:21	08/24/22 18:05	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 16:25	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	162	mg/L	10.0	10.0	1		08/12/22 09:03		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	2.7	mg/L	1.0	0.60	1		08/20/22 19:12	16887-00-6	
Fluoride	0.055J	mg/L	0.10	0.050	1		08/20/22 19:12	16984-48-8	
Sulfate	1.6	mg/L	1.0	0.50	1		08/20/22 19:12	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: DUP-3		Lab ID: 92619171027		Collected: 08/10/22 00:00	Received: 08/11/22 09:02	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:22	08/18/22 20:25	7440-66-6	
Calcium	32.0	mg/L	1.0	0.12	1	08/18/22 11:22	08/18/22 20:25	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	08/26/22 09:41	08/26/22 20:36	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/26/22 09:41	08/26/22 20:36	7440-38-2	
Barium	0.015	mg/L	0.0050	0.00067	1	08/26/22 09:41	08/26/22 20:36	7440-39-3	
Beryllium	0.000082J	mg/L	0.00050	0.000054	1	08/26/22 09:41	08/26/22 20:36	7440-41-7	
Boron	0.019J	mg/L	0.040	0.0086	1	08/26/22 09:41	08/26/22 20:36	7440-42-8	B
Cadmium	ND	mg/L	0.00050	0.00011	1	08/26/22 09:41	08/26/22 20:36	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/26/22 09:41	08/26/22 20:36	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/26/22 09:41	08/26/22 20:36	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/26/22 09:41	08/26/22 20:36	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/26/22 09:41	08/26/22 20:36	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/26/22 09:41	08/26/22 20:36	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/26/22 09:41	08/26/22 20:36	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/26/22 09:41	08/26/22 20:36	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/26/22 09:41	08/26/22 20:36	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/26/22 09:41	08/26/22 20:36	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 16:27	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	140	mg/L	10.0	10.0	1		08/15/22 11:24		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	2.6	mg/L	1.0	0.60	1		08/20/22 19:27	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/22 19:27	16984-48-8	
Sulfate	2.3	mg/L	1.0	0.50	1		08/20/22 19:27	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: FB-4									
Lab ID: 92619171028									
Collected: 08/10/22 14:00 Received: 08/11/22 09:02 Matrix: Water									
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:22	08/18/22 20:39	7440-66-6	
Calcium	ND	mg/L	1.0	0.12	1	08/18/22 11:22	08/18/22 20:39	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0010J	mg/L	0.0030	0.00078	1	08/26/22 09:41	08/26/22 21:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/26/22 09:41	08/26/22 21:00	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	08/26/22 09:41	08/26/22 21:00	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/26/22 09:41	08/26/22 21:00	7440-41-7	
Boron	0.012J	mg/L	0.040	0.0086	1	08/26/22 09:41	08/26/22 21:00	7440-42-8	B
Cadmium	ND	mg/L	0.00050	0.00011	1	08/26/22 09:41	08/26/22 21:00	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/26/22 09:41	08/26/22 21:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/26/22 09:41	08/26/22 21:00	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/26/22 09:41	08/26/22 21:00	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/26/22 09:41	08/26/22 21:00	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/26/22 09:41	08/26/22 21:00	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/26/22 09:41	08/26/22 21:00	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/26/22 09:41	08/26/22 21:00	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/26/22 09:41	08/26/22 21:00	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/26/22 09:41	08/26/22 21:00	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 16:30	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/15/22 11:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		08/20/22 19:42	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/20/22 19:42	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/20/22 19:42	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWC-16R **Lab ID: 92619171029** Collected: 08/11/22 09:00 Received: 08/15/22 10:41 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/15/22 14:19		
pH	7.05	Std. Units			1		08/15/22 14:19		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Aluminum	ND	mg/L	0.10	0.067	1	08/22/22 11:40	08/22/22 18:11	7429-90-5	M1
Iron	ND	mg/L	0.040	0.025	1	08/22/22 11:40	08/22/22 18:11	7439-89-6	M1
Zinc	0.036	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 18:11	7440-66-6	M1
Phosphorus	ND	mg/L	0.050	0.044	1	08/22/22 11:40	08/22/22 18:11	7723-14-0	M1
Potassium	2.9	mg/L	0.20	0.15	1	08/22/22 11:40	08/22/22 18:11	7440-09-7	M1
Sodium	7.3	mg/L	1.0	0.58	1	08/22/22 11:40	08/22/22 18:11	7440-23-5	M1
Calcium	71.6	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 18:11	7440-70-2	M1
Magnesium	30.8	mg/L	0.050	0.012	1	08/22/22 11:40	08/22/22 18:11	7439-95-4	M1

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	0.0099	mg/L	0.0030	0.00078	1	08/26/22 09:41	08/26/22 23:11	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/26/22 09:41	08/26/22 23:11	7440-38-2	
Barium	0.034	mg/L	0.0050	0.00067	1	08/26/22 09:41	08/26/22 23:11	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/26/22 09:41	08/26/22 23:11	7440-41-7	
Boron	0.013J	mg/L	0.040	0.0086	1	08/26/22 09:41	08/26/22 23:11	7440-42-8	B
Cadmium	ND	mg/L	0.00050	0.00011	1	08/26/22 09:41	08/26/22 23:11	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/26/22 09:41	08/26/22 23:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/26/22 09:41	08/26/22 23:11	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/26/22 09:41	08/26/22 23:11	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/26/22 09:41	08/26/22 23:11	7439-92-1	
Nickel	0.0077	mg/L	0.0050	0.00071	1	08/26/22 09:41	08/26/22 23:11	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/26/22 09:41	08/26/22 23:11	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/26/22 09:41	08/26/22 23:11	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/26/22 09:41	08/26/22 23:11	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/26/22 09:41	08/26/22 23:11	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 16:33	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	306	mg/L	10.0	10.0	1		08/16/22 14:09		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	1.4	mg/L	1.0	0.60	1		08/22/22 14:34	16887-00-6	
Fluoride	0.12	mg/L	0.10	0.050	1		08/22/22 14:34	16984-48-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Sample: GWC-16R		Lab ID: 92619171029		Collected: 08/11/22 09:00	Received: 08/15/22 10:41	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Sulfate	5.0	mg/L	1.0	0.50	1		08/22/22 14:34	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWC-17R **Lab ID: 92619171030** Collected: 08/11/22 09:37 Received: 08/15/22 10:41 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/15/22 14:20		
pH	7.27	Std. Units			1		08/15/22 14:20		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 18:57	7440-66-6	
Potassium	0.73	mg/L	0.20	0.15	1	08/22/22 11:40	08/22/22 18:57	7440-09-7	
Sodium	2.3	mg/L	1.0	0.58	1	08/22/22 11:40	08/22/22 18:57	7440-23-5	
Calcium	70.8	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 18:57	7440-70-2	
Magnesium	37.1	mg/L	0.050	0.012	1	08/22/22 11:40	08/22/22 18:57	7439-95-4	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	08/26/22 14:18	08/27/22 20:08	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/26/22 14:18	08/27/22 20:08	7440-38-2	
Barium	0.017	mg/L	0.0050	0.00067	1	08/26/22 14:18	08/27/22 20:08	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/26/22 14:18	08/27/22 20:08	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/26/22 14:18	08/27/22 20:08	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/26/22 14:18	08/27/22 20:08	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/26/22 14:18	08/27/22 20:08	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/26/22 14:18	08/27/22 20:08	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/26/22 14:18	08/27/22 20:08	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/26/22 14:18	08/27/22 20:08	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/26/22 14:18	08/27/22 20:08	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/26/22 14:18	08/27/22 20:08	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/26/22 14:18	08/27/22 20:08	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/26/22 14:18	08/27/22 20:08	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/26/22 14:18	08/27/22 20:08	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 16:40	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	296	mg/L	10.0	10.0	1		08/16/22 14:09		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	4.7	mg/L	1.0	0.60	1		08/22/22 14:49	16887-00-6	
Fluoride	0.051J	mg/L	0.10	0.050	1		08/22/22 14:49	16984-48-8	
Sulfate	6.6	mg/L	1.0	0.50	1		08/22/22 14:49	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: GWC-23R		Lab ID: 92619171031		Collected: 08/11/22 10:20	Received: 08/15/22 10:41	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/15/22 14:20		
pH	7.37	Std. Units			1		08/15/22 14:20		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 19:02	7440-66-6	
Potassium	1.6	mg/L	0.20	0.15	1	08/22/22 11:40	08/22/22 19:02	7440-09-7	
Sodium	116	mg/L	1.0	0.58	1	08/22/22 11:40	08/22/22 19:02	7440-23-5	
Calcium	67.0	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 19:02	7440-70-2	
Magnesium	34.8	mg/L	0.050	0.012	1	08/22/22 11:40	08/22/22 19:02	7439-95-4	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/26/22 14:18	08/27/22 20:14	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/26/22 14:18	08/27/22 20:14	7440-38-2	
Barium	0.034	mg/L	0.0050	0.00067	1	08/26/22 14:18	08/27/22 20:14	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/26/22 14:18	08/27/22 20:14	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/26/22 14:18	08/27/22 20:14	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/26/22 14:18	08/27/22 20:14	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/26/22 14:18	08/27/22 20:14	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/26/22 14:18	08/27/22 20:14	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/26/22 14:18	08/27/22 20:14	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/26/22 14:18	08/27/22 20:14	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/26/22 14:18	08/27/22 20:14	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/26/22 14:18	08/27/22 20:14	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/26/22 14:18	08/27/22 20:14	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/26/22 14:18	08/27/22 20:14	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/26/22 14:18	08/27/22 20:14	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 16:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	586	mg/L	20.0	20.0	1		08/16/22 14:18		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.1	mg/L	1.0	0.60	1		08/22/22 15:04	16887-00-6	
Fluoride	0.073J	mg/L	0.10	0.050	1		08/22/22 15:04	16984-48-8	
Sulfate	143	mg/L	3.0	1.5	3		08/23/22 04:15	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Sample: FB-5		Lab ID: 92619171032		Collected: 08/11/22 16:25	Received: 08/15/22 10:41	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 19:06	7440-66-6		
Potassium	ND	mg/L	0.20	0.15	1	08/22/22 11:40	08/22/22 19:06	7440-09-7		
Sodium	ND	mg/L	1.0	0.58	1	08/22/22 11:40	08/22/22 19:06	7440-23-5		
Calcium	ND	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 19:06	7440-70-2		
Magnesium	ND	mg/L	0.050	0.012	1	08/22/22 11:40	08/22/22 19:06	7439-95-4		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/26/22 14:18	08/27/22 20:32	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	08/26/22 14:18	08/27/22 20:32	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	08/26/22 14:18	08/27/22 20:32	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	08/26/22 14:18	08/27/22 20:32	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	08/26/22 14:18	08/27/22 20:32	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/26/22 14:18	08/27/22 20:32	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	08/26/22 14:18	08/27/22 20:32	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	08/26/22 14:18	08/27/22 20:32	7440-48-4		
Copper	ND	mg/L	0.0050	0.0010	1	08/26/22 14:18	08/27/22 20:32	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	08/26/22 14:18	08/27/22 20:32	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	08/26/22 14:18	08/27/22 20:32	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	08/26/22 14:18	08/27/22 20:32	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	08/26/22 14:18	08/27/22 20:32	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	08/26/22 14:18	08/27/22 20:32	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	08/26/22 14:18	08/27/22 20:32	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/29/22 12:00	08/29/22 16:46	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/16/22 14:18			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/22/22 15:19	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/22/22 15:19	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/22/22 15:19	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

QC Batch:	716042	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171001, 92619171002, 92619171003, 92619171004, 92619171005, 92619171006

METHOD BLANK: 3732858 Matrix: Water
Associated Lab Samples: 92619171001, 92619171002, 92619171003, 92619171004, 92619171005, 92619171006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/11/22 18:28	
Zinc	mg/L	ND	0.020	0.0085	08/11/22 18:28	

LABORATORY CONTROL SAMPLE: 3732859

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	105	80-120	
Zinc	mg/L	1	1.0	101	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3732860 3732861

Parameter	Units	92618826005 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Calcium	mg/L	7.1	1	1	7.9	8.2	83	111	75-125	3	20	
Zinc	mg/L	ND	1	1	1.0	1.0	100	104	75-125	4	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch: 718056 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92619171007, 92619171008, 92619171009, 92619171010, 92619171011, 92619171012, 92619171013, 92619171014, 92619171015, 92619171016, 92619171017, 92619171018, 92619171019, 92619171020, 92619171021, 92619171022, 92619171023, 92619171024, 92619171025, 92619171026

METHOD BLANK: 3743065 Matrix: Water
Associated Lab Samples: 92619171007, 92619171008, 92619171009, 92619171010, 92619171011, 92619171012, 92619171013, 92619171014, 92619171015, 92619171016, 92619171017, 92619171018, 92619171019, 92619171020, 92619171021, 92619171022, 92619171023, 92619171024, 92619171025, 92619171026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/18/22 16:27	
Zinc	mg/L	ND	0.020	0.0085	08/18/22 16:27	

LABORATORY CONTROL SAMPLE: 3743066

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	107	80-120	
Zinc	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3743067 3743068

Parameter	Units	92619171007		3743067		3743068		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec						
Calcium	mg/L	53.1	1	1	53.4	52.4	29	-68	75-125	2	20	M1	
Zinc	mg/L	0.011J	1	1	1.0	1.0	102	101	75-125	1	20		

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch: 718057 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92619171027, 92619171028

METHOD BLANK: 3743081 Matrix: Water
Associated Lab Samples: 92619171027, 92619171028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/18/22 19:07	
Zinc	mg/L	ND	0.020	0.0085	08/18/22 19:07	

LABORATORY CONTROL SAMPLE: 3743082

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	110	80-120	
Zinc	mg/L	1	1.1	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3743188 3743189

Parameter	Units	92619473001		3743188		3743189		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Calcium	mg/L	2930 ug/L	1	1	4.1	3.9	115	98	75-125	4	20
Zinc	mg/L	114 ug/L	1	1	1.1	1.1	102	100	75-125	2	20

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch: 718681 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171029, 92619171030, 92619171031, 92619171032

METHOD BLANK: 3746088 Matrix: Water
Associated Lab Samples: 92619171029, 92619171030, 92619171031, 92619171032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Aluminum	mg/L	ND	0.10	0.067	08/22/22 18:02	
Calcium	mg/L	ND	1.0	0.12	08/22/22 18:02	
Iron	mg/L	ND	0.040	0.025	08/22/22 18:02	
Magnesium	mg/L	ND	0.050	0.012	08/22/22 18:02	
Phosphorus	mg/L	ND	0.050	0.044	08/22/22 18:02	
Potassium	mg/L	ND	0.20	0.15	08/22/22 18:02	
Sodium	mg/L	ND	1.0	0.58	08/22/22 18:02	
Zinc	mg/L	ND	0.020	0.0085	08/22/22 18:02	

LABORATORY CONTROL SAMPLE: 3746089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	mg/L	1	1.1	110	80-120	
Calcium	mg/L	1	1.0	103	80-120	
Iron	mg/L	1	1.0	101	80-120	
Magnesium	mg/L	1	1.0	104	80-120	
Phosphorus	mg/L	1	1.1	107	80-120	
Potassium	mg/L	1	1.1	115	80-120	
Sodium	mg/L	1	1.1	106	80-120	
Zinc	mg/L	1	1.1	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746090 3746091

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92619171029 Result	Spike Conc.	Spike Conc.	Conc.								
Aluminum	mg/L	ND	1	1	1	2.1	2.3	214	228	75-125	6	20	M1
Calcium	mg/L	71.6	1	1	1	70.9	76.8	-66	517	75-125	8	20	M1
Iron	mg/L	ND	1	1	1	2.1	2.3	214	226	75-125	5	20	M1
Magnesium	mg/L	30.8	1	1	1	31.8	34.4	100	353	75-125	8	20	M1
Phosphorus	mg/L	ND	1	1	1	ND	ND	0	0	75-125		20	M1
Potassium	mg/L	2.9	1	1	1	4.9	5.2	202	234	75-125	6	20	M1
Sodium	mg/L	7.3	1	1	1	9.2	9.8	186	256	75-125	7	20	M1
Zinc	mg/L	0.036	1	1	1	0.25	0.26	22	22	75-125	3	20	M1

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch: 716046 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171001, 92619171002, 92619171003, 92619171004, 92619171005, 92619171006

METHOD BLANK: 3732885 Matrix: Water
Associated Lab Samples: 92619171001, 92619171002, 92619171003, 92619171004, 92619171005, 92619171006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/12/22 18:44	
Arsenic	mg/L	ND	0.0050	0.0022	08/12/22 18:44	
Barium	mg/L	ND	0.0050	0.00067	08/12/22 18:44	
Beryllium	mg/L	ND	0.00050	0.000054	08/12/22 18:44	
Boron	mg/L	ND	0.040	0.0086	08/12/22 18:44	
Cadmium	mg/L	ND	0.00050	0.00011	08/12/22 18:44	
Chromium	mg/L	ND	0.0050	0.0011	08/12/22 18:44	
Cobalt	mg/L	ND	0.0050	0.00039	08/12/22 18:44	
Copper	mg/L	ND	0.0050	0.0010	08/12/22 18:44	
Lead	mg/L	ND	0.0010	0.00089	08/12/22 18:44	
Nickel	mg/L	ND	0.0050	0.00071	08/12/22 18:44	
Selenium	mg/L	ND	0.0050	0.0014	08/12/22 18:44	
Silver	mg/L	ND	0.0050	0.00044	08/12/22 18:44	
Thallium	mg/L	ND	0.0010	0.00018	08/12/22 18:44	
Vanadium	mg/L	ND	0.010	0.0019	08/12/22 18:44	

LABORATORY CONTROL SAMPLE: 3732886

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	115	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.10	102	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	1.0	102	80-120	
Cadmium	mg/L	0.1	0.10	101	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	103	80-120	
Copper	mg/L	0.1	0.10	103	80-120	
Lead	mg/L	0.1	0.093	93	80-120	
Nickel	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.091	91	80-120	
Silver	mg/L	0.1	0.10	105	80-120	
Thallium	mg/L	0.1	0.090	90	80-120	
Vanadium	mg/L	0.1	0.11	107	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Parameter	Units	92618826010		MS		MSD		3732887		3732888		% Rec	Limits	RPD	Max RPD	Qual
		Result	Conc.	Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec								
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	115	112	75-125	3	20					
Arsenic	mg/L	0.0022J	0.1	0.1	0.098	0.096	96	93	75-125	3	20					
Barium	mg/L	0.085	0.1	0.1	0.22	0.21	134	126	75-125	4	20	M1				
Beryllium	mg/L	ND	0.1	0.1	0.091	0.089	91	89	75-125	3	20					
Boron	mg/L	0.25	1	1	1.2	1.2	93	90	75-125	2	20					
Cadmium	mg/L	ND	0.1	0.1	0.10	0.099	100	99	75-125	1	20					
Chromium	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20					
Cobalt	mg/L	0.00080J	0.1	0.1	0.10	0.098	99	97	75-125	2	20					
Copper	mg/L	ND	0.1	0.1	0.098	0.096	98	96	75-125	2	20					
Lead	mg/L	ND	0.1	0.1	0.093	0.090	93	90	75-125	4	20					
Nickel	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	2	20					
Selenium	mg/L	ND	0.1	0.1	0.090	0.089	90	89	75-125	1	20					
Silver	mg/L	ND	0.1	0.1	0.10	0.098	101	98	75-125	3	20					
Thallium	mg/L	ND	0.1	0.1	0.091	0.088	91	88	75-125	3	20					
Vanadium	mg/L	ND	0.1	0.1	0.10	0.10	102	100	75-125	1	20					

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch: 718385 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92619171007, 92619171008, 92619171009, 92619171010, 92619171011, 92619171012, 92619171013, 92619171014, 92619171015, 92619171016, 92619171017, 92619171018, 92619171019, 92619171020, 92619171021, 92619171022, 92619171023, 92619171024, 92619171025, 92619171026

METHOD BLANK: 3744753 Matrix: Water
Associated Lab Samples: 92619171007, 92619171008, 92619171009, 92619171010, 92619171011, 92619171012, 92619171013, 92619171014, 92619171015, 92619171016, 92619171017, 92619171018, 92619171019, 92619171020, 92619171021, 92619171022, 92619171023, 92619171024, 92619171025, 92619171026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	0.00097J	0.0030	0.00078	08/24/22 15:09	
Arsenic	mg/L	ND	0.0050	0.0022	08/24/22 15:09	
Barium	mg/L	ND	0.0050	0.00067	08/24/22 15:09	
Beryllium	mg/L	ND	0.00050	0.000054	08/24/22 15:09	
Boron	mg/L	ND	0.040	0.0086	08/24/22 15:09	
Cadmium	mg/L	ND	0.00050	0.00011	08/24/22 15:09	
Chromium	mg/L	ND	0.0050	0.0011	08/24/22 15:09	
Cobalt	mg/L	ND	0.0050	0.00039	08/24/22 15:09	
Copper	mg/L	ND	0.0050	0.0010	08/24/22 15:09	
Lead	mg/L	ND	0.0010	0.00089	08/24/22 15:09	
Nickel	mg/L	ND	0.0050	0.00071	08/24/22 15:09	
Selenium	mg/L	ND	0.0050	0.0014	08/24/22 15:09	
Silver	mg/L	ND	0.0050	0.00044	08/24/22 15:09	
Thallium	mg/L	ND	0.0010	0.00018	08/24/22 15:09	
Vanadium	mg/L	ND	0.010	0.0019	08/24/22 15:09	

LABORATORY CONTROL SAMPLE: 3744754

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	109	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.10	100	80-120	
Boron	mg/L	1	1.0	104	80-120	
Cadmium	mg/L	0.1	0.098	98	80-120	
Chromium	mg/L	0.1	0.10	103	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Copper	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Nickel	mg/L	0.1	0.10	101	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Silver	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	
Vanadium	mg/L	0.1	0.10	103	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Parameter	Units	92619171007		MS		MSD		3744755		3744756		Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	111	109	75-125	2	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	104	102	75-125	2	20	
Barium	mg/L	0.037	0.1	0.1	0.14	0.14	104	101	75-125	2	20	
Beryllium	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	1	20	
Boron	mg/L	0.023J	1	1	1.0	1.0	102	101	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	102	101	75-125	1	20	
Chromium	mg/L	ND	0.1	0.1	0.11	0.10	105	103	75-125	2	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.099	102	99	75-125	3	20	
Copper	mg/L	ND	0.1	0.1	0.10	0.098	100	98	75-125	2	20	
Lead	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	
Nickel	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	103	101	75-125	2	20	
Silver	mg/L	ND	0.1	0.1	0.099	0.097	99	97	75-125	3	20	
Thallium	mg/L	ND	0.1	0.1	0.10	0.099	103	99	75-125	4	20	
Vanadium	mg/L	ND	0.1	0.1	0.11	0.11	108	106	75-125	2	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch: 719812 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171027, 92619171028, 92619171029

METHOD BLANK: 3751329 Matrix: Water

Associated Lab Samples: 92619171027, 92619171028, 92619171029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/26/22 20:24	
Arsenic	mg/L	ND	0.0050	0.0022	08/26/22 20:24	
Barium	mg/L	ND	0.0050	0.00067	08/26/22 20:24	
Beryllium	mg/L	ND	0.00050	0.000054	08/26/22 20:24	
Boron	mg/L	0.020J	0.040	0.0086	08/26/22 20:24	
Cadmium	mg/L	ND	0.00050	0.00011	08/26/22 20:24	
Chromium	mg/L	ND	0.0050	0.0011	08/26/22 20:24	
Cobalt	mg/L	ND	0.0050	0.00039	08/26/22 20:24	
Copper	mg/L	ND	0.0050	0.0010	08/26/22 20:24	
Lead	mg/L	ND	0.0010	0.00089	08/26/22 20:24	
Nickel	mg/L	ND	0.0050	0.00071	08/26/22 20:24	
Selenium	mg/L	ND	0.0050	0.0014	08/26/22 20:24	
Silver	mg/L	ND	0.0050	0.00044	08/26/22 20:24	
Thallium	mg/L	ND	0.0010	0.00018	08/26/22 20:24	
Vanadium	mg/L	ND	0.010	0.0019	08/26/22 20:24	

LABORATORY CONTROL SAMPLE: 3751330

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	113	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.10	102	80-120	
Beryllium	mg/L	0.1	0.099	99	80-120	
Boron	mg/L	1	1.0	102	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.097	97	80-120	
Cobalt	mg/L	0.1	0.093	93	80-120	
Copper	mg/L	0.1	0.093	93	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Nickel	mg/L	0.1	0.093	93	80-120	
Selenium	mg/L	0.1	0.097	97	80-120	
Silver	mg/L	0.1	0.10	102	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	
Vanadium	mg/L	0.1	0.096	96	80-120	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Parameter	Units	92619171027		3751331		3751332		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	107	111	75-125	4	20			
Arsenic	mg/L	ND	0.1	0.1	0.10	0.098	101	98	75-125	3	20			
Barium	mg/L	0.015	0.1	0.1	0.11	0.12	100	101	75-125	1	20			
Beryllium	mg/L	0.000082J	0.1	0.1	0.098	0.097	97	97	75-125	1	20			
Boron	mg/L	0.019J	1	1	1.0	1.0	100	98	75-125	1	20			
Cadmium	mg/L	ND	0.1	0.1	0.096	0.099	96	99	75-125	3	20			
Chromium	mg/L	ND	0.1	0.1	0.099	0.098	98	97	75-125	2	20			
Cobalt	mg/L	ND	0.1	0.1	0.096	0.094	96	94	75-125	2	20			
Copper	mg/L	ND	0.1	0.1	0.093	0.091	93	91	75-125	2	20			
Lead	mg/L	ND	0.1	0.1	0.097	0.096	97	96	75-125	1	20			
Nickel	mg/L	ND	0.1	0.1	0.095	0.094	95	94	75-125	1	20			
Selenium	mg/L	ND	0.1	0.1	0.10	0.097	99	97	75-125	3	20			
Silver	mg/L	ND	0.1	0.1	0.098	0.099	98	99	75-125	0	20			
Thallium	mg/L	ND	0.1	0.1	0.099	0.098	99	98	75-125	0	20			
Vanadium	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	0	20			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch: 719833 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92619171030, 92619171031, 92619171032

METHOD BLANK: 3751482 Matrix: Water
Associated Lab Samples: 92619171030, 92619171031, 92619171032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/27/22 19:20	
Arsenic	mg/L	ND	0.0050	0.0022	08/27/22 19:20	
Barium	mg/L	ND	0.0050	0.00067	08/27/22 19:20	
Beryllium	mg/L	ND	0.00050	0.000054	08/27/22 19:20	
Boron	mg/L	ND	0.040	0.0086	08/27/22 19:20	
Cadmium	mg/L	ND	0.00050	0.00011	08/27/22 19:20	
Chromium	mg/L	ND	0.0050	0.0011	08/27/22 19:20	
Cobalt	mg/L	ND	0.0050	0.00039	08/27/22 19:20	
Copper	mg/L	ND	0.0050	0.0010	08/27/22 19:20	
Lead	mg/L	ND	0.0010	0.00089	08/27/22 19:20	
Nickel	mg/L	ND	0.0050	0.00071	08/27/22 19:20	
Selenium	mg/L	ND	0.0050	0.0014	08/27/22 19:20	
Silver	mg/L	ND	0.0050	0.00044	08/27/22 19:20	
Thallium	mg/L	ND	0.0010	0.00018	08/27/22 19:20	
Vanadium	mg/L	ND	0.010	0.0019	08/27/22 19:20	

LABORATORY CONTROL SAMPLE: 3751483

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.10	104	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.098	98	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	0.1	0.095	95	80-120	
Chromium	mg/L	0.1	0.095	95	80-120	
Cobalt	mg/L	0.1	0.092	92	80-120	
Copper	mg/L	0.1	0.092	92	80-120	
Lead	mg/L	0.1	0.097	97	80-120	
Nickel	mg/L	0.1	0.092	92	80-120	
Selenium	mg/L	0.1	0.096	96	80-120	
Silver	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.098	98	80-120	
Vanadium	mg/L	0.1	0.096	96	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Parameter	Units	92620555001		3751484		3751485		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Antimony	mg/L	ND	0.1	0.1	0.10	0.11	104	106	75-125	2	20			
Arsenic	mg/L	ND	0.1	0.1	0.096	0.096	96	96	75-125	0	20			
Barium	mg/L	55.2 ug/L	0.1	0.1	0.15	0.16	96	101	75-125	4	20			
Beryllium	mg/L	0.054J ug/L	0.1	0.1	0.093	0.096	93	96	75-125	3	20			
Boron	mg/L	8.7J ug/L	1	1	0.97	0.98	96	98	75-125	1	20			
Cadmium	mg/L	ND	0.1	0.1	0.094	0.097	94	97	75-125	3	20			
Chromium	mg/L	1.4J ug/L	0.1	0.1	0.098	0.097	96	96	75-125	1	20			
Cobalt	mg/L	ND	0.1	0.1	0.094	0.095	94	95	75-125	1	20			
Copper	mg/L	ND	0.1	0.1	0.093	0.094	93	94	75-125	1	20			
Lead	mg/L	ND	0.1	0.1	0.096	0.095	96	95	75-125	1	20			
Nickel	mg/L	ND	0.1	0.1	0.094	0.094	94	94	75-125	0	20			
Selenium	mg/L	ND	0.1	0.1	0.095	0.096	95	96	75-125	1	20			
Silver	mg/L	ND	0.1	0.1	0.096	0.096	96	96	75-125	0	20			
Thallium	mg/L	ND	0.1	0.1	0.097	0.097	96	97	75-125	1	20			
Vanadium	mg/L	3.0J ug/L	0.1	0.1	0.10	0.10	98	97	75-125	1	20			

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch:	719863	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171001, 92619171002, 92619171003, 92619171004, 92619171005, 92619171006, 92619171007, 92619171008, 92619171009, 92619171010, 92619171011, 92619171012, 92619171013, 92619171014, 92619171015, 92619171016, 92619171017, 92619171018, 92619171019, 92619171020

METHOD BLANK: 3751697 Matrix: Water

Associated Lab Samples: 92619171001, 92619171002, 92619171003, 92619171004, 92619171005, 92619171006, 92619171007, 92619171008, 92619171009, 92619171010, 92619171011, 92619171012, 92619171013, 92619171014, 92619171015, 92619171016, 92619171017, 92619171018, 92619171019, 92619171020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	08/29/22 14:38	

LABORATORY CONTROL SAMPLE: 3751698

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	103	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3751699 3751700

Parameter	Units	92619171001		3751700		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result							
Mercury	mg/L	ND	0.0025	0.0025	0.0026	0.0017	103	68	75-125	40	20	M1,R1

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

QC Batch:	719865	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171021, 92619171022, 92619171023, 92619171024, 92619171025, 92619171026, 92619171027, 92619171028, 92619171029, 92619171030, 92619171031, 92619171032

METHOD BLANK: 3751705 Matrix: Water

Associated Lab Samples: 92619171021, 92619171022, 92619171023, 92619171024, 92619171025, 92619171026, 92619171027, 92619171028, 92619171029, 92619171030, 92619171031, 92619171032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	08/29/22 15:55	

LABORATORY CONTROL SAMPLE: 3751706

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3751707 3751708

Parameter	Units	92619171021 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Result	Spike Conc.	MSD Result						
Mercury	mg/L	ND	0.0025	0.0020	0.0025	0.0024	80	95	75-125	17	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

QC Batch:	715879	Analysis Method:	SM 2540C-2015
QC Batch Method:	SM 2540C-2015	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171002, 92619171004, 92619171005, 92619171006

METHOD BLANK: 3731855 Matrix: Water
Associated Lab Samples: 92619171002, 92619171004, 92619171005, 92619171006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/09/22 10:01	

LABORATORY CONTROL SAMPLE: 3731856

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	384	96	80-120	

SAMPLE DUPLICATE: 3731857

Parameter	Units	92618823005 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	334	334	0	25	

SAMPLE DUPLICATE: 3731858

Parameter	Units	92618820016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	302	335	10	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch: 716396	Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171001, 92619171003

METHOD BLANK: 3734636 Matrix: Water

Associated Lab Samples: 92619171001, 92619171003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/11/22 10:34	

LABORATORY CONTROL SAMPLE: 3734637

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	80-120	

SAMPLE DUPLICATE: 3735020

Parameter	Units	92618826003 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	224	225	0	25	

SAMPLE DUPLICATE: 3735021

Parameter	Units	92618826011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	285	282	1	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

QC Batch: 716789

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171007, 92619171008, 92619171009, 92619171010, 92619171011, 92619171012, 92619171013, 92619171014, 92619171015, 92619171016, 92619171017, 92619171018, 92619171019, 92619171020, 92619171021, 92619171022, 92619171023, 92619171024, 92619171025, 92619171026

METHOD BLANK: 3736560

Matrix: Water

Associated Lab Samples: 92619171007, 92619171008, 92619171009, 92619171010, 92619171011, 92619171012, 92619171013, 92619171014, 92619171015, 92619171016, 92619171017, 92619171018, 92619171019, 92619171020, 92619171021, 92619171022, 92619171023, 92619171024, 92619171025, 92619171026

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/12/22 08:57	

LABORATORY CONTROL SAMPLE: 3736561

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	391	98	80-120	

SAMPLE DUPLICATE: 3736562

Parameter	Units	92619171007 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	232	236	2	25	

SAMPLE DUPLICATE: 3736563

Parameter	Units	92619171017 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	102	156	42	25 D6	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

QC Batch: 717151	Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171027, 92619171028

METHOD BLANK: 3738466 Matrix: Water

Associated Lab Samples: 92619171027, 92619171028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/15/22 11:23	

LABORATORY CONTROL SAMPLE: 3738467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	415	104	80-120	

SAMPLE DUPLICATE: 3738468

Parameter	Units	92620164002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	226	227	0	25	

SAMPLE DUPLICATE: 3738469

Parameter	Units	92619171028 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

QC Batch: 717424	Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015	Analysis Description: 2540C Total Dissolved Solids
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171029, 92619171030

METHOD BLANK: 3739844 Matrix: Water

Associated Lab Samples: 92619171029, 92619171030

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/16/22 14:07	

LABORATORY CONTROL SAMPLE: 3739845

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	380	95	80-120	

SAMPLE DUPLICATE: 3739846

Parameter	Units	92618826016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		25	

SAMPLE DUPLICATE: 3739847

Parameter	Units	92620047010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	91.0	89.0	2	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

QC Batch: 717426

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92619171031, 92619171032

METHOD BLANK: 3739848

Matrix: Water

Associated Lab Samples: 92619171031, 92619171032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/16/22 14:15	

LABORATORY CONTROL SAMPLE: 3739849

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	385	96	80-120	

SAMPLE DUPLICATE: 3739850

Parameter	Units	92618822013 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	134	138	3	25	

SAMPLE DUPLICATE: 3739851

Parameter	Units	92618822004 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	940	924	2	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch: 717492 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92619171001, 92619171002

METHOD BLANK: 3740200 Matrix: Water

Associated Lab Samples: 92619171001, 92619171002

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/17/22 07:54	
Fluoride	mg/L	ND	0.10	0.050	08/17/22 07:54	
Sulfate	mg/L	ND	1.0	0.50	08/17/22 07:54	

LABORATORY CONTROL SAMPLE: 3740201

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.5	95	90-110	
Fluoride	mg/L	2.5	2.5	100	90-110	
Sulfate	mg/L	50	47.6	95	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3740202 3740203

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92619725001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	64.1	50	50	105	105	82	83	90-110	1	10	M1	
Fluoride	mg/L	0.38	2.5	2.5	2.7	2.8	94	96	90-110	2	10		
Sulfate	mg/L	288	50	50	337	338	99	100	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3740204 3740205

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92618826008 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	5.0	50	50	59.1	59.0	108	108	90-110	0	10		
Fluoride	mg/L	0.075J	2.5	2.5	2.8	2.8	107	108	90-110	1	10		
Sulfate	mg/L	217	50	50	264	265	95	96	90-110	0	10		

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

QC Batch: 717794 Analysis Method: EPA 300.0 Rev 2.1 1993
 QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
 Laboratory: Pace Analytical Services - Asheville
 Associated Lab Samples: 92619171003, 92619171004, 92619171005, 92619171006

METHOD BLANK: 3741771 Matrix: Water
 Associated Lab Samples: 92619171003, 92619171004, 92619171005, 92619171006

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/17/22 20:45	
Fluoride	mg/L	ND	0.10	0.050	08/17/22 20:45	
Sulfate	mg/L	ND	1.0	0.50	08/17/22 20:45	

LABORATORY CONTROL SAMPLE: 3741772

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	50.9	102	90-110	
Fluoride	mg/L	2.5	2.5	102	90-110	
Sulfate	mg/L	50	49.6	99	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3741773 3741774

Parameter	Units	92619171003		3741773		3741774		% Rec	% Rec	% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					
Chloride	mg/L	0.96J	50	50	52.8	52.5	104	103	90-110	0	10	
Fluoride	mg/L	0.073J	2.5	2.5	2.5	2.5	96	97	90-110	0	10	
Sulfate	mg/L	1.4	50	50	51.6	51.5	100	100	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3741775 3741776

Parameter	Units	92620477006		3741775		3741776		% Rec	% Rec	% Rec Limits	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec					
Chloride	mg/L	10.3	50	50	62.4	60.9	104	101	90-110	2	10	
Fluoride	mg/L	0.59	2.5	2.5	3.3	3.2	109	105	90-110	3	10	
Sulfate	mg/L	11.0	50	50	61.8	60.5	102	99	90-110	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch:	718416	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92619171007, 92619171008, 92619171009, 92619171010, 92619171011, 92619171012, 92619171013, 92619171014, 92619171015, 92619171016, 92619171017, 92619171018, 92619171019, 92619171020

METHOD BLANK: 3744911 Matrix: Water
Associated Lab Samples: 92619171007, 92619171008, 92619171009, 92619171010, 92619171011, 92619171012, 92619171013, 92619171014, 92619171015, 92619171016, 92619171017, 92619171018, 92619171019, 92619171020

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/20/22 19:31	
Fluoride	mg/L	ND	0.10	0.050	08/20/22 19:31	
Sulfate	mg/L	ND	1.0	0.50	08/20/22 19:31	

LABORATORY CONTROL SAMPLE: 3744912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.8	100	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744913 3744914

Parameter	Units	9261269001		3744914		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	5.4	50	54.6	55.3	99	100	90-110	1	10	
Fluoride	mg/L	0.12	2.5	2.7	2.7	104	104	90-110	0	10	
Sulfate	mg/L	5.5	50	55.3	56.0	99	101	90-110	1	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744915 3744916

Parameter	Units	92619171011		3744916		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	2.2	50	51.8	52.3	99	100	90-110	1	10	
Fluoride	mg/L	0.066J	2.5	2.7	2.7	104	104	90-110	0	10	
Sulfate	mg/L	1.5	50	51.2	51.8	100	101	90-110	1	10	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch: 718488 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92619171021, 92619171022, 92619171023, 92619171024, 92619171025, 92619171026, 92619171027, 92619171028

METHOD BLANK: 3745401 Matrix: Water
Associated Lab Samples: 92619171021, 92619171022, 92619171023, 92619171024, 92619171025, 92619171026, 92619171027, 92619171028

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/20/22 12:59	
Fluoride	mg/L	ND	0.10	0.050	08/20/22 12:59	
Sulfate	mg/L	ND	1.0	0.50	08/20/22 12:59	

LABORATORY CONTROL SAMPLE: 3745402

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.2	102	90-110	
Fluoride	mg/L	2.5	2.6	105	90-110	
Sulfate	mg/L	50	50.3	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745403 3745404

Parameter	Units	92621298001		3745404		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	8.1	50	59.8	60.0	103	104	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.7	2.7	103	104	90-110	1	10	
Sulfate	mg/L	18.8	50	69.7	69.7	102	102	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745405 3745406

Parameter	Units	92619171021		3745406		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	2.6	50	54.5	54.6	104	104	90-110	0	10	
Fluoride	mg/L	ND	2.5	2.5	2.5	98	100	90-110	1	10	
Sulfate	mg/L	2.1	50	52.7	52.9	101	102	90-110	0	10	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

QC Batch: 718644 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92619171029, 92619171030, 92619171031, 92619171032

METHOD BLANK: 3745974 Matrix: Water
Associated Lab Samples: 92619171029, 92619171030, 92619171031, 92619171032

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/22/22 08:12	
Fluoride	mg/L	ND	0.10	0.050	08/22/22 08:12	
Sulfate	mg/L	ND	1.0	0.50	08/22/22 08:12	

LABORATORY CONTROL SAMPLE: 3745975

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.2	102	90-110	
Fluoride	mg/L	2.5	2.7	106	90-110	
Sulfate	mg/L	50	49.9	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745976 3745977

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92618822016 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	148	50	50	184	186	71	76	90-110	1	10	M1	
Fluoride	mg/L	0.086J	2.5	2.5	2.6	2.6	100	102	90-110	2	10		
Sulfate	mg/L	423	50	50	444	451	42	57	90-110	2	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745978 3745979

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92619003009 Result	Spike Conc.	Spike Conc.	Result								
Chloride	mg/L	42.1	50	50	94.5	94.7	105	105	90-110	0	10		
Fluoride	mg/L	0.056J	2.5	2.5	2.5	2.6	99	101	90-110	2	10		
Sulfate	mg/L	2030	50	50	2070	2070	93	81	90-110	0	10	M1	

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QUALIFIERS

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

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

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92619171001	GWA-38				
92619171002	GWA-52				
92619171003	GWA-54				
92619171004	GWA-56				
92619171007	GWA-36A				
92619171008	GWA-36RA				
92619171009	GWA-37				
92619171010	GWA-53				
92619171011	GWA-53R				
92619171012	GWA-55				
92619171013	GWA-55R				
92619171016	GWA-51RZ				
92619171017	GWC-19R				
92619171018	GWC-20R				
92619171019	GWC-24R				
92619171020	GWC-25R				
92619171023	GWC-18				
92619171024	GWC-18R				
92619171025	GWC-21R				
92619171026	GWC-22R				
92619171029	GWC-16R				
92619171030	GWC-17R				
92619171031	GWC-23R				
92619171001	GWA-38	EPA 3010A	716042	EPA 6010D	716585
92619171002	GWA-52	EPA 3010A	716042	EPA 6010D	716585
92619171003	GWA-54	EPA 3010A	716042	EPA 6010D	716585
92619171004	GWA-56	EPA 3010A	716042	EPA 6010D	716585
92619171005	DUP-1	EPA 3010A	716042	EPA 6010D	716585
92619171006	FB-1	EPA 3010A	716042	EPA 6010D	716585
92619171007	GWA-36A	EPA 3010A	718056	EPA 6010D	718142
92619171008	GWA-36RA	EPA 3010A	718056	EPA 6010D	718142
92619171009	GWA-37	EPA 3010A	718056	EPA 6010D	718142
92619171010	GWA-53	EPA 3010A	718056	EPA 6010D	718142
92619171011	GWA-53R	EPA 3010A	718056	EPA 6010D	718142
92619171012	GWA-55	EPA 3010A	718056	EPA 6010D	718142
92619171013	GWA-55R	EPA 3010A	718056	EPA 6010D	718142
92619171014	FB-2	EPA 3010A	718056	EPA 6010D	718142
92619171015	EB-1	EPA 3010A	718056	EPA 6010D	718142
92619171016	GWA-51RZ	EPA 3010A	718056	EPA 6010D	718142
92619171017	GWC-19R	EPA 3010A	718056	EPA 6010D	718142
92619171018	GWC-20R	EPA 3010A	718056	EPA 6010D	718142
92619171019	GWC-24R	EPA 3010A	718056	EPA 6010D	718142
92619171020	GWC-25R	EPA 3010A	718056	EPA 6010D	718142
92619171021	DUP-2	EPA 3010A	718056	EPA 6010D	718142
92619171022	FB-3	EPA 3010A	718056	EPA 6010D	718142
92619171023	GWC-18	EPA 3010A	718056	EPA 6010D	718142
92619171024	GWC-18R	EPA 3010A	718056	EPA 6010D	718142
92619171025	GWC-21R	EPA 3010A	718056	EPA 6010D	718142

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4

Pace Project No.: 92619171

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92619171026	GWC-22R	EPA 3010A	718056	EPA 6010D	718142
92619171027	DUP-3	EPA 3010A	718057	EPA 6010D	718149
92619171028	FB-4	EPA 3010A	718057	EPA 6010D	718149
92619171029	GWC-16R	EPA 3010A	718681	EPA 6010D	718747
92619171030	GWC-17R	EPA 3010A	718681	EPA 6010D	718747
92619171031	GWC-23R	EPA 3010A	718681	EPA 6010D	718747
92619171032	FB-5	EPA 3010A	718681	EPA 6010D	718747
92619171001	GWA-38	EPA 3005A	716046	EPA 6020B	716279
92619171002	GWA-52	EPA 3005A	716046	EPA 6020B	716279
92619171003	GWA-54	EPA 3005A	716046	EPA 6020B	716279
92619171004	GWA-56	EPA 3005A	716046	EPA 6020B	716279
92619171005	DUP-1	EPA 3005A	716046	EPA 6020B	716279
92619171006	FB-1	EPA 3005A	716046	EPA 6020B	716279
92619171007	GWA-36A	EPA 3005A	718385	EPA 6020B	718456
92619171008	GWA-36RA	EPA 3005A	718385	EPA 6020B	718456
92619171009	GWA-37	EPA 3005A	718385	EPA 6020B	718456
92619171010	GWA-53	EPA 3005A	718385	EPA 6020B	718456
92619171011	GWA-53R	EPA 3005A	718385	EPA 6020B	718456
92619171012	GWA-55	EPA 3005A	718385	EPA 6020B	718456
92619171013	GWA-55R	EPA 3005A	718385	EPA 6020B	718456
92619171014	FB-2	EPA 3005A	718385	EPA 6020B	718456
92619171015	EB-1	EPA 3005A	718385	EPA 6020B	718456
92619171016	GWA-51RZ	EPA 3005A	718385	EPA 6020B	718456
92619171017	GWC-19R	EPA 3005A	718385	EPA 6020B	718456
92619171018	GWC-20R	EPA 3005A	718385	EPA 6020B	718456
92619171019	GWC-24R	EPA 3005A	718385	EPA 6020B	718456
92619171020	GWC-25R	EPA 3005A	718385	EPA 6020B	718456
92619171021	DUP-2	EPA 3005A	718385	EPA 6020B	718456
92619171022	FB-3	EPA 3005A	718385	EPA 6020B	718456
92619171023	GWC-18	EPA 3005A	718385	EPA 6020B	718456
92619171024	GWC-18R	EPA 3005A	718385	EPA 6020B	718456
92619171025	GWC-21R	EPA 3005A	718385	EPA 6020B	718456
92619171026	GWC-22R	EPA 3005A	718385	EPA 6020B	718456
92619171027	DUP-3	EPA 3005A	719812	EPA 6020B	719875
92619171028	FB-4	EPA 3005A	719812	EPA 6020B	719875
92619171029	GWC-16R	EPA 3005A	719812	EPA 6020B	719875
92619171030	GWC-17R	EPA 3005A	719833	EPA 6020B	719944
92619171031	GWC-23R	EPA 3005A	719833	EPA 6020B	719944
92619171032	FB-5	EPA 3005A	719833	EPA 6020B	719944
92619171001	GWA-38	EPA 7470A	719863	EPA 7470A	720168
92619171002	GWA-52	EPA 7470A	719863	EPA 7470A	720168
92619171003	GWA-54	EPA 7470A	719863	EPA 7470A	720168
92619171004	GWA-56	EPA 7470A	719863	EPA 7470A	720168
92619171005	DUP-1	EPA 7470A	719863	EPA 7470A	720168
92619171006	FB-1	EPA 7470A	719863	EPA 7470A	720168

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92619171007	GWA-36A	EPA 7470A	719863	EPA 7470A	720168
92619171008	GWA-36RA	EPA 7470A	719863	EPA 7470A	720168
92619171009	GWA-37	EPA 7470A	719863	EPA 7470A	720168
92619171010	GWA-53	EPA 7470A	719863	EPA 7470A	720168
92619171011	GWA-53R	EPA 7470A	719863	EPA 7470A	720168
92619171012	GWA-55	EPA 7470A	719863	EPA 7470A	720168
92619171013	GWA-55R	EPA 7470A	719863	EPA 7470A	720168
92619171014	FB-2	EPA 7470A	719863	EPA 7470A	720168
92619171015	EB-1	EPA 7470A	719863	EPA 7470A	720168
92619171016	GWA-51RZ	EPA 7470A	719863	EPA 7470A	720168
92619171017	GWC-19R	EPA 7470A	719863	EPA 7470A	720168
92619171018	GWC-20R	EPA 7470A	719863	EPA 7470A	720168
92619171019	GWC-24R	EPA 7470A	719863	EPA 7470A	720168
92619171020	GWC-25R	EPA 7470A	719863	EPA 7470A	720168
92619171021	DUP-2	EPA 7470A	719865	EPA 7470A	720169
92619171022	FB-3	EPA 7470A	719865	EPA 7470A	720169
92619171023	GWC-18	EPA 7470A	719865	EPA 7470A	720169
92619171024	GWC-18R	EPA 7470A	719865	EPA 7470A	720169
92619171025	GWC-21R	EPA 7470A	719865	EPA 7470A	720169
92619171026	GWC-22R	EPA 7470A	719865	EPA 7470A	720169
92619171027	DUP-3	EPA 7470A	719865	EPA 7470A	720169
92619171028	FB-4	EPA 7470A	719865	EPA 7470A	720169
92619171029	GWC-16R	EPA 7470A	719865	EPA 7470A	720169
92619171030	GWC-17R	EPA 7470A	719865	EPA 7470A	720169
92619171031	GWC-23R	EPA 7470A	719865	EPA 7470A	720169
92619171032	FB-5	EPA 7470A	719865	EPA 7470A	720169
92619171001	GWA-38	SM 2540C-2015	716396		
92619171002	GWA-52	SM 2540C-2015	715879		
92619171003	GWA-54	SM 2540C-2015	716396		
92619171004	GWA-56	SM 2540C-2015	715879		
92619171005	DUP-1	SM 2540C-2015	715879		
92619171006	FB-1	SM 2540C-2015	715879		
92619171007	GWA-36A	SM 2540C-2015	716789		
92619171008	GWA-36RA	SM 2540C-2015	716789		
92619171009	GWA-37	SM 2540C-2015	716789		
92619171010	GWA-53	SM 2540C-2015	716789		
92619171011	GWA-53R	SM 2540C-2015	716789		
92619171012	GWA-55	SM 2540C-2015	716789		
92619171013	GWA-55R	SM 2540C-2015	716789		
92619171014	FB-2	SM 2540C-2015	716789		
92619171015	EB-1	SM 2540C-2015	716789		
92619171016	GWA-51RZ	SM 2540C-2015	716789		
92619171017	GWC-19R	SM 2540C-2015	716789		
92619171018	GWC-20R	SM 2540C-2015	716789		
92619171019	GWC-24R	SM 2540C-2015	716789		
92619171020	GWC-25R	SM 2540C-2015	716789		

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 3&4
Pace Project No.: 92619171

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92619171021	DUP-2	SM 2540C-2015	716789		
92619171022	FB-3	SM 2540C-2015	716789		
92619171023	GWC-18	SM 2540C-2015	716789		
92619171024	GWC-18R	SM 2540C-2015	716789		
92619171025	GWC-21R	SM 2540C-2015	716789		
92619171026	GWC-22R	SM 2540C-2015	716789		
92619171027	DUP-3	SM 2540C-2015	717151		
92619171028	FB-4	SM 2540C-2015	717151		
92619171029	GWC-16R	SM 2540C-2015	717424		
92619171030	GWC-17R	SM 2540C-2015	717424		
92619171031	GWC-23R	SM 2540C-2015	717426		
92619171032	FB-5	SM 2540C-2015	717426		
92619171001	GWA-38	EPA 300.0 Rev 2.1 1993	717492		
92619171002	GWA-52	EPA 300.0 Rev 2.1 1993	717492		
92619171003	GWA-54	EPA 300.0 Rev 2.1 1993	717794		
92619171004	GWA-56	EPA 300.0 Rev 2.1 1993	717794		
92619171005	DUP-1	EPA 300.0 Rev 2.1 1993	717794		
92619171006	FB-1	EPA 300.0 Rev 2.1 1993	717794		
92619171007	GWA-36A	EPA 300.0 Rev 2.1 1993	718416		
92619171008	GWA-36RA	EPA 300.0 Rev 2.1 1993	718416		
92619171009	GWA-37	EPA 300.0 Rev 2.1 1993	718416		
92619171010	GWA-53	EPA 300.0 Rev 2.1 1993	718416		
92619171011	GWA-53R	EPA 300.0 Rev 2.1 1993	718416		
92619171012	GWA-55	EPA 300.0 Rev 2.1 1993	718416		
92619171013	GWA-55R	EPA 300.0 Rev 2.1 1993	718416		
92619171014	FB-2	EPA 300.0 Rev 2.1 1993	718416		
92619171015	EB-1	EPA 300.0 Rev 2.1 1993	718416		
92619171016	GWA-51RZ	EPA 300.0 Rev 2.1 1993	718416		
92619171017	GWC-19R	EPA 300.0 Rev 2.1 1993	718416		
92619171018	GWC-20R	EPA 300.0 Rev 2.1 1993	718416		
92619171019	GWC-24R	EPA 300.0 Rev 2.1 1993	718416		
92619171020	GWC-25R	EPA 300.0 Rev 2.1 1993	718416		
92619171021	DUP-2	EPA 300.0 Rev 2.1 1993	718488		
92619171022	FB-3	EPA 300.0 Rev 2.1 1993	718488		
92619171023	GWC-18	EPA 300.0 Rev 2.1 1993	718488		
92619171024	GWC-18R	EPA 300.0 Rev 2.1 1993	718488		
92619171025	GWC-21R	EPA 300.0 Rev 2.1 1993	718488		
92619171026	GWC-22R	EPA 300.0 Rev 2.1 1993	718488		
92619171027	DUP-3	EPA 300.0 Rev 2.1 1993	718488		
92619171028	FB-4	EPA 300.0 Rev 2.1 1993	718488		
92619171029	GWC-16R	EPA 300.0 Rev 2.1 1993	718644		
92619171030	GWC-17R	EPA 300.0 Rev 2.1 1993	718644		
92619171031	GWC-23R	EPA 300.0 Rev 2.1 1993	718644		
92619171032	FB-5	EPA 300.0 Rev 2.1 1993	718644		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92619171



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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 8/8/22 [Signature]

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID:

214

Type of Ice:

Wet Blue None

Cooler Temp:

1.2

Correction Factor: Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

1.2

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	W	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

pH Strip Lot# 10D4611

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO#: 92619171

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Col form, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project #

PM: NMG

Due Date: 08/22/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA N82S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pass-standards-terms.pdf>.

Section B
Required Client Information:

Company: Georgia Power
Address: 241 Ralph McGill Blvd. NE
Atlanta, GA 30308
Email: klynjnk@southemco.com
Phone: (470) 217-0008
Requested Due Date: Standard

Section C
Required Project Information:

Report To: Kristen Jurino, Cassidy Suberland
Copy To: Laura Midoff, Ben Hodges, Mike Smiley
Purchase Order #: Noelia Gangli
Project Name: Bowen LF Cells 3&4
Project #:

Section D
Invoice Information:

Attention: Company Name: Georgia Power
Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308
Pace Project Manager: nicole.d'oleo@pacelabs.com.
Pace Profile #: 10850-4

Page : 3 Of 3

Section E
Required Analyte Information:

MATRIX CODE (see valid codes to left)
SAMPLE TYPE (G=GRAB C=COMP)
COLLECTED
DATE
TIME
SAMPLE TEMP AT COLLECTION
OF CONTAINERS
Unpreserved
Preservatives: H2SO4, HNO3, HCl, NaOH, Na2S2O3, Methanol, Other
Analytes Test: Y/N
III/IV + State Metals
Cl, F, SO4
TDS
Residual Chlorine (Y/N)
Requested Analyte Filtered (Y/N)
Regulatory Agency
State / Location
GA

ITEM #	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives	Analytes Test	Y/N	Requested Analyte Filtered (Y/N)	Regulatory Agency	State / Location	GA	TEMP in C	Received on Ice (Y/N)	Custody	Sealed Cooler (Y/N)	Samples intact (Y/N)	
																						Matrix
25	DU-P-1	WG	G	G	8/5/22	—	3	2	1		X	X	X									
26	DU-P-2	WG	G								X	X	X									
27	DU-P-3	WG	G								X	X	X									
28	FB-1	WG	G	G	8/5/22	1155	3	2	1		X	X	X									
29	FB-2	WG	G								X	X	X									
30	FB-3	WG	G								X	X	X									
31	FB-4	WG	G								X	X	X									
32	FB-5	WG	G								X	X	X									
33	EB-1	WG	G								X	X	X									
34	EB-2	WG	G								X	X	X									
35	EB-3	WG	G								X	X	X									
36																						

ADDITIONAL COMMENTS

REQUISISHED BY / AFFILIATION

DATE

TIME

ACCEPTED BY / AFFILIATION

DATE

TIME

SAMPLE CONDITIONS

SAAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Meredith Duncan, Will Locker, Robert Mull

SIGNATURE of SAMPLER: *Meredith Duncan*

DATE Signed: 8/5/22



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville

Sample Condition Upon Receipt

Client Name:

Project #:

WO#: 92619171

PM: NMG

Due Date: 08/22/22

CLIENT: GA-GA Power

Courier: Fed Ex UPS USPS Client Pace Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 8/11/22 L2 Con

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer: IR Gun ID: 230

Type of Ice: Wet Blue None

Cooler Temp: 3.1 Correction Factor: Add/Subtract (°C) 0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.1

USDA Regulated Soil (N/A, water sample)

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

				Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	W			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes	<input type="checkbox"/> No	<input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

pH Strip Lot# 10D4611

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

WO#: 92619171

Exceptions: VOA, Col form, TOC, OI and Grease, DRO/8015 (water) DOC, LLHg

PM: NMG

Due Date: 08/22/22

**Bottom half of box is to list number of bottles

CLIENT: GA-GA Power

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	V5GU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
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12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO#: 92619171

PM: NMG

Due Date: 08/22/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG6U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately. Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>.

Section A
Required Client Information:
 Company: Georgia Power
 Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308
 Email: krlurhk@southernco.com
 Phone: (470) 217-0008 Fax: Standard
 Requested Due Date: Standard

Section B
Required Project Information:
 Report To: Kristen Jurinko, Cassidy Sutherland
 Copy To: Laura Mickliff, Ben Hodges, Mike Smiley, Noelia Gangi
 Purchase Order #: Bowen LF Collis 3&4
 Project Name: Bowen LF Collis 3&4
 Project #: 10850-4

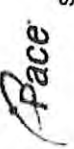
Section C
Invoice Information:
 Attention: Georgia Power
 Company Name: Georgia Power
 Address: 241 Ralph McGill Blvd, NE, Atlanta, GA 30308
 Pace Quote:
 Pace Project Manager: nicole.d'eleo@pacelabs.com
 Pace Profile #: 10850-4
 States / Location: GA
 Regulatory Agency

ITEM #	MATRIX	MATRIX CODE	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		PRESERVATIVES	ANALYSES TEST	RESIDUAL CHLORINE (Y/N)
				DATE	TIME			
1	GWA-36A	WG G	G	8/8/22	1108	H2SO4 HNO3 HCl NaOH Na2S2O3 Methanol Other	Y/N	6.79
2	GWA-36RA	WG G	G	8/18/22	1303			7.11
3	GWA-37	WG G	G	8/18/22	1507			5.16
4	GWA-38	WG G	G					
5	GWA-51RZ	WG G	G					
6	GWA-52	WG G	G					
7	GWA-53	WG G	G	8/18/22	1435			7.66
8	GWA-53R	WG G	G	8/18/22	1225			7.61
9	GWA-54	WG G	G					
10	GWA-55	WG G	G	8/18/22	1540			7.10
11	GWA-55R	WG G	G	8/18/22	1434			7.26
12	GWA-56	WG G	G					

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Will Loaker	8/11/22	0800	Stephen Wilson	8/11/22	0800	
	Stephen Wilson	8/11/22	0902	Ryan Williams, Pace	8/11/22	0902	
	Ryan Williams / Pace	8/11/22	1154	Charles F. Gentry	8/11/22	1154	

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Meredith Duncan, Will Loaker, Robert Mull
 SIGNATURE OF SAMPLER: *Meredith Duncan* DATE Signed: 8/18/22

Received on (Y/N) _____
 Intact Samples (Y/N) _____
 Cooled (Y/N) _____
 Custody (Y/N) _____



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Section A
 Invoice Information:
 Page : 3 Of 3

Required Client Information:	
Company: Georgia Power	Report To: Kristen Jurinko, Cassidy Sutherland
Address: 241 Ralph McGill Blvd. NE Atlanta, GA 30308	Copy To: Laura Midriff, Ben Hodges, Mike Smitley Mollia Cangj
Phone: (470) 217-0008 Fax: Standard	Purchase Order #: Bowen LF Cells 344
Email: krjurnik@southemco.com	Project Name: Bowen LF Cells 344
Requested Due Date: Standard	Project #: Standard
Required Project Information:	
Company Name: Georgia Power	Altention:
Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308	Pace Project Manager: nicole.d'bleo@pacelabs.com
Pace Quote:	Pace Profile #: 10850-4
Regulatory Agency:	State / Location: GA

ITEM #	MATRIX CODE (see valid codes to left)		COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives			Y/N	Analytes Test	TDS	Residual Chlorine (Y/N)
	MATRIX CODE	CODE	DATE	TIME	WG	G					H2SO4	HNO3	HCl				
25	DUP-1	WW	8/11/22	0800	WG	G											
26	DUP-2	WW	8/11/22	0800	WG	G											
27	DUP-3	WW	8/11/22	0800	WG	G											
28	FB-1	WW	8/11/22	0800	WG	G											
29	FB-2	WW	8/11/22	0800	WG	G	32	1						X	X	X	
30	FB-3	WW	8/11/22	0800	WG	G								X	X	X	
31	FB-4	WW	8/11/22	0800	WG	G								X	X	X	
32	FB-5	WW	8/11/22	0800	WG	G								X	X	X	
33	EB-1	WW	8/11/22	0800	WG	G	32	1						X	X	X	
34	EB-2	WW	8/11/22	0800	WG	G								X	X	X	
35	EB-3	WW	8/11/22	0800	WG	G								X	X	X	
36																	

REQUISITIONED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Will Leaker	8/11/22	0800	Stephen Wilson	8/11/22	0800	Received on Ice (Y/N)
Stephen Wilson	8/11/22	0902	Ryan Williams / Pace	8/11/22	0902	Custody (Y/N)
Ryan Williams / Pace	8/11/22	1154	Charles Hanks	8/11/22	1154	Cooler (Y/N)
						Samples Intact (Y/N)

ADDITIONAL COMMENTS

SAMPLER NAME AND SIGNATURE:
 PRINT Name of SAMPLER: Meredith Duncan, Will Leaker, Robert Mull
 SIGNATURE OF SAMPLER: *Meredith Duncan* DATE Signed: 8/18/22



CHAIN-OF-CUSTODY / Analytical Request Document

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Section C
Page: 2 Of 3

Section A

Required Client Information:		Invoice Information:	
Company: Georgia Power	Report To: Kristin Jurinko, Cassidy Sutherland	Company Name: Georgia Power	Attention:
Address: 241 Ralph McGill Blvd. NE	Copy To: Laura Midluff, Ben Hodigos, Mike Smiley	Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308	Regulatory Agency:
Atlanta, GA 30308	Noelia Gangi	Pace Quote:	States / Location:
Email: kjurink@southemco.com	Purchase Order #:	Pace Project Manager: nicole.dolee@pacelabs.com	GA
Phone: (470) 217-0008	Project Name: Bowen LF Cells 3&4	Pace Profile #: 10850-4	
Requested Due Date: Standard	Project #:		

Section B

Required Project Information:	
MATRIX CODE	COLLECTED
Drinking Water	DATE
Water	TIME
Waste Water	
Product	
Sewage	
Oil	
Sludge	
Other	
Other	
Other	
Other	
Other	
Other	
Other	

Section C

ITEM #	MATRIX	CODE	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analytes Test Y/N	ACCEPTED BY / AFFILIATION	DATE	TIME	DATE	TIME	SAMPLE CONDITIONS	Received on	TEMP In C	Is Custody Sealed	Cooler (Y/N)	Samples Infect (Y/N)									
				DATE	TIME																DATE	TIME							
13	GWC-16R	WG G	WG G																										
14	GWC-17R	WG G	WG G																										
15	GWC-18	WG G	WG G																										
16	GWC-18R	WG G	WG G																										
17	GWC-19R	WG G	WG G	8/9/22	1034		32	1																					
18	GWC-20R	WG G	WG G	8/9/22	1134		32	1																					
19	GWC-21R	WG G	WG G																										
20	GWC-22R	WG G	WG G																										
21	GWC-23R	WG G	WG G																										
22	GWC-24R	WG G	WG G	8/9/22	1252		32	1																					
23	GWC-25R	WG G	WG G	8/9/22	1055		32	1																					
24	SPRING	WS G	WS G																										
ADDITIONAL COMMENTS																													
Will Locker																													
Stephen Wilson																													
Ryan Williams / Pace																													
8/11/22 0800 Stephen Wilson																													
8/11/22 0902 Ryan Williams / Pace																													
8/11/22 1154 Charles Hanks																													
8/11/22 0800																													
8/11/22 0902																													
8/11/22 1154																													

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: Will Locker, Meredith Duncan, Robert Muil	DATE Signed: 8/19/22
SIGNATURE of SAMPLER:	



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Section A	Page:	3	Of	3
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Section A

Required Client Information:
 Company: Georgia Power
 Address: 241 Ralph McGill Blvd. NE
 Atlanta, GA 30308
 Email: knjunrkn@southernco.com
 Phone: (470) 217-0008 Fax:
 Requested Due Date: Standard

Section B

Required Project Information:
 Report To: Kristen Junrko, Cassidy Sutherland
 Copy To: Laura Midkiff, Ben Hodges, Mike Smiley
 Noelia Gangi
 Purchase Order #:
 Project Name: Bowen LF Cells 344
 Project #:

Section C

Invoice Information:
 Company Name: Georgia Power
 Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308
 Pace Quote:
 Pace Project Manager: nicole.dobos@pacelabs.com.
 Pace Profile #: 10850-4

Regulatory Agency
State / Location
 GA

#	ITEM	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives											Y/N	Analytes Test	Time /V	Requested Analytes Filtered (Y/N)	Residual Chlorine (Y/N)										
						DATE	TIME			H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Unpreserved	H2SO4	HNO3	HCl						NaOH	Na2S2O3	Methanol	Other	Cl, F, SO4	TDS				
25	DUP-1			WG G	G																														
26	DUP-2			WG G	G	8/9/22	---		3 2																										
27	DUP-3			WG G	G																														
28	FB-1			WQ G	G																														
29	FB-2			WQ G	G																														
30	FB-3			WQ G	G	8/9/22	1500		3 2																										
31	FB-4			WQ G	G																														
32	FB-5			WQ G	G																														
33	EB-1			WQ G	G																														
34	EB-2			WQ G	G																														
35	EB-3			WQ G	G																														
36																																			

RELEASING BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Will Locker	8/11/22	0800	Stephen Wilson	8/11/22	0800
Stephen Wilson	8/11/22	0902	Ryan Williams / Pace	8/11/22	0902
Ryan Williams / Pace	8/11/22	1154	Charles Hawks	8/11/22	1154

ADDITIONAL COMMENTS

RECEIVED BY / AFFILIATION (Y/N)

TEMP IN C

Received on (Y/N)

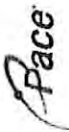
Custody (Y/N)

Sealed (Y/N)

Cooler (Y/N)

Samples Intact (Y/N)

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Will Locker, Meredith Duncan, Robert Mvul
 SIGNATURE of SAMPLER: [Signatures]
 DATE signed: 8/9/22



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Section A	Section B	Section C
Required Client Information: Company: Georgia Power Address: 241 Ralph McGill Blvd, NE Atlanta, GA 30308 Email: kjrunk@southemco.com Phone: (470) 217-0008 Requested Due Date: Standard	Required Project Information: Report To: Kristen Jurinko, Cassidy Sutherland Copy To: Laura McKiff, Ben Hodges, Mike Smiley Noelia Gangi Project Name: Bowen LF Cells 3&4 Project #:	Invoice Information: Company Name: Georgia Power Address: 241 Ralph McGill Blvd, NE, Atlanta, GA 30308 Pace Order #: 10850-4 Pace Project Manager: nicole.d'eloc@pacelabs.com
Regulatory Agency State / Location GA	Page: 2 Of 3	

ITEM #	MATRIX	CODE	MIXTURE	DATE	TIME	COLLECTED		SAMPLE TYPE (G=GRAB C=COMP)	MATRIX CODE (see valid codes to left)	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS		
						DATE	TIME											
13	GWC-16R	WG	G															
14	GWC-17R	WG	G															
15	GWC-18	WG	G	8/10/22	1155							32	1	8/11/22	0800	Stephen Wilson	8/11/22	0800
16	GWC-18R	WG	G	8/10/22	1022							32	1	8/11/22	0902	Ryan Wilson	8/11/22	0902
17	GWC-19R	WG	G															
18	GWC-20R	WG	G															
19	GWC-21R	WG	G	8/10/22	1100							32	1	8/11/22	0800	Stephen Wilson	8/11/22	0800
20	GWC-22R	WG	G	8/10/22	1315							32	1	8/11/22	0902	Ryan Wilson	8/11/22	0902
21	GWC-23R	WG	G															
22	GWC-24R	WG	G															
23	GWC-25R	WG	G															
24	SPRING	WS	G															

Analytes Test Y/N H2SO4 HNO3 HCl NaOH Na2S2O3 Methanol Other	# OF CONTAINERS 32 32 32 32	Residual Chlorine (Y/N)	Received on 8/11/22 8/11/22 8/11/22	Temp in C 6.53 7.59 6.98 7.10
SAMPLER NAME AND SIGNATURE PRINT Name of SAMPLER: Meredith Duncan, Robert Mull SIGNATURE of SAMPLER: <i>Meredith Duncan</i> DATE Signed: 8/10/22				



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Section A
 Section B
 Section C

Page: 3 Of 3

Required Client Information:

Company: Georgia Power
 Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308
 Email: kjujirink@southernco.com
 Phone: (470) 217-0008
 Requested Due Date: Standard

Report To: Kristen Jurinko, Cassidy Sutherland
 Copy To: Laura Mickliff, Ben Hodges, Mike Smalley
 Noelia Gangi
 Bowen LF Cells 384

Invoice Information:
 Attention: Georgia Power
 Company Name: Georgia Power
 Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308
 Pace Quote:
 Pace Project Manager: nicole.d'otelo@pacelabs.com
 Pace Profile #: 10850-4

Regulatory Agency
 State / Location
 GA

Required Project Information:

MATRIX CODE (see valid codes to left)

MATRIX
 Drinking Water
 Water
 Waste Water
 Product
 Soil/Sediment
 Oil
 Wipe
 Air
 Other
 Tissue

CODE
 DW
 WT
 WW
 P
 SL
 OL
 WP
 AR
 OF
 TS

SAMPLE TYPE (G-GRAB C-COMP)

COLLECTED
 DATE
 TIME

SAMPLE TEMP AT COLLECTION

OF CONTAINERS

Preservatives
 H2SO4
 HNO3
 HCl
 NaOH
 Na2S2O3
 Methanol
 Other

Analyses Test
 Y/N
 //IV + Stable Metals
 Cl, F, SO4
 TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

ITEM #	MATRIX CODE	SAMPLE TYPE	COLLECTED DATE	COLLECTED TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analyses Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
25	DUP-1	WG G								
26	DUP-2	WG G								
27	DUP-3	WG G	8/10/22	-		32	1			
28	FB-1	WG G								
29	FB-2	WG G								
30	FB-3	WG G								
31	FB-4	WG G	8/10/22	1400		32	1			
32	FB-5	WG G								
33	EB-1	WG G								
34	EB-2	WG G								
35	EB-3	WG G								
36										

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Will Locker	8/11/22	0800	Stephen Wilson	8/11/22	0800	
	Stephen Wilson	8/11/22	0902	Ryan Williams / Pace	8/11/22	0912	
	Ryan Williams / Pace	8/11/22	1154	Charles Hulse	8/11/22	1154	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Meredith Duncan, Robert Mull

SIGNATURE of SAMPLER: *Meredith Duncan*

DATE Signed: 8/10/22

Received on (Y/N)

Temp in C

Intact Samples (Y/N)

Cooler (Y/N)

Custody (Y/N)

September 19, 2022

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 11, 2022 and August 18, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Noelia Gangi, Georgia Power
Ben Hodges, Georgia Power
Kristen Jurinko
Carole Lieu, Stantec
Laura Midkiff, Georgia Power
Ms. Lauren Petty, Southern Company
Michael Smilley, Georgia Power
Brian Steele, Stantec
Andrew Stevens, Stantec
Cassidy Sutherland, Stantec



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92620047001	GWA-39Z	Water	08/10/22 14:52	08/11/22 09:02
92620047002	GWA-42	Water	08/10/22 15:36	08/11/22 09:02
92620047003	GWA-43R	Water	08/10/22 15:00	08/11/22 09:02
92620047004	FB-1	Water	08/10/22 15:45	08/11/22 09:02
92620047005	GWA-41	Water	08/11/22 15:55	08/15/22 10:41
92620047006	GWA-41R	Water	08/11/22 13:36	08/15/22 10:41
92620047007	GWA-43	Water	08/11/22 16:00	08/15/22 10:41
92620047008	DUP-1	Water	08/11/22 00:00	08/15/22 10:41
92620047009	FB-2	Water	08/11/22 16:30	08/15/22 10:41
92620047010	GWA-40	Water	08/12/22 10:10	08/15/22 10:41
92620047011	GWA-45	Water	08/12/22 11:30	08/15/22 10:41
92620047012	GWA-45R	Water	08/12/22 09:45	08/15/22 10:41
92620047013	FB-3	Water	08/12/22 12:15	08/15/22 10:41
92620047014	GWC-44	Water	08/15/22 10:40	08/18/22 09:35
92620047015	GWC-46R	Water	08/15/22 10:35	08/18/22 09:35
92620047016	GWC-47	Water	08/15/22 13:55	08/18/22 09:35
92620047017	GWC-47R	Water	08/15/22 12:37	08/18/22 09:35
92620047018	GWC-48	Water	08/15/22 16:05	08/18/22 09:35
92620047019	GWC-49R	Water	08/15/22 14:38	08/18/22 09:35
92620047020	GWC-49Z	Water	08/15/22 15:40	08/18/22 09:35
92620047021	DUP-2	Water	08/15/22 00:00	08/18/22 09:35
92620047022	FB-4	Water	08/15/22 16:35	08/18/22 09:35
92620047023	GWA-39RZ	Water	08/16/22 09:54	08/18/22 09:35
92620047024	FB-5	Water	08/16/22 15:30	08/18/22 09:35
92620047025	EB-1	Water	08/16/22 15:33	08/18/22 09:35

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92620047001	GWA-39Z	EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92620047002	GWA-42	EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92620047003	GWA-43R	EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92620047004	FB-1	EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92620047005	GWA-41	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92620047006	GWA-41R	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92620047007	GWA-43	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92620047008	DUP-1	EPA 6010D	KH	2
		EPA 6020B	CW1	15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92620047009	FB-2	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92620047010	GWA-40	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92620047011	GWA-45	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92620047012	GWA-45R	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92620047013	FB-3	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92620047014	GWC-44	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
92620047015	GWC-46R	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92620047016	GWC-47	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92620047017	GWC-47R	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92620047018	GWC-48	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92620047019	GWC-49R	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92620047020	GWC-49Z	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92620047021	DUP-2	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92620047022	FB-4	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92620047023	GWA-39RZ	EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	2

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92620047024	FB-5	EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
92620047025	EB-1	SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	CDC	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92620047001	GWA-39Z					
	Performed by	Customer			08/11/22 15:35	
	pH	6.07	Std. Units		08/11/22 15:35	
EPA 6010D	Calcium	8.7	mg/L	1.0	08/18/22 20:06	
EPA 6020B	Barium	0.010	mg/L	0.0050	08/19/22 21:11	
SM 2540C-2015	Total Dissolved Solids	50.0	mg/L	10.0	08/15/22 11:24	
EPA 300.0 Rev 2.1 1993	Chloride	0.93J	mg/L	1.0	08/20/22 21:50	
EPA 300.0 Rev 2.1 1993	Fluoride	0.075J	mg/L	0.10	08/20/22 21:50	
EPA 300.0 Rev 2.1 1993	Sulfate	1.3	mg/L	1.0	08/20/22 21:50	
92620047002	GWA-42					
	Performed by	Customer			08/11/22 15:35	
	pH	7.26	Std. Units		08/11/22 15:35	
EPA 6010D	Zinc	0.0089J	mg/L	0.020	08/18/22 20:11	
EPA 6010D	Calcium	40.5	mg/L	1.0	08/18/22 20:11	
EPA 6020B	Barium	0.0063	mg/L	0.0050	08/19/22 21:17	
EPA 6020B	Beryllium	0.00016J	mg/L	0.00050	08/19/22 21:17	
EPA 6020B	Cadmium	0.00034J	mg/L	0.00050	08/19/22 21:17	
EPA 6020B	Nickel	0.0016J	mg/L	0.0050	08/19/22 21:17	
SM 2540C-2015	Total Dissolved Solids	134	mg/L	10.0	08/15/22 11:24	
EPA 300.0 Rev 2.1 1993	Chloride	1.8	mg/L	1.0	08/20/22 22:06	
EPA 300.0 Rev 2.1 1993	Fluoride	0.068J	mg/L	0.10	08/20/22 22:06	
EPA 300.0 Rev 2.1 1993	Sulfate	1.0	mg/L	1.0	08/20/22 22:06	
92620047003	GWA-43R					
	Performed by	Customer			08/11/22 15:35	
	pH	7.72	Std. Units		08/11/22 15:35	
EPA 6010D	Calcium	33.1	mg/L	1.0	08/18/22 20:16	
EPA 6020B	Barium	0.0066	mg/L	0.0050	08/19/22 21:23	
EPA 6020B	Boron	0.010J	mg/L	0.040	08/19/22 21:23	
SM 2540C-2015	Total Dissolved Solids	145	mg/L	10.0	08/15/22 11:24	
EPA 300.0 Rev 2.1 1993	Chloride	1.7	mg/L	1.0	08/20/22 22:21	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.10	08/20/22 22:21	
EPA 300.0 Rev 2.1 1993	Sulfate	2.5	mg/L	1.0	08/20/22 22:21	
92620047005	GWA-41					
	Performed by	Customer			08/15/22 14:16	
	pH	6.29	Std. Units		08/15/22 14:16	
EPA 6010D	Calcium	16.2	mg/L	1.0	08/22/22 19:11	
EPA 6020B	Barium	0.022	mg/L	0.0050	08/31/22 21:54	
EPA 6020B	Nickel	0.00083J	mg/L	0.0050	08/31/22 21:54	
SM 2540C-2015	Total Dissolved Solids	73.0	mg/L	10.0	08/16/22 14:09	
EPA 300.0 Rev 2.1 1993	Chloride	1.3	mg/L	1.0	08/22/22 15:34	
EPA 300.0 Rev 2.1 1993	Sulfate	1.9	mg/L	1.0	08/22/22 15:34	
92620047006	GWA-41R					
	Performed by	Customer			08/15/22 14:16	
	pH	7.12	Std. Units		08/15/22 14:16	
EPA 6010D	Calcium	39.7	mg/L	1.0	08/22/22 19:16	
EPA 6020B	Barium	0.019	mg/L	0.0050	08/31/22 22:00	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92620047006	GWA-41R					
SM 2540C-2015	Total Dissolved Solids	170	mg/L	10.0	08/16/22 14:09	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	08/22/22 15:49	
EPA 300.0 Rev 2.1 1993	Sulfate	4.7	mg/L	1.0	08/22/22 15:49	
92620047007	GWA-43					
	Performed by	Customer			08/15/22 14:16	
	pH	5.64	Std. Units		08/15/22 14:16	
EPA 6010D	Calcium	4.8	mg/L	1.0	08/22/22 19:21	
EPA 6020B	Barium	0.016	mg/L	0.0050	08/31/22 22:06	
EPA 6020B	Beryllium	0.000076J	mg/L	0.00050	08/31/22 22:06	
SM 2540C-2015	Total Dissolved Solids	28.0	mg/L	10.0	08/16/22 14:09	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	08/22/22 16:03	
92620047008	DUP-1					
EPA 6010D	Calcium	39.8	mg/L	1.0	08/22/22 19:26	
EPA 6020B	Barium	0.019	mg/L	0.0050	08/31/22 22:12	
SM 2540C-2015	Total Dissolved Solids	165	mg/L	10.0	08/16/22 14:09	
EPA 300.0 Rev 2.1 1993	Chloride	0.92J	mg/L	1.0	08/22/22 00:47	
EPA 300.0 Rev 2.1 1993	Fluoride	0.070J	mg/L	0.10	08/22/22 00:47	
EPA 300.0 Rev 2.1 1993	Sulfate	4.6	mg/L	1.0	08/22/22 00:47	
92620047010	GWA-40					
	Performed by	Customer			08/15/22 14:17	
	pH	6.83	Std. Units		08/15/22 14:17	
EPA 6010D	Calcium	18.5	mg/L	1.0	08/22/22 19:35	
EPA 6020B	Barium	0.0076	mg/L	0.0050	08/31/22 22:24	
SM 2540C-2015	Total Dissolved Solids	91.0	mg/L	10.0	08/16/22 14:09	
EPA 300.0 Rev 2.1 1993	Fluoride	0.068J	mg/L	0.10	08/22/22 01:49	
EPA 300.0 Rev 2.1 1993	Sulfate	1.2	mg/L	1.0	08/22/22 01:49	
92620047011	GWA-45					
	Performed by	Customer			08/15/22 14:17	
	pH	4.70	Std. Units		08/15/22 14:17	
EPA 6010D	Calcium	1.1	mg/L	1.0	08/22/22 19:49	
EPA 6020B	Antimony	0.0072	mg/L	0.0030	08/31/22 22:30	
EPA 6020B	Barium	0.0064	mg/L	0.0050	08/31/22 22:30	
EPA 6020B	Cobalt	0.0011J	mg/L	0.0050	08/31/22 22:30	
EPA 6020B	Nickel	0.00086J	mg/L	0.0050	08/31/22 22:30	
SM 2540C-2015	Total Dissolved Solids	14.0	mg/L	10.0	08/16/22 14:09	
92620047012	GWA-45R					
	Performed by	Customer			08/15/22 14:17	
	pH	7.08	Std. Units		08/15/22 14:17	
EPA 6010D	Calcium	43.3	mg/L	1.0	08/22/22 19:54	
EPA 6020B	Barium	0.022	mg/L	0.0050	08/31/22 22:47	
SM 2540C-2015	Total Dissolved Solids	159	mg/L	10.0	08/16/22 14:11	
EPA 300.0 Rev 2.1 1993	Chloride	3.0	mg/L	1.0	08/22/22 02:20	
EPA 300.0 Rev 2.1 1993	Fluoride	0.063J	mg/L	0.10	08/22/22 02:20	
EPA 300.0 Rev 2.1 1993	Sulfate	3.6	mg/L	1.0	08/22/22 02:20	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92620047014	GWC-44					
	Performed by	Customer			08/25/22 14:13	
	pH	4.30	Std. Units		08/25/22 14:13	
EPA 6010D	Calcium	10.6	mg/L	1.0	08/22/22 21:45	
EPA 6020B	Barium	0.040	mg/L	0.0050	08/31/22 22:59	
EPA 6020B	Beryllium	0.000057J	mg/L	0.00050	08/31/22 22:59	
EPA 6020B	Boron	0.011J	mg/L	0.040	08/31/22 22:59	
EPA 6020B	Cobalt	0.0014J	mg/L	0.0050	08/31/22 22:59	
SM 2540C-2015	Total Dissolved Solids	50.0	mg/L	25.0	08/22/22 13:46	
EPA 300.0 Rev 2.1 1993	Chloride	5.1	mg/L	1.0	08/25/22 06:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.056J	mg/L	0.10	08/25/22 06:45	
EPA 300.0 Rev 2.1 1993	Sulfate	27.6	mg/L	1.0	08/25/22 06:45	
92620047015	GWC-46R					
	Performed by	Customer			08/25/22 14:13	
	pH	7.58	Std. Units		08/25/22 14:13	
EPA 6010D	Calcium	38.7	mg/L	1.0	08/22/22 21:49	
EPA 6020B	Barium	0.0098	mg/L	0.0050	08/31/22 23:05	
EPA 6020B	Chromium	0.0060	mg/L	0.0050	08/31/22 23:05	
SM 2540C-2015	Total Dissolved Solids	187	mg/L	25.0	08/22/22 13:46	
EPA 300.0 Rev 2.1 1993	Chloride	3.0	mg/L	1.0	08/25/22 07:00	
EPA 300.0 Rev 2.1 1993	Fluoride	0.060J	mg/L	0.10	08/25/22 07:00	
EPA 300.0 Rev 2.1 1993	Sulfate	5.6	mg/L	1.0	08/25/22 07:00	
92620047016	GWC-47					
	Performed by	Customer			08/25/22 14:14	
	pH	7.43	Std. Units		08/25/22 14:14	
EPA 6010D	Zinc	0.027	mg/L	0.020	08/22/22 21:54	
EPA 6010D	Calcium	33.7	mg/L	1.0	08/22/22 21:54	
EPA 6020B	Antimony	0.0022J	mg/L	0.0030	08/31/22 23:11	
EPA 6020B	Barium	0.0074	mg/L	0.0050	08/31/22 23:11	
EPA 6020B	Chromium	0.0015J	mg/L	0.0050	08/31/22 23:11	
SM 2540C-2015	Total Dissolved Solids	141	mg/L	25.0	08/22/22 13:46	
EPA 300.0 Rev 2.1 1993	Chloride	2.4	mg/L	1.0	08/25/22 07:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.058J	mg/L	0.10	08/25/22 07:45	
EPA 300.0 Rev 2.1 1993	Sulfate	8.4	mg/L	1.0	08/25/22 07:45	
92620047017	GWC-47R					
	Performed by	Customer			08/25/22 14:14	
	pH	7.35	Std. Units		08/25/22 14:14	
EPA 6010D	Zinc	0.040	mg/L	0.020	08/22/22 21:59	
EPA 6010D	Calcium	22.3	mg/L	1.0	08/22/22 21:59	
EPA 6020B	Barium	0.0077	mg/L	0.0050	08/31/22 23:47	
EPA 6020B	Beryllium	0.000065J	mg/L	0.00050	08/31/22 23:47	
EPA 6020B	Cadmium	0.00016J	mg/L	0.00050	08/31/22 23:47	
EPA 6020B	Chromium	0.0013J	mg/L	0.0050	08/31/22 23:47	
SM 2540C-2015	Total Dissolved Solids	104	mg/L	25.0	08/22/22 13:46	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	08/25/22 08:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.069J	mg/L	0.10	08/25/22 08:49	
EPA 300.0 Rev 2.1 1993	Sulfate	4.3	mg/L	1.0	08/25/22 08:49	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92620047018	GWC-48					
	Performed by	Customer			08/25/22 14:15	
	pH	4.89	Std. Units		08/25/22 14:15	
EPA 6010D	Zinc	0.0094J	mg/L	0.020	08/22/22 22:04	
EPA 6010D	Calcium	5.6	mg/L	1.0	08/22/22 22:04	
EPA 6020B	Barium	0.045	mg/L	0.0050	08/31/22 23:53	
EPA 6020B	Beryllium	0.00037J	mg/L	0.00050	08/31/22 23:53	
EPA 6020B	Cadmium	0.00022J	mg/L	0.00050	08/31/22 23:53	
EPA 6020B	Chromium	0.0019J	mg/L	0.0050	08/31/22 23:53	
EPA 6020B	Cobalt	0.0027J	mg/L	0.0050	08/31/22 23:53	
EPA 6020B	Nickel	0.0056	mg/L	0.0050	08/31/22 23:53	
EPA 7470A	Mercury	0.00038	mg/L	0.00020	08/31/22 15:04	
SM 2540C-2015	Total Dissolved Solids	37.0	mg/L	25.0	08/22/22 13:47	
EPA 300.0 Rev 2.1 1993	Chloride	5.4	mg/L	1.0	08/25/22 09:04	
EPA 300.0 Rev 2.1 1993	Fluoride	0.065J	mg/L	0.10	08/25/22 09:04	
EPA 300.0 Rev 2.1 1993	Sulfate	10.4	mg/L	1.0	08/25/22 09:04	
92620047019	GWC-49R					
	Performed by	Customer			08/25/22 14:15	
	pH	7.81	Std. Units		08/25/22 14:15	
EPA 6010D	Calcium	25.4	mg/L	1.0	08/22/22 22:08	
EPA 6020B	Antimony	0.0012J	mg/L	0.0030	08/31/22 23:59	
EPA 6020B	Barium	0.0098	mg/L	0.0050	08/31/22 23:59	
SM 2540C-2015	Total Dissolved Solids	103	mg/L	25.0	08/22/22 13:47	
EPA 300.0 Rev 2.1 1993	Chloride	1.3	mg/L	1.0	08/25/22 09:19	
EPA 300.0 Rev 2.1 1993	Sulfate	2.5	mg/L	1.0	08/25/22 09:19	
92620047020	GWC-49Z					
	Performed by	Customer			08/25/22 14:15	
	pH	5.06	Std. Units		08/25/22 14:15	
EPA 6010D	Calcium	0.70J	mg/L	1.0	08/22/22 22:13	
EPA 6020B	Barium	0.0041J	mg/L	0.0050	09/01/22 00:05	
EPA 6020B	Cobalt	0.0015J	mg/L	0.0050	09/01/22 00:05	
EPA 6020B	Nickel	0.0022J	mg/L	0.0050	09/01/22 00:05	
EPA 300.0 Rev 2.1 1993	Chloride	1.2	mg/L	1.0	08/25/22 09:34	
EPA 300.0 Rev 2.1 1993	Sulfate	0.98J	mg/L	1.0	08/25/22 09:34	
92620047021	DUP-2					
EPA 6010D	Zinc	0.041	mg/L	0.020	08/22/22 22:18	
EPA 6010D	Calcium	22.1	mg/L	1.0	08/22/22 22:18	
EPA 6020B	Barium	0.0076	mg/L	0.0050	09/01/22 00:11	
EPA 6020B	Chromium	0.0013J	mg/L	0.0050	09/01/22 00:11	
SM 2540C-2015	Total Dissolved Solids	95.0	mg/L	25.0	08/22/22 13:47	
EPA 300.0 Rev 2.1 1993	Chloride	2.2	mg/L	1.0	08/25/22 09:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.065J	mg/L	0.10	08/25/22 09:49	
EPA 300.0 Rev 2.1 1993	Sulfate	4.3	mg/L	1.0	08/25/22 09:49	
92620047023	GWA-39RZ					
	Performed by	Customer			08/25/22 14:16	
	pH	7.45	Std. Units		08/25/22 14:16	

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92620047023	GWA-39RZ					
EPA 6010D	Calcium	32.0	mg/L	1.0	08/23/22 17:09	
EPA 6020B	Antimony	0.0010J	mg/L	0.0030	09/01/22 00:23	
EPA 6020B	Barium	0.013	mg/L	0.0050	09/01/22 00:23	
SM 2540C-2015	Total Dissolved Solids	125	mg/L	25.0	08/23/22 14:29	
EPA 300.0 Rev 2.1 1993	Chloride	1.6	mg/L	1.0	08/25/22 10:19	
EPA 300.0 Rev 2.1 1993	Sulfate	4.5	mg/L	1.0	08/25/22 10:19	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: GWA-39Z	Lab ID: 92620047001	Collected: 08/10/22 14:52	Received: 08/11/22 09:02	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:35		
pH	6.07	Std. Units			1		08/11/22 15:35		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:22	08/18/22 20:06	7440-66-6	
Calcium	8.7	mg/L	1.0	0.12	1	08/18/22 11:22	08/18/22 20:06	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/22 10:35	08/19/22 21:11	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/18/22 10:35	08/19/22 21:11	7440-38-2	
Barium	0.010	mg/L	0.0050	0.00067	1	08/18/22 10:35	08/19/22 21:11	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/22 10:35	08/19/22 21:11	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/18/22 10:35	08/19/22 21:11	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/22 10:35	08/19/22 21:11	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/22 10:35	08/19/22 21:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/22 10:35	08/19/22 21:11	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/18/22 10:35	08/19/22 21:11	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/22 10:35	08/19/22 21:11	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/18/22 10:35	08/19/22 21:11	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/22 10:35	08/19/22 21:11	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/18/22 10:35	08/19/22 21:11	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/22 10:35	08/19/22 21:11	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/18/22 10:35	08/19/22 21:11	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:00	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	50.0	mg/L	10.0	10.0	1		08/15/22 11:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.93J	mg/L	1.0	0.60	1		08/20/22 21:50	16887-00-6	
Fluoride	0.075J	mg/L	0.10	0.050	1		08/20/22 21:50	16984-48-8	
Sulfate	1.3	mg/L	1.0	0.50	1		08/20/22 21:50	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: GWA-42									
Lab ID: 92620047002									
Collected: 08/10/22 15:36 Received: 08/11/22 09:02 Matrix: Water									
Report									
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:35		
pH	7.26	Std. Units			1		08/11/22 15:35		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.0089J	mg/L	0.020	0.0085	1	08/18/22 11:22	08/18/22 20:11	7440-66-6	
Calcium	40.5	mg/L	1.0	0.12	1	08/18/22 11:22	08/18/22 20:11	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/22 10:35	08/19/22 21:17	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/18/22 10:35	08/19/22 21:17	7440-38-2	
Barium	0.0063	mg/L	0.0050	0.00067	1	08/18/22 10:35	08/19/22 21:17	7440-39-3	
Beryllium	0.00016J	mg/L	0.00050	0.000054	1	08/18/22 10:35	08/19/22 21:17	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/18/22 10:35	08/19/22 21:17	7440-42-8	
Cadmium	0.00034J	mg/L	0.00050	0.00011	1	08/18/22 10:35	08/19/22 21:17	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/22 10:35	08/19/22 21:17	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/22 10:35	08/19/22 21:17	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/18/22 10:35	08/19/22 21:17	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/22 10:35	08/19/22 21:17	7439-92-1	
Nickel	0.0016J	mg/L	0.0050	0.00071	1	08/18/22 10:35	08/19/22 21:17	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/22 10:35	08/19/22 21:17	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/18/22 10:35	08/19/22 21:17	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/22 10:35	08/19/22 21:17	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/18/22 10:35	08/19/22 21:17	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:11	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	134	mg/L	10.0	10.0	1		08/15/22 11:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.8	mg/L	1.0	0.60	1		08/20/22 22:06	16887-00-6	
Fluoride	0.068J	mg/L	0.10	0.050	1		08/20/22 22:06	16984-48-8	
Sulfate	1.0	mg/L	1.0	0.50	1		08/20/22 22:06	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: GWA-43R									
Lab ID: 92620047003									
Collected: 08/10/22 15:00 Received: 08/11/22 09:02 Matrix: Water									
Report									
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/11/22 15:35		
pH	7.72	Std. Units			1		08/11/22 15:35		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:22	08/18/22 20:16	7440-66-6	
Calcium	33.1	mg/L	1.0	0.12	1	08/18/22 11:22	08/18/22 20:16	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/22 10:35	08/19/22 21:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/18/22 10:35	08/19/22 21:23	7440-38-2	
Barium	0.0066	mg/L	0.0050	0.00067	1	08/18/22 10:35	08/19/22 21:23	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/22 10:35	08/19/22 21:23	7440-41-7	
Boron	0.010J	mg/L	0.040	0.0086	1	08/18/22 10:35	08/19/22 21:23	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/22 10:35	08/19/22 21:23	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/22 10:35	08/19/22 21:23	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/22 10:35	08/19/22 21:23	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/18/22 10:35	08/19/22 21:23	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/18/22 10:35	08/19/22 21:23	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/18/22 10:35	08/19/22 21:23	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/22 10:35	08/19/22 21:23	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/18/22 10:35	08/19/22 21:23	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/22 10:35	08/19/22 21:23	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/18/22 10:35	08/19/22 21:23	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:14	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	145	mg/L	10.0	10.0	1		08/15/22 11:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.7	mg/L	1.0	0.60	1		08/20/22 22:21	16887-00-6	
Fluoride	0.062J	mg/L	0.10	0.050	1		08/20/22 22:21	16984-48-8	
Sulfate	2.5	mg/L	1.0	0.50	1		08/20/22 22:21	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Sample: FB-1		Lab ID: 92620047004		Collected: 08/10/22 15:45	Received: 08/11/22 09:02	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	08/18/22 11:22	08/18/22 20:20	7440-66-6		
Calcium	ND	mg/L	1.0	0.12	1	08/18/22 11:22	08/18/22 20:20	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/18/22 10:35	08/19/22 21:35	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	08/18/22 10:35	08/19/22 21:35	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	08/18/22 10:35	08/19/22 21:35	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	08/18/22 10:35	08/19/22 21:35	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	08/18/22 10:35	08/19/22 21:35	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/18/22 10:35	08/19/22 21:35	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	08/18/22 10:35	08/19/22 21:35	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	08/18/22 10:35	08/19/22 21:35	7440-48-4		
Copper	ND	mg/L	0.0050	0.0010	1	08/18/22 10:35	08/19/22 21:35	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	08/18/22 10:35	08/19/22 21:35	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	08/18/22 10:35	08/19/22 21:35	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	08/18/22 10:35	08/19/22 21:35	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	08/18/22 10:35	08/19/22 21:35	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	08/18/22 10:35	08/19/22 21:35	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	08/18/22 10:35	08/19/22 21:35	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:16	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/15/22 11:24			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/20/22 22:37	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/20/22 22:37	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/20/22 22:37	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: GWA-41	Lab ID: 92620047005	Collected: 08/11/22 15:55	Received: 08/15/22 10:41	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/15/22 14:16		
pH	6.29	Std. Units			1		08/15/22 14:16		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 19:11	7440-66-6	
Calcium	16.2	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 19:11	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 21:54	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 21:54	7440-38-2	
Barium	0.022	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 21:54	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 21:54	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 21:54	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 21:54	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 21:54	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 21:54	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 21:54	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 21:54	7439-92-1	
Nickel	0.00083J	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 21:54	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 21:54	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 21:54	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 21:54	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 21:54	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:24	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	73.0	mg/L	10.0	10.0	1		08/16/22 14:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.3	mg/L	1.0	0.60	1		08/22/22 15:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/22/22 15:34	16984-48-8	
Sulfate	1.9	mg/L	1.0	0.50	1		08/22/22 15:34	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: GWA-41R **Lab ID: 92620047006** Collected: 08/11/22 13:36 Received: 08/15/22 10:41 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/15/22 14:16		
pH	7.12	Std. Units			1		08/15/22 14:16		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 19:16	7440-66-6	
Calcium	39.7	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 19:16	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 22:00	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 22:00	7440-38-2	
Barium	0.019	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 22:00	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 22:00	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 22:00	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 22:00	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 22:00	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 22:00	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 22:00	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 22:00	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 22:00	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 22:00	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 22:00	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 22:00	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 22:00	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:27	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	170	mg/L	10.0	10.0	1		08/16/22 14:09		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	1.4	mg/L	1.0	0.60	1		08/22/22 15:49	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/22/22 15:49	16984-48-8	
Sulfate	4.7	mg/L	1.0	0.50	1		08/22/22 15:49	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: GWA-43	Lab ID: 92620047007	Collected: 08/11/22 16:00	Received: 08/15/22 10:41	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/15/22 14:16		
pH	5.64	Std. Units			1		08/15/22 14:16		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 19:21	7440-66-6	
Calcium	4.8	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 19:21	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 22:06	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 22:06	7440-38-2	
Barium	0.016	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 22:06	7440-39-3	
Beryllium	0.000076J	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 22:06	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 22:06	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 22:06	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 22:06	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 22:06	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 22:06	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 22:06	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 22:06	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 22:06	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 22:06	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 22:06	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 22:06	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:30	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	28.0	mg/L	10.0	10.0	1		08/16/22 14:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.4	mg/L	1.0	0.60	1		08/22/22 16:03	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/22/22 16:03	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/22/22 16:03	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Sample: DUP-1 **Lab ID: 92620047008** Collected: 08/11/22 00:00 Received: 08/15/22 10:41 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 19:26	7440-66-6	
Calcium	39.8	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 19:26	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 22:12	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 22:12	7440-38-2	
Barium	0.019	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 22:12	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 22:12	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 22:12	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 22:12	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 22:12	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 22:12	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 22:12	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 22:12	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 22:12	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 22:12	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 22:12	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 22:12	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 22:12	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:32	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	165	mg/L	10.0	10.0	1		08/16/22 14:09		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.92J	mg/L	1.0	0.60	1		08/22/22 00:47	16887-00-6	
Fluoride	0.070J	mg/L	0.10	0.050	1		08/22/22 00:47	16984-48-8	
Sulfate	4.6	mg/L	1.0	0.50	1		08/22/22 00:47	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: FB-2		Lab ID: 92620047009		Collected: 08/11/22 16:30	Received: 08/15/22 10:41	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 19:30	7440-66-6		
Calcium	ND	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 19:30	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 22:18	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 22:18	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 22:18	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 22:18	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 22:18	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 22:18	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 22:18	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 22:18	7440-48-4		
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 22:18	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 22:18	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 22:18	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 22:18	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 22:18	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 22:18	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 22:18	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:35	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/16/22 14:09			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/22/22 01:33	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/22/22 01:33	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/22/22 01:33	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: GWA-40 **Lab ID: 92620047010** Collected: 08/12/22 10:10 Received: 08/15/22 10:41 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						08/15/22 14:17		
pH	6.83	Std. Units					08/15/22 14:17		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 19:35	7440-66-6	
Calcium	18.5	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 19:35	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 22:24	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 22:24	7440-38-2	
Barium	0.0076	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 22:24	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 22:24	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 22:24	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 22:24	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 22:24	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 22:24	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 22:24	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 22:24	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 22:24	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 22:24	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 22:24	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 22:24	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 22:24	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:37	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	91.0	mg/L	10.0	10.0	1		08/16/22 14:09		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	ND	mg/L	1.0	0.60	1		08/22/22 01:49	16887-00-6	
Fluoride	0.068J	mg/L	0.10	0.050	1		08/22/22 01:49	16984-48-8	
Sulfate	1.2	mg/L	1.0	0.50	1		08/22/22 01:49	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Sample: GWA-45 **Lab ID: 92620047011** Collected: 08/12/22 11:30 Received: 08/15/22 10:41 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/15/22 14:17		
pH	4.70	Std. Units			1		08/15/22 14:17		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 19:49	7440-66-6	
Calcium	1.1	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 19:49	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	0.0072	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 22:30	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 22:30	7440-38-2	
Barium	0.0064	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 22:30	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 22:30	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 22:30	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 22:30	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 22:30	7440-47-3	
Cobalt	0.0011J	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 22:30	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 22:30	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 22:30	7439-92-1	
Nickel	0.00086J	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 22:30	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 22:30	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 22:30	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 22:30	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 22:30	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:40	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	14.0	mg/L	10.0	10.0	1		08/16/22 14:09		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	ND	mg/L	1.0	0.60	1		08/22/22 02:04	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/22/22 02:04	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/22/22 02:04	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: GWA-45R		Lab ID: 92620047012		Collected: 08/12/22 09:45		Received: 08/15/22 10:41		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/15/22 14:17		
pH	7.08	Std. Units			1		08/15/22 14:17		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 19:54	7440-66-6	
Calcium	43.3	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 19:54	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 22:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 22:47	7440-38-2	
Barium	0.022	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 22:47	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 22:47	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 22:47	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 22:47	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 22:47	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 22:47	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 22:47	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 22:47	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 22:47	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 22:47	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 22:47	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 22:47	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 22:47	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:43	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	159	mg/L	10.0	10.0	1		08/16/22 14:11		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.0	mg/L	1.0	0.60	1		08/22/22 02:20	16887-00-6	
Fluoride	0.063J	mg/L	0.10	0.050	1		08/22/22 02:20	16984-48-8	
Sulfate	3.6	mg/L	1.0	0.50	1		08/22/22 02:20	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Sample: FB-3		Lab ID: 92620047013		Collected: 08/12/22 12:15		Received: 08/15/22 10:41		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:40	08/22/22 19:59	7440-66-6		
Calcium	ND	mg/L	1.0	0.12	1	08/22/22 11:40	08/22/22 19:59	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 22:53	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 22:53	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 22:53	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 22:53	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 22:53	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 22:53	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 22:53	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 22:53	7440-48-4		
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 22:53	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 22:53	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 22:53	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 22:53	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 22:53	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 22:53	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 22:53	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:45	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	10.0	10.0	1		08/16/22 14:11			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/22/22 03:26	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/22/22 03:26	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/22/22 03:26	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Sample: GWC-44 **Lab ID: 92620047014** Collected: 08/15/22 10:40 Received: 08/18/22 09:35 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/25/22 14:13		
pH	4.30	Std. Units			1		08/25/22 14:13		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:26	08/22/22 21:45	7440-66-6	
Calcium	10.6	mg/L	1.0	0.12	1	08/22/22 11:26	08/22/22 21:45	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 22:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 22:59	7440-38-2	
Barium	0.040	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 22:59	7440-39-3	
Beryllium	0.000057J	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 22:59	7440-41-7	
Boron	0.011J	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 22:59	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 22:59	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 22:59	7440-47-3	
Cobalt	0.0014J	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 22:59	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 22:59	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 22:59	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 22:59	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 22:59	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 22:59	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 22:59	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 22:59	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:48	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	50.0	mg/L	25.0	10.0	1		08/22/22 13:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.1	mg/L	1.0	0.60	1		08/25/22 06:45	16887-00-6	
Fluoride	0.056J	mg/L	0.10	0.050	1		08/25/22 06:45	16984-48-8	
Sulfate	27.6	mg/L	1.0	0.50	1		08/25/22 06:45	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: GWC-46R	Lab ID: 92620047015	Collected: 08/15/22 10:35	Received: 08/18/22 09:35	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/25/22 14:13		
pH	7.58	Std. Units			1		08/25/22 14:13		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:26	08/22/22 21:49	7440-66-6	
Calcium	38.7	mg/L	1.0	0.12	1	08/22/22 11:26	08/22/22 21:49	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 23:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 23:05	7440-38-2	
Barium	0.0098	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 23:05	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 23:05	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 23:05	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 23:05	7440-43-9	
Chromium	0.0060	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 23:05	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 23:05	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 23:05	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 23:05	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 23:05	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 23:05	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 23:05	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 23:05	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 23:05	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:56	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	187	mg/L	25.0	10.0	1		08/22/22 13:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.0	mg/L	1.0	0.60	1		08/25/22 07:00	16887-00-6	
Fluoride	0.060J	mg/L	0.10	0.050	1		08/25/22 07:00	16984-48-8	
Sulfate	5.6	mg/L	1.0	0.50	1		08/25/22 07:00	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Sample: GWC-47 **Lab ID: 92620047016** Collected: 08/15/22 13:55 Received: 08/18/22 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/25/22 14:14		
pH	7.43	Std. Units			1		08/25/22 14:14		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	0.027	mg/L	0.020	0.0085	1	08/22/22 11:26	08/22/22 21:54	7440-66-6	
Calcium	33.7	mg/L	1.0	0.12	1	08/22/22 11:26	08/22/22 21:54	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	0.0022J	mg/L	0.0030	0.00078	1	08/31/22 09:26	08/31/22 23:11	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 09:26	08/31/22 23:11	7440-38-2	
Barium	0.0074	mg/L	0.0050	0.00067	1	08/31/22 09:26	08/31/22 23:11	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 09:26	08/31/22 23:11	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 09:26	08/31/22 23:11	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 09:26	08/31/22 23:11	7440-43-9	
Chromium	0.0015J	mg/L	0.0050	0.0011	1	08/31/22 09:26	08/31/22 23:11	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 09:26	08/31/22 23:11	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 09:26	08/31/22 23:11	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 09:26	08/31/22 23:11	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 09:26	08/31/22 23:11	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 09:26	08/31/22 23:11	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 09:26	08/31/22 23:11	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 09:26	08/31/22 23:11	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 09:26	08/31/22 23:11	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 14:59	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	141	mg/L	25.0	10.0	1		08/22/22 13:46		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	2.4	mg/L	1.0	0.60	1		08/25/22 07:45	16887-00-6	
Fluoride	0.058J	mg/L	0.10	0.050	1		08/25/22 07:45	16984-48-8	
Sulfate	8.4	mg/L	1.0	0.50	1		08/25/22 07:45	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: GWC-47R		Lab ID: 92620047017		Collected: 08/15/22 12:37		Received: 08/18/22 09:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/25/22 14:14		
pH	7.35	Std. Units			1		08/25/22 14:14		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.040	mg/L	0.020	0.0085	1	08/22/22 11:26	08/22/22 21:59	7440-66-6	
Calcium	22.3	mg/L	1.0	0.12	1	08/22/22 11:26	08/22/22 21:59	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 13:05	08/31/22 23:47	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 13:05	08/31/22 23:47	7440-38-2	
Barium	0.0077	mg/L	0.0050	0.00067	1	08/31/22 13:05	08/31/22 23:47	7440-39-3	
Beryllium	0.000065J	mg/L	0.00050	0.000054	1	08/31/22 13:05	08/31/22 23:47	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 13:05	08/31/22 23:47	7440-42-8	
Cadmium	0.00016J	mg/L	0.00050	0.00011	1	08/31/22 13:05	08/31/22 23:47	7440-43-9	
Chromium	0.0013J	mg/L	0.0050	0.0011	1	08/31/22 13:05	08/31/22 23:47	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 13:05	08/31/22 23:47	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 13:05	08/31/22 23:47	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 13:05	08/31/22 23:47	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 13:05	08/31/22 23:47	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 13:05	08/31/22 23:47	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 13:05	08/31/22 23:47	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 13:05	08/31/22 23:47	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 13:05	08/31/22 23:47	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:01	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	104	mg/L	25.0	10.0	1		08/22/22 13:46		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.2	mg/L	1.0	0.60	1		08/25/22 08:49	16887-00-6	
Fluoride	0.069J	mg/L	0.10	0.050	1		08/25/22 08:49	16984-48-8	
Sulfate	4.3	mg/L	1.0	0.50	1		08/25/22 08:49	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: GWC-48	Lab ID: 92620047018	Collected: 08/15/22 16:05	Received: 08/18/22 09:35	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/25/22 14:15		
pH	4.89	Std. Units			1		08/25/22 14:15		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.0094J	mg/L	0.020	0.0085	1	08/22/22 11:26	08/22/22 22:04	7440-66-6	
Calcium	5.6	mg/L	1.0	0.12	1	08/22/22 11:26	08/22/22 22:04	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 13:05	08/31/22 23:53	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 13:05	08/31/22 23:53	7440-38-2	
Barium	0.045	mg/L	0.0050	0.00067	1	08/31/22 13:05	08/31/22 23:53	7440-39-3	
Beryllium	0.00037J	mg/L	0.00050	0.000054	1	08/31/22 13:05	08/31/22 23:53	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 13:05	08/31/22 23:53	7440-42-8	
Cadmium	0.00022J	mg/L	0.00050	0.00011	1	08/31/22 13:05	08/31/22 23:53	7440-43-9	
Chromium	0.0019J	mg/L	0.0050	0.0011	1	08/31/22 13:05	08/31/22 23:53	7440-47-3	
Cobalt	0.0027J	mg/L	0.0050	0.00039	1	08/31/22 13:05	08/31/22 23:53	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 13:05	08/31/22 23:53	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 13:05	08/31/22 23:53	7439-92-1	
Nickel	0.0056	mg/L	0.0050	0.00071	1	08/31/22 13:05	08/31/22 23:53	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 13:05	08/31/22 23:53	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 13:05	08/31/22 23:53	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 13:05	08/31/22 23:53	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 13:05	08/31/22 23:53	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	0.00038	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:04	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	37.0	mg/L	25.0	10.0	1		08/22/22 13:47		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	5.4	mg/L	1.0	0.60	1		08/25/22 09:04	16887-00-6	
Fluoride	0.065J	mg/L	0.10	0.050	1		08/25/22 09:04	16984-48-8	
Sulfate	10.4	mg/L	1.0	0.50	1		08/25/22 09:04	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: GWC-49R	Lab ID: 92620047019	Collected: 08/15/22 14:38		Received: 08/18/22 09:35		Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/25/22 14:15		
pH	7.81	Std. Units			1		08/25/22 14:15		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:26	08/22/22 22:08	7440-66-6	
Calcium	25.4	mg/L	1.0	0.12	1	08/22/22 11:26	08/22/22 22:08	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0012J	mg/L	0.0030	0.00078	1	08/31/22 13:05	08/31/22 23:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 13:05	08/31/22 23:59	7440-38-2	
Barium	0.0098	mg/L	0.0050	0.00067	1	08/31/22 13:05	08/31/22 23:59	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 13:05	08/31/22 23:59	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 13:05	08/31/22 23:59	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 13:05	08/31/22 23:59	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 13:05	08/31/22 23:59	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 13:05	08/31/22 23:59	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 13:05	08/31/22 23:59	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 13:05	08/31/22 23:59	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 13:05	08/31/22 23:59	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 13:05	08/31/22 23:59	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 13:05	08/31/22 23:59	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 13:05	08/31/22 23:59	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 13:05	08/31/22 23:59	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:06	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	103	mg/L	25.0	10.0	1		08/22/22 13:47		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.3	mg/L	1.0	0.60	1		08/25/22 09:19	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/25/22 09:19	16984-48-8	
Sulfate	2.5	mg/L	1.0	0.50	1		08/25/22 09:19	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: GWC-49Z	Lab ID: 92620047020	Collected: 08/15/22 15:40	Received: 08/18/22 09:35	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/25/22 14:15		
pH	5.06	Std. Units			1		08/25/22 14:15		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:26	08/22/22 22:13	7440-66-6	
Calcium	0.70J	mg/L	1.0	0.12	1	08/22/22 11:26	08/22/22 22:13	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 13:05	09/01/22 00:05	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 13:05	09/01/22 00:05	7440-38-2	
Barium	0.0041J	mg/L	0.0050	0.00067	1	08/31/22 13:05	09/01/22 00:05	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 13:05	09/01/22 00:05	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 13:05	09/01/22 00:05	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 13:05	09/01/22 00:05	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 13:05	09/01/22 00:05	7440-47-3	
Cobalt	0.0015J	mg/L	0.0050	0.00039	1	08/31/22 13:05	09/01/22 00:05	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 13:05	09/01/22 00:05	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 13:05	09/01/22 00:05	7439-92-1	
Nickel	0.0022J	mg/L	0.0050	0.00071	1	08/31/22 13:05	09/01/22 00:05	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 13:05	09/01/22 00:05	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 13:05	09/01/22 00:05	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 13:05	09/01/22 00:05	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 13:05	09/01/22 00:05	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:09	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		08/22/22 13:47		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.2	mg/L	1.0	0.60	1		08/25/22 09:34	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/25/22 09:34	16984-48-8	
Sulfate	0.98J	mg/L	1.0	0.50	1		08/25/22 09:34	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: DUP-2		Lab ID: 92620047021		Collected: 08/15/22 00:00		Received: 08/18/22 09:35		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	0.041	mg/L	0.020	0.0085	1	08/22/22 11:26	08/22/22 22:18	7440-66-6		
Calcium	22.1	mg/L	1.0	0.12	1	08/22/22 11:26	08/22/22 22:18	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 13:05	09/01/22 00:11	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 13:05	09/01/22 00:11	7440-38-2		
Barium	0.0076	mg/L	0.0050	0.00067	1	08/31/22 13:05	09/01/22 00:11	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 13:05	09/01/22 00:11	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 13:05	09/01/22 00:11	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 13:05	09/01/22 00:11	7440-43-9		
Chromium	0.0013J	mg/L	0.0050	0.0011	1	08/31/22 13:05	09/01/22 00:11	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 13:05	09/01/22 00:11	7440-48-4		
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 13:05	09/01/22 00:11	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 13:05	09/01/22 00:11	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 13:05	09/01/22 00:11	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 13:05	09/01/22 00:11	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 13:05	09/01/22 00:11	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 13:05	09/01/22 00:11	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 13:05	09/01/22 00:11	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 16:15	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	95.0	mg/L	25.0	10.0	1		08/22/22 13:47			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	2.2	mg/L	1.0	0.60	1		08/25/22 09:49	16887-00-6		
Fluoride	0.065J	mg/L	0.10	0.050	1		08/25/22 09:49	16984-48-8		
Sulfate	4.3	mg/L	1.0	0.50	1		08/25/22 09:49	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: FB-4		Lab ID: 92620047022		Collected: 08/15/22 16:35	Received: 08/18/22 09:35	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:26	08/22/22 22:23	7440-66-6		
Calcium	ND	mg/L	1.0	0.12	1	08/22/22 11:26	08/22/22 22:23	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 13:05	09/01/22 00:17	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 13:05	09/01/22 00:17	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	08/31/22 13:05	09/01/22 00:17	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 13:05	09/01/22 00:17	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 13:05	09/01/22 00:17	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 13:05	09/01/22 00:17	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 13:05	09/01/22 00:17	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 13:05	09/01/22 00:17	7440-48-4		
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 13:05	09/01/22 00:17	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 13:05	09/01/22 00:17	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 13:05	09/01/22 00:17	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 13:05	09/01/22 00:17	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 13:05	09/01/22 00:17	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 13:05	09/01/22 00:17	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 13:05	09/01/22 00:17	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 16:18	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		08/22/22 13:47			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/25/22 10:04	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/25/22 10:04	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/25/22 10:04	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: GWA-39RZ									
Lab ID: 92620047023									
Collected: 08/16/22 09:54 Received: 08/18/22 09:35 Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/25/22 14:16		
pH	7.45	Std. Units			1		08/25/22 14:16		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:26	08/23/22 17:09	7440-66-6	
Calcium	32.0	mg/L	1.0	0.12	1	08/22/22 11:26	08/23/22 17:09	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0010J	mg/L	0.0030	0.00078	1	08/31/22 13:05	09/01/22 00:23	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 13:05	09/01/22 00:23	7440-38-2	
Barium	0.013	mg/L	0.0050	0.00067	1	08/31/22 13:05	09/01/22 00:23	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 13:05	09/01/22 00:23	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 13:05	09/01/22 00:23	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 13:05	09/01/22 00:23	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 13:05	09/01/22 00:23	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 13:05	09/01/22 00:23	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 13:05	09/01/22 00:23	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 13:05	09/01/22 00:23	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 13:05	09/01/22 00:23	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 13:05	09/01/22 00:23	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 13:05	09/01/22 00:23	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 13:05	09/01/22 00:23	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 13:05	09/01/22 00:23	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 16:21	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	125	mg/L	25.0	10.0	1		08/23/22 14:29		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.6	mg/L	1.0	0.60	1		08/25/22 10:19	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		08/25/22 10:19	16984-48-8	
Sulfate	4.5	mg/L	1.0	0.50	1		08/25/22 10:19	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: FB-5		Lab ID: 92620047024		Collected: 08/16/22 15:30		Received: 08/18/22 09:35		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:26	08/23/22 17:19	7440-66-6		
Calcium	ND	mg/L	1.0	0.12	1	08/22/22 11:26	08/23/22 17:19	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 13:05	09/01/22 00:29	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 13:05	09/01/22 00:29	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	08/31/22 13:05	09/01/22 00:29	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 13:05	09/01/22 00:29	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 13:05	09/01/22 00:29	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 13:05	09/01/22 00:29	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 13:05	09/01/22 00:29	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 13:05	09/01/22 00:29	7440-48-4		
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 13:05	09/01/22 00:29	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 13:05	09/01/22 00:29	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 13:05	09/01/22 00:29	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 13:05	09/01/22 00:29	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 13:05	09/01/22 00:29	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 13:05	09/01/22 00:29	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 13:05	09/01/22 00:29	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 16:23	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		08/23/22 14:29			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/25/22 10:34	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/25/22 10:34	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/25/22 10:34	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Sample: EB-1		Lab ID: 92620047025		Collected: 08/16/22 15:33		Received: 08/18/22 09:35		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	08/22/22 11:26	08/23/22 17:24	7440-66-6		
Calcium	ND	mg/L	1.0	0.12	1	08/22/22 11:26	08/23/22 17:24	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	08/31/22 13:05	09/01/22 00:47	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	08/31/22 13:05	09/01/22 00:47	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	08/31/22 13:05	09/01/22 00:47	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	08/31/22 13:05	09/01/22 00:47	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	08/31/22 13:05	09/01/22 00:47	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	08/31/22 13:05	09/01/22 00:47	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	08/31/22 13:05	09/01/22 00:47	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	08/31/22 13:05	09/01/22 00:47	7440-48-4		
Copper	ND	mg/L	0.0050	0.0010	1	08/31/22 13:05	09/01/22 00:47	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	08/31/22 13:05	09/01/22 00:47	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	08/31/22 13:05	09/01/22 00:47	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	08/31/22 13:05	09/01/22 00:47	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	08/31/22 13:05	09/01/22 00:47	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	08/31/22 13:05	09/01/22 00:47	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	08/31/22 13:05	09/01/22 00:47	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 16:31	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		08/23/22 14:30			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/25/22 08:03	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/25/22 08:03	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/25/22 08:03	14808-79-8		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

QC Batch: 718057	Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A	Analysis Description: 6010D ATL
	Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92620047001, 92620047002, 92620047003, 92620047004

METHOD BLANK: 3743081 Matrix: Water
Associated Lab Samples: 92620047001, 92620047002, 92620047003, 92620047004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/18/22 19:07	
Zinc	mg/L	ND	0.020	0.0085	08/18/22 19:07	

LABORATORY CONTROL SAMPLE: 3743082

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	110	80-120	
Zinc	mg/L	1	1.1	105	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3743188 3743189

Parameter	Units	92619473001		3743188		3743189		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec				
Calcium	mg/L	2930 ug/L	1	1	4.1	3.9	115	98	75-125	4	20
Zinc	mg/L	114 ug/L	1	1	1.1	1.1	102	100	75-125	2	20

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

QC Batch:	718681	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92620047005, 92620047006, 92620047007, 92620047008, 92620047009, 92620047010, 92620047011, 92620047012, 92620047013

METHOD BLANK: 3746088 Matrix: Water
Associated Lab Samples: 92620047005, 92620047006, 92620047007, 92620047008, 92620047009, 92620047010, 92620047011, 92620047012, 92620047013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/22/22 18:02	
Zinc	mg/L	ND	0.020	0.0085	08/22/22 18:02	

LABORATORY CONTROL SAMPLE: 3746089

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.0	103	80-120	
Zinc	mg/L	1	1.1	108	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746090 3746091

Parameter	Units	92619171029		3746091		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Calcium	mg/L	71.6	1	1	70.9	76.8	-66	517	75-125	8	20	M1	
Zinc	mg/L	0.036	1	1	0.25	0.26	22	22	75-125	3	20	M1	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

QC Batch:	718685	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92620047014, 92620047015, 92620047016, 92620047017, 92620047018, 92620047019, 92620047020, 92620047021, 92620047022, 92620047023, 92620047024, 92620047025

METHOD BLANK: 3746092 Matrix: Water
Associated Lab Samples: 92620047014, 92620047015, 92620047016, 92620047017, 92620047018, 92620047019, 92620047020, 92620047021, 92620047022, 92620047023, 92620047024, 92620047025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/22/22 20:27	
Zinc	mg/L	ND	0.020	0.0085	08/22/22 20:27	

LABORATORY CONTROL SAMPLE: 3746093

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	107	80-120	
Zinc	mg/L	1	1.1	106	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3746094 3746095

Parameter	Units	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92620801001 Result	Spike Conc.	Spike Conc.	Result						
Calcium	mg/L				1.7	1.7			1	20	
Zinc	mg/L				1.1	1.1			1	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

QC Batch: 718049 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92620047001, 92620047002, 92620047003, 92620047004

METHOD BLANK: 3743030 Matrix: Water
Associated Lab Samples: 92620047001, 92620047002, 92620047003, 92620047004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/19/22 17:13	
Arsenic	mg/L	ND	0.0050	0.0022	08/19/22 17:13	
Barium	mg/L	ND	0.0050	0.00067	08/19/22 17:13	
Beryllium	mg/L	ND	0.00050	0.000054	08/19/22 17:13	
Boron	mg/L	ND	0.040	0.0086	08/19/22 17:13	
Cadmium	mg/L	ND	0.00050	0.00011	08/19/22 17:13	
Chromium	mg/L	ND	0.0050	0.0011	08/19/22 17:13	
Cobalt	mg/L	ND	0.0050	0.00039	08/19/22 17:13	
Copper	mg/L	ND	0.0050	0.0010	08/19/22 17:13	
Lead	mg/L	ND	0.0010	0.00089	08/19/22 17:13	
Nickel	mg/L	ND	0.0050	0.00071	08/19/22 17:13	
Selenium	mg/L	ND	0.0050	0.0014	08/19/22 17:13	
Silver	mg/L	ND	0.0050	0.00044	08/19/22 17:13	
Thallium	mg/L	ND	0.0010	0.00018	08/19/22 17:13	
Vanadium	mg/L	ND	0.010	0.0019	08/19/22 17:13	

LABORATORY CONTROL SAMPLE: 3743031

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	108	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.10	101	80-120	
Boron	mg/L	1	1.0	105	80-120	
Cadmium	mg/L	0.1	0.10	102	80-120	
Chromium	mg/L	0.1	0.11	105	80-120	
Cobalt	mg/L	0.1	0.10	103	80-120	
Copper	mg/L	0.1	0.10	103	80-120	
Lead	mg/L	0.1	0.10	101	80-120	
Nickel	mg/L	0.1	0.10	104	80-120	
Selenium	mg/L	0.1	0.098	98	80-120	
Silver	mg/L	0.1	0.11	106	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	
Vanadium	mg/L	0.1	0.11	107	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Parameter	Units	92620282006		3743032		3743033		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Antimony	mg/L	ND	0.1	0.1	0.11	0.10	108	104	75-125	4	20			
Arsenic	mg/L	ND	0.1	0.1	0.11	0.11	107	107	75-125	0	20			
Barium	mg/L	74.9 ug/L	0.1	0.1	0.18	0.18	107	108	75-125	1	20			
Beryllium	mg/L	2.9 ug/L	0.1	0.1	0.095	0.095	92	92	75-125	0	20			
Boron	mg/L	ND	1	1	0.97	0.98	95	96	75-125	1	20			
Cadmium	mg/L	1.2 ug/L	0.1	0.1	0.10	0.11	104	104	75-125	0	20			
Chromium	mg/L	14.1 ug/L	0.1	0.1	0.12	0.12	105	111	75-125	4	20			
Cobalt	mg/L	5.3 ug/L	0.1	0.1	0.11	0.11	103	104	75-125	1	20			
Copper	mg/L	5.4 ug/L	0.1	0.1	0.10	0.10	96	95	75-125	1	20			
Lead	mg/L	19.4 ug/L	0.1	0.1	0.12	0.12	98	100	75-125	2	20			
Nickel	mg/L	6.6 ug/L	0.1	0.1	0.11	0.11	101	103	75-125	2	20			
Selenium	mg/L	ND	0.1	0.1	0.11	0.11	103	103	75-125	0	20			
Silver	mg/L	ND	0.1	0.1	0.089	0.089	89	89	75-125	1	20			
Thallium	mg/L	ND	0.1	0.1	0.097	0.10	97	100	75-125	3	20			
Vanadium	mg/L	12.5 ug/L	0.1	0.1	0.12	0.13	110	117	75-125	5	20			

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

QC Batch: 720481 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92620047005, 92620047006, 92620047007, 92620047008, 92620047009, 92620047010, 92620047011, 92620047012, 92620047013, 92620047014, 92620047015, 92620047016

METHOD BLANK: 3754401 Matrix: Water
Associated Lab Samples: 92620047005, 92620047006, 92620047007, 92620047008, 92620047009, 92620047010, 92620047011, 92620047012, 92620047013, 92620047014, 92620047015, 92620047016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/31/22 20:24	
Arsenic	mg/L	ND	0.0050	0.0022	08/31/22 20:24	
Barium	mg/L	ND	0.0050	0.00067	08/31/22 20:24	
Beryllium	mg/L	ND	0.00050	0.000054	08/31/22 20:24	
Boron	mg/L	ND	0.040	0.0086	08/31/22 20:24	
Cadmium	mg/L	ND	0.00050	0.00011	08/31/22 20:24	
Chromium	mg/L	ND	0.0050	0.0011	08/31/22 20:24	
Cobalt	mg/L	ND	0.0050	0.00039	08/31/22 20:24	
Copper	mg/L	ND	0.0050	0.0010	08/31/22 20:24	
Lead	mg/L	ND	0.0010	0.00089	08/31/22 20:24	
Nickel	mg/L	ND	0.0050	0.00071	08/31/22 20:24	
Selenium	mg/L	ND	0.0050	0.0014	08/31/22 20:24	
Silver	mg/L	ND	0.0050	0.00044	08/31/22 20:24	
Thallium	mg/L	ND	0.0010	0.00018	08/31/22 20:24	
Vanadium	mg/L	ND	0.010	0.0019	08/31/22 20:24	

LABORATORY CONTROL SAMPLE: 3754402

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	107	80-120	
Arsenic	mg/L	0.1	0.097	97	80-120	
Barium	mg/L	0.1	0.10	102	80-120	
Beryllium	mg/L	0.1	0.094	94	80-120	
Boron	mg/L	1	0.94	94	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.094	94	80-120	
Cobalt	mg/L	0.1	0.092	92	80-120	
Copper	mg/L	0.1	0.092	92	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Nickel	mg/L	0.1	0.094	94	80-120	
Selenium	mg/L	0.1	0.10	100	80-120	
Silver	mg/L	0.1	0.10	100	80-120	
Thallium	mg/L	0.1	0.10	101	80-120	
Vanadium	mg/L	0.1	0.096	96	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Parameter	Units	92619832017		3754403		3754404		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec							
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	106	107	75-125	1	20			
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	0	20			
Barium	mg/L	17.8 ug/L	0.1	0.1	0.12	0.12	101	102	75-125	1	20			
Beryllium	mg/L	ND	0.1	0.1	0.091	0.091	91	91	75-125	0	20			
Boron	mg/L	ND	1	1	0.93	0.93	91	92	75-125	0	20			
Cadmium	mg/L	ND	0.1	0.1	0.099	0.10	99	100	75-125	1	20			
Chromium	mg/L	ND	0.1	0.1	0.095	0.095	94	94	75-125	0	20			
Cobalt	mg/L	ND	0.1	0.1	0.091	0.092	90	92	75-125	1	20			
Copper	mg/L	ND	0.1	0.1	0.089	0.091	89	91	75-125	1	20			
Lead	mg/L	ND	0.1	0.1	0.096	0.096	96	96	75-125	1	20			
Nickel	mg/L	ND	0.1	0.1	0.092	0.093	91	92	75-125	1	20			
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20			
Silver	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	1	20			
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	100	101	75-125	1	20			
Vanadium	mg/L	ND	0.1	0.1	0.096	0.098	96	98	75-125	1	20			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

QC Batch: 720636 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92620047017, 92620047018, 92620047019, 92620047020, 92620047021, 92620047022, 92620047023, 92620047024, 92620047025

METHOD BLANK: 3754933 Matrix: Water
Associated Lab Samples: 92620047017, 92620047018, 92620047019, 92620047020, 92620047021, 92620047022, 92620047023, 92620047024, 92620047025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	08/31/22 23:35	
Arsenic	mg/L	ND	0.0050	0.0022	08/31/22 23:35	
Barium	mg/L	ND	0.0050	0.00067	08/31/22 23:35	
Beryllium	mg/L	ND	0.00050	0.000054	08/31/22 23:35	
Boron	mg/L	ND	0.040	0.0086	08/31/22 23:35	
Cadmium	mg/L	ND	0.00050	0.00011	08/31/22 23:35	
Chromium	mg/L	ND	0.0050	0.0011	08/31/22 23:35	
Cobalt	mg/L	ND	0.0050	0.00039	08/31/22 23:35	
Copper	mg/L	ND	0.0050	0.0010	08/31/22 23:35	
Lead	mg/L	ND	0.0010	0.00089	08/31/22 23:35	
Nickel	mg/L	ND	0.0050	0.00071	08/31/22 23:35	
Selenium	mg/L	ND	0.0050	0.0014	08/31/22 23:35	
Silver	mg/L	ND	0.0050	0.00044	08/31/22 23:35	
Thallium	mg/L	ND	0.0010	0.00018	08/31/22 23:35	
Vanadium	mg/L	ND	0.010	0.0019	08/31/22 23:35	

LABORATORY CONTROL SAMPLE: 3754934

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	105	80-120	
Arsenic	mg/L	0.1	0.095	95	80-120	
Barium	mg/L	0.1	0.10	100	80-120	
Beryllium	mg/L	0.1	0.092	92	80-120	
Boron	mg/L	1	0.93	93	80-120	
Cadmium	mg/L	0.1	0.10	100	80-120	
Chromium	mg/L	0.1	0.092	92	80-120	
Cobalt	mg/L	0.1	0.090	90	80-120	
Copper	mg/L	0.1	0.091	91	80-120	
Lead	mg/L	0.1	0.096	96	80-120	
Nickel	mg/L	0.1	0.091	91	80-120	
Selenium	mg/L	0.1	0.094	94	80-120	
Silver	mg/L	0.1	0.097	97	80-120	
Thallium	mg/L	0.1	0.099	99	80-120	
Vanadium	mg/L	0.1	0.094	94	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

Parameter	Units	92620170005		3755022		3755023		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Antimony	mg/L	ND	0.1	0.1	0.11	0.095	112	95	75-125	16	20			
Arsenic	mg/L	ND	0.1	0.1	0.10	0.097	102	97	75-125	5	20			
Barium	mg/L	16.1 ug/L	0.1	0.1	0.12	0.11	106	98	75-125	6	20			
Beryllium	mg/L	ND	0.1	0.1	0.093	0.089	93	89	75-125	4	20			
Boron	mg/L	ND	1	1	0.97	0.92	94	89	75-125	5	20			
Cadmium	mg/L	ND	0.1	0.1	0.10	0.097	103	97	75-125	6	20			
Chromium	mg/L	ND	0.1	0.1	0.097	0.091	97	91	75-125	7	20			
Cobalt	mg/L	ND	0.1	0.1	0.096	0.089	95	88	75-125	8	20			
Copper	mg/L	ND	0.1	0.1	0.094	0.088	93	87	75-125	7	20			
Lead	mg/L	ND	0.1	0.1	0.097	0.091	97	91	75-125	6	20			
Nickel	mg/L	ND	0.1	0.1	0.096	0.090	96	90	75-125	6	20			
Selenium	mg/L	ND	0.1	0.1	0.10	0.096	100	96	75-125	4	20			
Silver	mg/L	ND	0.1	0.1	0.10	0.12	100	116	75-125	15	20			
Thallium	mg/L	ND	0.1	0.1	0.10	0.096	101	96	75-125	4	20			
Vanadium	mg/L	ND	0.1	0.1	0.099	0.095	99	95	75-125	5	20			

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

QC Batch:	720383	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples:	92620047001, 92620047002, 92620047003, 92620047004, 92620047005, 92620047006, 92620047007, 92620047008, 92620047009, 92620047010, 92620047011, 92620047012, 92620047013, 92620047014, 92620047015, 92620047016, 92620047017, 92620047018, 92620047019, 92620047020		

METHOD BLANK:	3753816	Matrix:	Water
Associated Lab Samples:	92620047001, 92620047002, 92620047003, 92620047004, 92620047005, 92620047006, 92620047007, 92620047008, 92620047009, 92620047010, 92620047011, 92620047012, 92620047013, 92620047014, 92620047015, 92620047016, 92620047017, 92620047018, 92620047019, 92620047020		

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	08/31/22 13:55	

LABORATORY CONTROL SAMPLE:	3753817					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0027	107	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE:	3753818			3753819								
Parameter	Units	92620047001 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
Mercury	mg/L	ND	0.0025	0.0025	0.0025	0.0027	100	106	75-125	6	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

QC Batch: 720617

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92620047021, 92620047022, 92620047023, 92620047024, 92620047025

METHOD BLANK: 3754840

Matrix: Water

Associated Lab Samples: 92620047021, 92620047022, 92620047023, 92620047024, 92620047025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	08/31/22 15:12	

LABORATORY CONTROL SAMPLE: 3754841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3754842 3754843

Parameter	Units	3754842		3754843		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0026	0.0026	106	103	75-125	2	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

QC Batch:	717151	Analysis Method:	SM 2540C-2015
QC Batch Method:	SM 2540C-2015	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92620047001, 92620047002, 92620047003, 92620047004

METHOD BLANK: 3738466 Matrix: Water
Associated Lab Samples: 92620047001, 92620047002, 92620047003, 92620047004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/15/22 11:23	

LABORATORY CONTROL SAMPLE: 3738467

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	415	104	80-120	

SAMPLE DUPLICATE: 3738468

Parameter	Units	92620164002 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	226	227	0	25	

SAMPLE DUPLICATE: 3738469

Parameter	Units	92619171028 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

QC Batch: 717424 Analysis Method: SM 2540C-2015
 QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92620047005, 92620047006, 92620047007, 92620047008, 92620047009, 92620047010, 92620047011, 92620047012, 92620047013

METHOD BLANK: 3739844 Matrix: Water
 Associated Lab Samples: 92620047005, 92620047006, 92620047007, 92620047008, 92620047009, 92620047010, 92620047011, 92620047012, 92620047013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	10.0	10.0	08/16/22 14:07	

LABORATORY CONTROL SAMPLE: 3739845

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	380	95	80-120	

SAMPLE DUPLICATE: 3739846

Parameter	Units	92618826016 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	ND	ND		25	

SAMPLE DUPLICATE: 3739847

Parameter	Units	92620047010 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	91.0	89.0	2	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

QC Batch: 718687 Analysis Method: SM 2540C-2015
 QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
 Laboratory: Pace Analytical Services - Peachtree Corners, GA
 Associated Lab Samples: 92620047014, 92620047015, 92620047016, 92620047017, 92620047018, 92620047019, 92620047020, 92620047021, 92620047022

METHOD BLANK: 3746100 Matrix: Water
 Associated Lab Samples: 92620047014, 92620047015, 92620047016, 92620047017, 92620047018, 92620047019, 92620047020, 92620047021, 92620047022

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	08/22/22 13:45	

LABORATORY CONTROL SAMPLE: 3746101

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	374	94	80-120	

SAMPLE DUPLICATE: 3746102

Parameter	Units	92620047014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	50.0	55.0	10	25	

SAMPLE DUPLICATE: 3746115

Parameter	Units	92621399001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	226	225	0	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

QC Batch: 718925 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92620047023, 92620047024, 92620047025

METHOD BLANK: 3747275 Matrix: Water
Associated Lab Samples: 92620047023, 92620047024, 92620047025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	08/23/22 14:29	

LABORATORY CONTROL SAMPLE: 3747276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	366	92	80-120	

SAMPLE DUPLICATE: 3747277

Parameter	Units	92620047023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	125	127	2	25	

SAMPLE DUPLICATE: 3747278

Parameter	Units	92621399021 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	141	141	0	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

QC Batch: 718416 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92620047001, 92620047002, 92620047003, 92620047004

METHOD BLANK: 3744911 Matrix: Water
Associated Lab Samples: 92620047001, 92620047002, 92620047003, 92620047004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/20/22 19:31	
Fluoride	mg/L	ND	0.10	0.050	08/20/22 19:31	
Sulfate	mg/L	ND	1.0	0.50	08/20/22 19:31	

LABORATORY CONTROL SAMPLE: 3744912

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.8	100	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	50.5	101	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744913 3744914

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92621269001 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	5.4	50	50	54.6	55.3	99	100	90-110	1	10		
Fluoride	mg/L	0.12	2.5	2.5	2.7	2.7	104	104	90-110	0	10		
Sulfate	mg/L	5.5	50	50	55.3	56.0	99	101	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3744915 3744916

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92619171011 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	2.2	50	50	51.8	52.3	99	100	90-110	1	10		
Fluoride	mg/L	0.066J	2.5	2.5	2.7	2.7	104	104	90-110	0	10		
Sulfate	mg/L	1.5	50	50	51.2	51.8	100	101	90-110	1	10		

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

QC Batch: 718644 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92620047005, 92620047006, 92620047007

METHOD BLANK: 3745974 Matrix: Water

Associated Lab Samples: 92620047005, 92620047006, 92620047007

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/22/22 08:12	
Fluoride	mg/L	ND	0.10	0.050	08/22/22 08:12	
Sulfate	mg/L	ND	1.0	0.50	08/22/22 08:12	

LABORATORY CONTROL SAMPLE: 3745975

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.2	102	90-110	
Fluoride	mg/L	2.5	2.7	106	90-110	
Sulfate	mg/L	50	49.9	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745976 3745977

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92618822016 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	148	50	50	184	186	71	76	90-110	1	10	M1	
Fluoride	mg/L	0.086J	2.5	2.5	2.6	2.6	100	102	90-110	2	10		
Sulfate	mg/L	423	50	50	444	451	42	57	90-110	2	10	M1	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745978 3745979

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92619003009 Result	Spike Conc.	Spike Conc.	Conc.								
Chloride	mg/L	42.1	50	50	94.5	94.7	105	105	90-110	0	10		
Fluoride	mg/L	0.056J	2.5	2.5	2.5	2.6	99	101	90-110	2	10		
Sulfate	mg/L	2030	50	50	2070	2070	93	81	90-110	0	10	M1	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

QC Batch: 718645 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92620047008, 92620047009, 92620047010, 92620047011, 92620047012, 92620047013

METHOD BLANK: 3745980 Matrix: Water
Associated Lab Samples: 92620047008, 92620047009, 92620047010, 92620047011, 92620047012, 92620047013

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/22/22 00:16	
Fluoride	mg/L	ND	0.10	0.050	08/22/22 00:16	
Sulfate	mg/L	ND	1.0	0.50	08/22/22 00:16	

LABORATORY CONTROL SAMPLE: 3745981

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	48.9	98	90-110	
Fluoride	mg/L	2.5	2.6	104	90-110	
Sulfate	mg/L	50	49.2	98	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745982 3745983

Parameter	Units	92620047008		92620047010		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Chloride	mg/L	0.92J	50	50	51.8	52.0	102	102	90-110	1	10		
Fluoride	mg/L	0.070J	2.5	2.5	2.7	2.7	106	106	90-110	0	10		
Sulfate	mg/L	4.6	50	50	55.3	55.5	101	102	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3745984 3745985

Parameter	Units	92619231004		92619231004		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result								
Chloride	mg/L	1.7	50	50	52.8	52.8	102	102	90-110	0	10		
Fluoride	mg/L	0.14	2.5	2.5	2.9	2.9	111	110	90-110	1	10 M1		
Sulfate	mg/L	2.3	50	50	53.6	53.6	103	103	90-110	0	10		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

QC Batch:	718985	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92620047014, 92620047015, 92620047016, 92620047017, 92620047018, 92620047019, 92620047020, 92620047021, 92620047022, 92620047023, 92620047024

METHOD BLANK: 3747535 Matrix: Water
Associated Lab Samples: 92620047014, 92620047015, 92620047016, 92620047017, 92620047018, 92620047019, 92620047020, 92620047021, 92620047022, 92620047023, 92620047024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/25/22 02:42	
Fluoride	mg/L	ND	0.10	0.050	08/25/22 02:42	
Sulfate	mg/L	ND	1.0	0.50	08/25/22 02:42	

LABORATORY CONTROL SAMPLE: 3747536

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	52.1	104	90-110	
Fluoride	mg/L	2.5	2.7	109	90-110	
Sulfate	mg/L	50	51.1	102	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3747537 3747538

Parameter	Units	92619981007		3747538		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	1.5	50	50	53.3	53.8	104	105	90-110	1	10
Fluoride	mg/L	0.11	2.5	2.5	2.9	2.9	111	112	90-110	1	10 M1
Sulfate	mg/L	1.4	50	50	52.2	52.5	102	102	90-110	1	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3747539 3747540

Parameter	Units	92620047015		3747540		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.						
Chloride	mg/L	3.0	50	50	55.6	55.4	105	105	90-110	0	10
Fluoride	mg/L	0.060J	2.5	2.5	2.7	2.7	105	104	90-110	1	10
Sulfate	mg/L	5.6	50	50	57.0	56.6	103	102	90-110	1	10

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

QC Batch: 719421 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92620047025

METHOD BLANK: 3749772 Matrix: Water
Associated Lab Samples: 92620047025

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/25/22 05:24	
Fluoride	mg/L	ND	0.10	0.050	08/25/22 05:24	
Sulfate	mg/L	ND	1.0	0.50	08/25/22 05:24	

LABORATORY CONTROL SAMPLE: 3749773

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.2	94	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	48.6	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3749774 3749775

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92621844002	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	98.7	50	50	50	139	140	81	82	90-110	0	10	M1
Fluoride	mg/L	0.57	2.5	2.5	2.5	3.1	3.1	101	101	90-110	0	10	
Sulfate	mg/L	51.8	50	50	50	99.0	99.3	94	95	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3749776 3749777

Parameter	Units	MS		MSD		MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		92621399007	Result	Spike Conc.	Spike Conc.								
Chloride	mg/L	ND	50	50	50	48.6	49.1	96	97	90-110	1	10	
Fluoride	mg/L	0.062J	2.5	2.5	2.5	2.6	2.6	101	102	90-110	1	10	
Sulfate	mg/L	0.53J	50	50	50	49.3	50.1	98	99	90-110	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN LF CELLS 9 & 10

Pace Project No.: 92620047

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

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

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92620047001	GWA-39Z				
92620047002	GWA-42				
92620047003	GWA-43R				
92620047005	GWA-41				
92620047006	GWA-41R				
92620047007	GWA-43				
92620047010	GWA-40				
92620047011	GWA-45				
92620047012	GWA-45R				
92620047014	GWC-44				
92620047015	GWC-46R				
92620047016	GWC-47				
92620047017	GWC-47R				
92620047018	GWC-48				
92620047019	GWC-49R				
92620047020	GWC-49Z				
92620047023	GWA-39RZ				
92620047001	GWA-39Z	EPA 3010A	718057	EPA 6010D	718149
92620047002	GWA-42	EPA 3010A	718057	EPA 6010D	718149
92620047003	GWA-43R	EPA 3010A	718057	EPA 6010D	718149
92620047004	FB-1	EPA 3010A	718057	EPA 6010D	718149
92620047005	GWA-41	EPA 3010A	718681	EPA 6010D	718747
92620047006	GWA-41R	EPA 3010A	718681	EPA 6010D	718747
92620047007	GWA-43	EPA 3010A	718681	EPA 6010D	718747
92620047008	DUP-1	EPA 3010A	718681	EPA 6010D	718747
92620047009	FB-2	EPA 3010A	718681	EPA 6010D	718747
92620047010	GWA-40	EPA 3010A	718681	EPA 6010D	718747
92620047011	GWA-45	EPA 3010A	718681	EPA 6010D	718747
92620047012	GWA-45R	EPA 3010A	718681	EPA 6010D	718747
92620047013	FB-3	EPA 3010A	718681	EPA 6010D	718747
92620047014	GWC-44	EPA 3010A	718685	EPA 6010D	718749
92620047015	GWC-46R	EPA 3010A	718685	EPA 6010D	718749
92620047016	GWC-47	EPA 3010A	718685	EPA 6010D	718749
92620047017	GWC-47R	EPA 3010A	718685	EPA 6010D	718749
92620047018	GWC-48	EPA 3010A	718685	EPA 6010D	718749
92620047019	GWC-49R	EPA 3010A	718685	EPA 6010D	718749
92620047020	GWC-49Z	EPA 3010A	718685	EPA 6010D	718749
92620047021	DUP-2	EPA 3010A	718685	EPA 6010D	718749
92620047022	FB-4	EPA 3010A	718685	EPA 6010D	718749
92620047023	GWA-39RZ	EPA 3010A	718685	EPA 6010D	718749
92620047024	FB-5	EPA 3010A	718685	EPA 6010D	718749
92620047025	EB-1	EPA 3010A	718685	EPA 6010D	718749
92620047001	GWA-39Z	EPA 3005A	718049	EPA 6020B	718139
92620047002	GWA-42	EPA 3005A	718049	EPA 6020B	718139
92620047003	GWA-43R	EPA 3005A	718049	EPA 6020B	718139
92620047004	FB-1	EPA 3005A	718049	EPA 6020B	718139

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92620047005	GWA-41	EPA 3005A	720481	EPA 6020B	720671
92620047006	GWA-41R	EPA 3005A	720481	EPA 6020B	720671
92620047007	GWA-43	EPA 3005A	720481	EPA 6020B	720671
92620047008	DUP-1	EPA 3005A	720481	EPA 6020B	720671
92620047009	FB-2	EPA 3005A	720481	EPA 6020B	720671
92620047010	GWA-40	EPA 3005A	720481	EPA 6020B	720671
92620047011	GWA-45	EPA 3005A	720481	EPA 6020B	720671
92620047012	GWA-45R	EPA 3005A	720481	EPA 6020B	720671
92620047013	FB-3	EPA 3005A	720481	EPA 6020B	720671
92620047014	GWC-44	EPA 3005A	720481	EPA 6020B	720671
92620047015	GWC-46R	EPA 3005A	720481	EPA 6020B	720671
92620047016	GWC-47	EPA 3005A	720481	EPA 6020B	720671
92620047017	GWC-47R	EPA 3005A	720636	EPA 6020B	720779
92620047018	GWC-48	EPA 3005A	720636	EPA 6020B	720779
92620047019	GWC-49R	EPA 3005A	720636	EPA 6020B	720779
92620047020	GWC-49Z	EPA 3005A	720636	EPA 6020B	720779
92620047021	DUP-2	EPA 3005A	720636	EPA 6020B	720779
92620047022	FB-4	EPA 3005A	720636	EPA 6020B	720779
92620047023	GWA-39RZ	EPA 3005A	720636	EPA 6020B	720779
92620047024	FB-5	EPA 3005A	720636	EPA 6020B	720779
92620047025	EB-1	EPA 3005A	720636	EPA 6020B	720779
92620047001	GWA-39Z	EPA 7470A	720383	EPA 7470A	720673
92620047002	GWA-42	EPA 7470A	720383	EPA 7470A	720673
92620047003	GWA-43R	EPA 7470A	720383	EPA 7470A	720673
92620047004	FB-1	EPA 7470A	720383	EPA 7470A	720673
92620047005	GWA-41	EPA 7470A	720383	EPA 7470A	720673
92620047006	GWA-41R	EPA 7470A	720383	EPA 7470A	720673
92620047007	GWA-43	EPA 7470A	720383	EPA 7470A	720673
92620047008	DUP-1	EPA 7470A	720383	EPA 7470A	720673
92620047009	FB-2	EPA 7470A	720383	EPA 7470A	720673
92620047010	GWA-40	EPA 7470A	720383	EPA 7470A	720673
92620047011	GWA-45	EPA 7470A	720383	EPA 7470A	720673
92620047012	GWA-45R	EPA 7470A	720383	EPA 7470A	720673
92620047013	FB-3	EPA 7470A	720383	EPA 7470A	720673
92620047014	GWC-44	EPA 7470A	720383	EPA 7470A	720673
92620047015	GWC-46R	EPA 7470A	720383	EPA 7470A	720673
92620047016	GWC-47	EPA 7470A	720383	EPA 7470A	720673
92620047017	GWC-47R	EPA 7470A	720383	EPA 7470A	720673
92620047018	GWC-48	EPA 7470A	720383	EPA 7470A	720673
92620047019	GWC-49R	EPA 7470A	720383	EPA 7470A	720673
92620047020	GWC-49Z	EPA 7470A	720383	EPA 7470A	720673
92620047021	DUP-2	EPA 7470A	720617	EPA 7470A	720674
92620047022	FB-4	EPA 7470A	720617	EPA 7470A	720674
92620047023	GWA-39RZ	EPA 7470A	720617	EPA 7470A	720674
92620047024	FB-5	EPA 7470A	720617	EPA 7470A	720674
92620047025	EB-1	EPA 7470A	720617	EPA 7470A	720674
92620047001	GWA-39Z	SM 2540C-2015	717151		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92620047002	GWA-42	SM 2540C-2015	717151		
92620047003	GWA-43R	SM 2540C-2015	717151		
92620047004	FB-1	SM 2540C-2015	717151		
92620047005	GWA-41	SM 2540C-2015	717424		
92620047006	GWA-41R	SM 2540C-2015	717424		
92620047007	GWA-43	SM 2540C-2015	717424		
92620047008	DUP-1	SM 2540C-2015	717424		
92620047009	FB-2	SM 2540C-2015	717424		
92620047010	GWA-40	SM 2540C-2015	717424		
92620047011	GWA-45	SM 2540C-2015	717424		
92620047012	GWA-45R	SM 2540C-2015	717424		
92620047013	FB-3	SM 2540C-2015	717424		
92620047014	GWC-44	SM 2540C-2015	718687		
92620047015	GWC-46R	SM 2540C-2015	718687		
92620047016	GWC-47	SM 2540C-2015	718687		
92620047017	GWC-47R	SM 2540C-2015	718687		
92620047018	GWC-48	SM 2540C-2015	718687		
92620047019	GWC-49R	SM 2540C-2015	718687		
92620047020	GWC-49Z	SM 2540C-2015	718687		
92620047021	DUP-2	SM 2540C-2015	718687		
92620047022	FB-4	SM 2540C-2015	718687		
92620047023	GWA-39RZ	SM 2540C-2015	718925		
92620047024	FB-5	SM 2540C-2015	718925		
92620047025	EB-1	SM 2540C-2015	718925		
92620047001	GWA-39Z	EPA 300.0 Rev 2.1 1993	718416		
92620047002	GWA-42	EPA 300.0 Rev 2.1 1993	718416		
92620047003	GWA-43R	EPA 300.0 Rev 2.1 1993	718416		
92620047004	FB-1	EPA 300.0 Rev 2.1 1993	718416		
92620047005	GWA-41	EPA 300.0 Rev 2.1 1993	718644		
92620047006	GWA-41R	EPA 300.0 Rev 2.1 1993	718644		
92620047007	GWA-43	EPA 300.0 Rev 2.1 1993	718644		
92620047008	DUP-1	EPA 300.0 Rev 2.1 1993	718645		
92620047009	FB-2	EPA 300.0 Rev 2.1 1993	718645		
92620047010	GWA-40	EPA 300.0 Rev 2.1 1993	718645		
92620047011	GWA-45	EPA 300.0 Rev 2.1 1993	718645		
92620047012	GWA-45R	EPA 300.0 Rev 2.1 1993	718645		
92620047013	FB-3	EPA 300.0 Rev 2.1 1993	718645		
92620047014	GWC-44	EPA 300.0 Rev 2.1 1993	718985		
92620047015	GWC-46R	EPA 300.0 Rev 2.1 1993	718985		
92620047016	GWC-47	EPA 300.0 Rev 2.1 1993	718985		
92620047017	GWC-47R	EPA 300.0 Rev 2.1 1993	718985		
92620047018	GWC-48	EPA 300.0 Rev 2.1 1993	718985		
92620047019	GWC-49R	EPA 300.0 Rev 2.1 1993	718985		
92620047020	GWC-49Z	EPA 300.0 Rev 2.1 1993	718985		
92620047021	DUP-2	EPA 300.0 Rev 2.1 1993	718985		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9 & 10
Pace Project No.: 92620047

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92620047022	FB-4	EPA 300.0 Rev 2.1 1993	718985		
92620047023	GWA-39RZ	EPA 300.0 Rev 2.1 1993	718985		
92620047024	FB-5	EPA 300.0 Rev 2.1 1993	718985		
92620047025	EB-1	EPA 300.0 Rev 2.1 1993	719421		

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DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

GAPower

Project #:

WO#: 92620047



92620047

Date/Initials Person Examining Contents: 05/12/2022

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

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer:

IR Gun ID: 230

Type of Ice: Wet Blue None

Cooler Temp:

3.1

Correction Factor: Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

3.1

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Comments/Discrepancy:

Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	<i>W</i>	
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

pH Strip Lot# 10D4611

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92620047

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project #

PM: NMG

Due Date: 08/25/22

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

CLIENT: GA-GA Power

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1		1	1			1																						
2		1	1			1																						
3		1	1			1																						
4		1	1			1																						
5																												
6																												
7																												
8																												
9																												
10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Page

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/ubts/pes-standard-terms.pdf>.

Section A

Required Client Information:

Company:	Georgia Power	Report To:	Kristen Jurinco Cassidy Suberland
Address:	241 Ralph McGill Blvd. NE	Copy To:	Laura Middleff, Ben Hodges, Mike Smiley
Atlanta, GA 30308		Purchase Order #:	Nobelia Gangi
Email:	kjurinco@southemco.com	Project Name:	Bowen LF Cells 9A10
Phone:	(470) 217-0008	Project #:	
Requested Due Date:	Standard	Attention:	
		Company Name:	Georgia Power
		Address:	241 Ralph McGill Blvd. NE Atlanta, GA 30308
		Page Queue:	
		Pace Project Manager:	nicole.doleo@pacelabs.com
		Pace Profile #:	10850-4
		Regulatory Agency:	GA
		State / Location:	GA

Section B

Required Project Information:

Invoice Information:

Section C

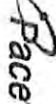
CHAIN-OF-CUSTODY / Analytical Request Document

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

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 /, -) Sample IDs must be unique	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analyses Test			Requesteds Analytals Filtered (Y/N)	Residual Chlorine (Y/N)	Regulatory Agency	State / Location												
										Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	III/IV + State Metals	Cl, F, SO4	TDS																		
										DM	WT	WW	P	SL	CL	WP	AR	OT	TS																			
1	GWA-39RZ	Drinking Water	DM	WG G	G	8/10/22	1452	32	1																													
2	GWA-39Z	Water	WT	WG G	G	8/10/22	1452	32	1																													
3	GWA-40	Water	WT	WG G	G	8/10/22	1536	32	1																													
4	GWA-41	Water	WT	WG G	G	8/10/22	1500	32	1																													
5	GWA-41R	Water	WT	WG G	G	8/10/22	1500	32	1																													
6	GWA-42	Water	WT	WG G	G	8/10/22	1500	32	1																													
7	GWA-43	Water	WT	WG G	G	8/10/22	1500	32	1																													
8	GWA-43R	Water	WT	WG G	G	8/10/22	1500	32	1																													
9	GWC-44	Water	WT	WG G	G	8/10/22	1500	32	1																													
10	GWC-45	Water	WT	WG G	G	8/10/22	1500	32	1																													
11	GWC-45R	Water	WT	WG G	G	8/10/22	1500	32	1																													
12	GWC-46R	Water	WT	WG G	G	8/10/22	1500	32	1																													

REQUISITIONED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Will Laaker	8/11/22	0800	Stephen Wilson	8/11/22	0806	
Stephens Wilson	8/11/22	0902	Ryan Wilson	8/11/22	0902	
Ryan Williams	8/11/22	1154	Emma Lee Parker	8/11/22	1154	

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER:	Robert Moll, William Laaker, Meredith Duncan
SIGNATURE of SAMPLER:	Robert Moll, William Laaker, Meredith Duncan
DATE Signed:	8/10/22



Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>.

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section C Invoice Information:

Page : 2 Of 3

Section A Required Client Information:

Company: Georgia Power
 Address: 241 Ralph McGill Blvd, NE Atlanta, GA 30308
 Email: kryunk@southemco.com
 Phone: (470) 217-0008 Fax
 Requested Due Date: Standard

Section B Required Project Information:

Report To: Kristen Jurinko, Cassidy Sutherland
 Copy To: Laura Mickel, Ben Hodges, Mike Smiley
 Purchase Order #: Noelia Gangi
 Project Name: Bowen LF Cells 9&10
 Project #:

Attention:	Company Name: Georgia Power	Address:	241 Ralph McGill Blvd, NE, Atlanta, GA 30308
Pace Quote:		Pace Project Manager:	nicole.d'oleo@pacelabs.com
Pace Profile #:	10850-4		
Regulatory Agency:		State / Location:	GA

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9 / -)</small> Sample IDs must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	Preservatives							Analyses Test			Residual Chlorine (Y/N)								
											H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	III/IV + State Metals	Cl, F, SO4	TDS									
13	GW-C-47	WG G	G																										
14	GW-C-47R	WG G	G																										
15	GW-C-48	WG G	G																										
16	GW-C-49R	WG G	G																										
17	GW-C-49Z	WG G	G																										
18	DUP-1	WG G	G																										
19	DUP-2	WG G	G																										
20	FB-1	WQ G	G	8/10/22		1545			3	2	1																		
21	FB-2	WQ G	G																										
22	FB-3	WQ G	G																										
23	FB-4	WQ G	G																										
24	FB-5	WQ G	G																										

RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Will Looper	8/11/22	0800	Stephen Wilson	8/11/22	0800
Stephens Wilson	8/11/22	0902	Bryan Wilson	8/11/22	0902
Ryan Williams / Pace	8/11/22	1154	Travis Hawks	8/11/22	1154

TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
-----------	-----------------------	-----------------------------	----------------------

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Robert M. William Looper
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed: 8/10/22



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mech Atlanta Knoxville

Sample Condition Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92620047

PM: NMG

Due Date: 08/25/22

CLIENT: GA-GA Power

Courier: FedEx UPS USPS Client: Commercial Pace Other

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 8/15/22
LCC

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No No

Thermometer:

RR Gun ID:

2/4

Type of Ice:

Wet Blue None

Cooler Temp:

2.9

Correction Factor:

Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Sampling or ice, cooling process has begun

Cooler Temp Corrected (°C):

2.9

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States, CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign country (including Hawaii and Puerto Rico)? Yes No

Comments/Discrepancy:

Chain of Custody Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix:	W	
Headspace in VOA Vials (>5.6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

pH Strip Lot# 1004611

Person contacted

Date/Time

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO#: 92620047

Project #

PM: NMG

Due Date: 08/25/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LHM

**Bottom half of box is to list number of bottles

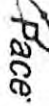
***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (C-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (C-)	BP3M-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (C-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (C-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (C-)	AG3S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(C-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per lab)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (C-)	VSGU-20 mL. Schottlab vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1																												
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11																												
12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



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CHAIN-OF-CUSTODY / Analytical Request Document

Section A Required Client Information: Section B Required Project Information: Section C Invoice Information:

Company: Georgia Power Report To: Kristan Junsko, Casey Sutherland

Address: 241 Ralph McGill Blvd NE Copy To: Laura McCall, Ben Hooper, Mike Smiley

Atlanta, GA 30308 Nuclea (Gingl)

Email: kjunsko@ge.com Purchase Order #: Bowen LE Cells 9&10

Phone: (478) 217-0008 Fax Project Name: Bowen LE Cells 9&10

Requested Date: Standard Project #:

Attention: Company Name: Georgia Power

Address: 241 Ralph McGill Blvd NE, Atlanta, GA 30304 Pace Group:

Pace Project Manager: nicole.dobson@pace.com Pace Profile #: 10430-4

Regulatory Agency: State / Location: GA

Page: 1 Of 3

ITEM #	SAMPLE ID One Character per box (A-Z, 0-9 / . -) Sample IDs must be unique	LMI P/L CODE Drawing W size Material W size Product Screw/Size OH Wipe Date Time Name	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test	Requested Analysis Frequency (Y/N)	Residual Chlorine (Y/N)							
					DATE	TIME			Unreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol				Other						
1	GWA-39RZ		WG G																						
2	GWA-39Z		WG G																						
3	GWA-40		WG G																						
4	GWA-41		WG G	8/11/22	1555		3 Z	1																6.27	
5	GWA-41R		WG G	8/11/22	1336		3 Z	1																7.12	
6	GWA-42		WG G																					5.64	
7	GWA-43		WG G	8/11/22	1600		3 Z	1																	
8	GWA-43R		WG G																						
9	GWC-44		WG G																						
10	GWC-45		WG G																						
11	GWC-45R		WG G																						
12	GWC-45R		WG G																						
ADDITIONAL COMMENTS				RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS													
				Will Locker		8/15/22	0800	Alyce Garner		8/15/22	0800														
				Alyce Garner		8/15/22	1041	Ryan Williams / Pace		8/15/22	1041														
				Ryan Williams / Pace		8/15/22	1145	David Spaulde		8/15/22	1145														

SAMPLER NAME AND SIGNATURE: _____

PRINT Name of SAMPLER: Robert Mull Meridith Duncan Will Locker

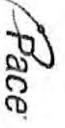
SIGNATURE of SAMPLER: *Robert Mull Meridith Duncan Will Locker* DATE Signed: 8/11/22

TEMP in C _____

Received on Ice (Y/N) _____

Custody Sealed/Cooled (Y/N) _____

Samples Intact (Y/N) _____



CHAIN-OF-CUSTODY / Analytical Request Document

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Section A Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>

Section B

Section C

Section D

Required Client Information:	Company: Georgia Power	Report To: Kristen Lunnick, Cassidy Sunderland	Attention:
Address: 241 Ralph McGill Blvd NE	Atlanta, GA 30308	Copy To: Laura Midkiff, Ben Hoopes, Mike Smiley	Company Name: Georgia Power
Phone: (478) 217-0008	Fax: (478) 217-0008	Purchase Order #: Noelia Gamp	Address: 241 Ralph McGill Blvd NE, Atlanta, GA 30308
Requested Due Date: Standard	Project Name: Bowen LE Cells 5310	Project #:	Pace Project Manager: nicole.d@pacelabs.com
			Pace Profile #: 10950-4
			Requested Analysis Filtered (Y/N)
			State / Location: GA

ITEM #	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test			Residual Chlorine (Y/N)	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)																
					DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N	III/IV + State Metals						Cl, F, SO4	TDS														
1	GWA-39RZ	WG	G	WG	G																																		
2	GWA-39Z	WG	G	WG	G																																		
3	GWA-40	WG	G	WG	G																																		
4	GWA-41	WG	G	WG	G	8/11/22	1555	3.2	1																														
5	GWA-41R	WG	G	WG	G	8/11/22	1336	3.2	1																														
6	GWA-42	WG	G	WG	G																																		
7	GWA-43	WG	G	WG	G	8/11/22	1600	3.2	1																														
8	GWA-43R	WG	G	WG	G																																		
9	GWC-44	WG	G	WG	G																																		
10	GWC-45	WG	G	WG	G																																		
11	GWC-45R	WG	G	WG	G																																		
12	GWC-46R	WG	G	WG	G																																		

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS

SAMPLER NAME AND SIGNATURE		TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)
PRINT Name of SAMPLER:	Signature of SAMPLER:				
Robert Mull, Meredith Duncan, Will Leaker	<i>[Signature]</i>				
	SIGNATURE of SAMPLER:	DATE Signed:			
	<i>[Signature]</i>	8/11/22			

CHAIN-OF-CUSTODY / Analytical Request Document

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Page: 2 of 3

Section A Required Client Information:		Section B Required Project Information:		Section C Invoice Information:	
Company:	Georgia Power	Report To:	Kristen Jumbo, Cassidy Sutherland	Advertiser:	Adamban
Address:	241 Rizzo McCull Blvd, NE Atlanta, GA 30308	Copy To:	Laura Medoff, Ben Hodges, Mike Smiley Nocua Group	Company Name:	Georgia Power
Email:	kyrin.k@gepower.com	Purchase Order #:		Address:	241 Rizzo McCull Blvd, NE, Atlanta, GA 30308
Phone:	(470) 217-0008 Fax	Project Name:	Brown LE Cells 3810	Parcel Quota	
Requested Due Date	Standard	Project #:		Parcel Project Manager:	nicole.cabcoff@pacbas.com
				Parcel Profile #	10850-1
				Requested Analysis Entered (Y/N)	CA

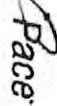
ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / . -) Sample IDs must be unique	MATRIX Drinking Water Wastewater Process Cooling Oil Wine Air Dredge Sludge	CODE DWH WWW P OL WIP AD OT IS	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives										Analyzes Test			Residual Chlorine (Y/N)	
				DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	III/IV + State Metals	Cl, F, SO4	TDS				
13	GWC-47			WG	G												X	X	X			
14	GWC-47R			WG	G												X	X	X			
15	GWC-48			WG	G												X	X	X			
16	GWC-49R			WG	G												X	X	X			
17	GWC-49Z			WG	G												X	X	X			
18	DUP-1			WG	G	8/11/22				3	2	1					X	X	X			
19	DUP-2			WG	G												X	X	X			
20	FB-1			WG	G												X	X	X			
21	FB-2			WG	G	8/11/22	1630			3	2	1					X	X	X			
22	FB-3			WG	G												X	X	X			
23	FB-4			WG	G												X	X	X			
24	FB-5			WG	G												X	X	X			

ADDITIONAL COMMENTS	REINDEXED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Will LaBarr	8/15/22	0800	Atya Garner	8/15/22	0800	
	Atya Garner	8/16/22	1041	Kyan Williams / Pace	8/15/22	1041	
	Kyan Williams / Pace	8/16/22	1105	Erin Finkbeiner / Pace	8/15/22	1145	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER	Signature
Will LaBarr	[Signature]
Robert Mui	[Signature]
Meredith Duncan	[Signature]

DATE signed: 8/11/22



Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hub/5/pas-standard-terms.pdf>.

CHAIN-OF-CUSTODY / Analytical Request Document

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Section A

Required Client Information:

Company	Georgia Power	Report To	Kriston Juntika, Casey Sutherland	Invoicing Information:	Company Name:	Georgia Power
Address:	241 Ralph McGill Blvd NE	Copy To	Laura Makin, Ben Hodges, Mike Sanders	Address:	241 Ralph McGill Blvd NE, Atlanta, GA 30308	
City/State	Atlanta, GA 30308	Purchase Order #	Noelle Ganga	Pace Project Manager:	noelle.d.cook@pacelabs.com	
Email	kejuhrk@pacelabs.com	Project Name	Bowen LF Cells 9310	Pace Profile #	10850-4	
Phone	(470) 217-0008	Requested Date	Standard	Requesting Analysis Filtered (Y/N)	GA	
Requested Date	Standard	Project #				

Section B

Required Project Information:

Company Name:	Georgia Power
Address:	241 Ralph McGill Blvd NE, Atlanta, GA 30308
Pace Project Manager:	noelle.d.cook@pacelabs.com
Pace Profile #:	10850-4

ITEM #	MATRIX	CORE	MATRIX CODE	SAMPLE TYPE	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analyses Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)
25	EB-1	WG		G						X	X	X
26	EB-2	WG		G						X	X	X
27	EB-3	WG	G							X	X	X
28												
29												
30												
31												
32												
33												
34												
35												
36												

ADDITIONAL COMMENTS

		REIMBURSED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS				
			8/15/22	0800	Ateya Garner	8/15/22	0800					
		Will LaBarr	8/15/22	10:41	Lydia Williams	8/15/22	10:41					
		Ateya Garner	8/15/22	11:45	Lydia Williams	8/15/22	11:45					

SAMPLER SIGNATURE AND SIGNATURE

PRINT Name of SAMPLER: Robert Mull

SIGNATURE of SAMPLER: *[Signature]*

DATE Signed: 8/16/22

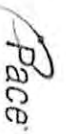
DATE Signed: 8/16/22

TEMP in C

Received or lost (Y/N)

Custody Sealed Cooker (Y/N)

Samples Intact (Y/N)



Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standards-terms.pdf>.

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Company: Georgia Power Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308 Email: kmjank@ga.com Phone: (478) 217-0008 Fax: Standard Requested Date: Standard	Section B Required Project Information: Report To: Kristen Jurnea, Cassidy Sutherland Copy To: Laural Mikulic, Ben Hodges, Mike Smiley Neola Garcia Purchase Order #: Bowen LE Collis 9810 Project Name: Bowen LE Collis 9810 Project #:	Section C Invoice Information: Attention: Company Name: Georgia Power Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308 Pace Quote: Pace Project Manager: nicole.dole@pacelabs.com Pace Profile #: 10850-4	Regulatory Agency State / Location: GA
---	---	---	--

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / . ?) Sample Ids must be unique	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test			Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS				
				DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	III/IV + State Metals	Cl, F, SO4				TDS			
1	GWA-39RZ	WG G	G																					
2	GWA-39Z	WG G	G																					
3	GWA-40	WG G	G	8/12/22	1010		3 2	1																6.83
4	GWA-41	WG G	G																					
5	GWA-41R	WG G	G																					
6	GWA-42	WG G	G																					
7	GWA-43	WG G	G																					
8	GWA-43R	WG G	G																					
9	GWC-44	WG G	G																					
10	GWC-45	WG G	G	8/12/22	1130		3 2	1																4.70
11	GWC-45R	WG G	G	8/12/22	0945		3 2	1																7.08
12	GWC-46R	WG G	G																					

SAMPLER NAME AND SIGNATURE	
PRINT Name of SAMPLER: Meredith Duncan, Robert Mull	DATE Signed: 8/12/22
SIGNATURE of SAMPLER: <i>Meredith Duncan</i>	

REQUINISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Will Leaber	8/15/22	0800	Atoya Garner	8/15/22	0800
Atoya Garner	8/15/22	1044	Ryan Williams	8/15/22	1041
Kegan Williams	8/15/22	1145	Brenda Howard	8/15/22	1145



Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.paceids.com/hubs/pas-standard-terms.pdf>.

CHAIN-OF-CUSTODY / Analytical Request Document

Section A Required Client Information: **Section B** Required Project Information: **Section C** Invoice Information:

Company: Georgia Power	Report To: Kristen Jankko, Cassidy Sutherland	Address: 241 Ralph McGill Blvd. NE Atlanta, GA 30308	Company Name: Georgia Power
Address: 241 Ralph McGill Blvd. NE Atlanta, GA 30308	Copy To: Laura Midelf, Ben Hodges, Mike Striley	Address: 241 Ralph McGill Blvd. NE Atlanta, GA 30308	Company Name: Georgia Power
Email: kjarunk@scottarena.com	Purchase Order #: Neofix Gamp	Page Guide:	Company Name: Georgia Power
Phone: (470) 211-0008	Project Name: Bowen LE Cells 9&10	Page Project Manager: nicole@oleo@paceids.com	Company Name: Georgia Power
Requested Due Date: Standard	Project #:	Page Profile #: 10850-4	Company Name: Georgia Power

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test			Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	State / Location
			DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	III/IV + State Metals	Cl, F, SO4			
13	GWC-47	WG G																	
14	GWC-47R	WG G																	
15	GWC-48	WG G																	
16	GWC-49R	WG G																	
17	GWC-49Z	WG G																	
18	DUP-1	WG G																	
19	DUP-2	WG G																	
20	FB-1	WG G																	
21	FB-2	WG G																	
22	FB-3	WG G	8/12/22	12:15		3	2				1								
23	FB-4	WG G																	
24	FB-5	WG G																	

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Will Leaker	8/15/22	0800	Atiya Garner	8/15/22	0300	
	Atiya Garner	8/15/22	1041	Lyon Williams	8/15/22	1041	
	Lyon Williams	8/15/22	1145	Charles Parker	8/15/22	1145	

SAMPLER NAME AND SIGNATURE: **PRINT Name of SAMPLER:** Meredith Durson, Robert Mull
SIGNATURE OF SAMPLER: *Meredith Durson* **DATE Signed:** 8/12/22

TEMP in C: _____
 Received on Ice (Y/N): _____
 Custody Sealed Cooler (Y/N): _____
 Samples Intact (Y/N): _____



Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standard/terms.pdf>.

CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A: Required Client Information; Section B: Required Project Information; Section C: Invoice Information

Section A	Required Client Information:	Section B	Required Project Information:	Section C	Invoice Information:
Company: Georgia Power	Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308	Report To: Kristen James, Cassidy Sutherland	Copy To: Laura Miller, Ben Hodges, Mike Smiley	Attention: Company Name: Georgia Power	Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308
Phone: (478) 217-0008	Requested Due Date: Standard	Project Name: Bowen LF Cells 9810	Project #: 10850-4	Page Profile #: 10850-4	Page Duplicate
				Pace Project Manager: mcale@paceelabs.com	Pace Profile #: 10850-4
				Requested Analysis Filtered (Y/N)	Regulatory Agency
					State / Location
					GA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / , -) Sample IDs must be unique	MATRIX Drinking Water Waste Water Wastewater Process Water Industrial Other	CODE EW WT WW PW ISL OL WQ WR AR DT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	PRESERVATIVES								Analyses Test	Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	TEMP in C	SAMPLE CONDITIONS														
						DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other						III/IV + State Metals	Cl, F, SO4	TDS	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)									
25	EB-1				WQ	G																															
26	EB-2				WQ	G																															
27	EB-3				WQ	G																															
28																																					
29																																					
30																																					
31																																					
32																																					
33																																					
34																																					
35																																					
36																																					

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	TEMP in C		SAMPLE CONDITIONS	
		Will Locker		8/15/22	0800	Atoya Garner		8/15/22	0800				
		Atoya Garner		8/15/22	1041	Lynn Williams / Pace		8/15/22	1041				
		Lynn Williams / Pace		8/15/22	1145	Charles Yeater		8/15/22	1145				

SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER:		SIGNATURE of SAMPLER:		DATE Signed:	
		Meredith Duncan, Robert Mull				8/12/22	



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mooresville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name: GA Power

Project

WO#: 92620047

PM: NMG Due Date: 08/25/22
CLIENT: GA-GA Power

Courier: Commercial Fed Ex UPS USPS Client Page Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 8/18/22 CSB

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: Gun ID: 214 Type of Ice: Wet Blue None

Cooler Temp: 4.8 Correction Factor: 0.0 Add/Subtract (°C)

Temp should be above freezing to 6°C
 Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 4.8

USDA Regulated Soil (N/A, water sample)
Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A		4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		9.
-Includes Date/Time/ID/Analysis Matrix:	W		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

Field Data Required? Yes No

COMMENTS/SAMPLE DISCREPANCY

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO#: 92620047

PM: NMG

Due Date: 08/25/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass Jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2SO3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
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pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92620047

PM: NMG

Due Date: 08/25/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples. Project #

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

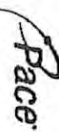
***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
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12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information:

Agency: Georgia Power
 Address: 241 Ralph McGill Blvd. NE
 Atlanta, GA 30308
 Email: krjurn@ge.com
 Phone: (478) 217-0008
 Fax: (478) 217-0008
 Requested Due Date: Standard

Section B
Required Project Information:

Report To: Kristen Jurno, Cassidy Suberland
 Copy To: Laura Maffitt, Ben Hodges, Mike Smiley
 Project Name: Bowen LF Cells 9&10
 Purchase Order #: Noelia Gangi
 Project #: Bowen LF Cells 9&10

Section C
Invoice Information:

Attention: Company Name: Georgia Power
 Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308
 Pace Project Manager: nicole.d'oleo@pace.com
 Pace Profile #: 10850-4

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / / . ') Sample IDs must be unique	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Y/N	Requester Analysis Returned (Y/N)	Residual Chlorine (Y/N)										
						DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol					Other	III/IV + State Metals	Cl, F, SO4	TDS						
1	GWA-399Z	Drinking Water	DW		G																									
2	GWA-39Z	Waste Water	WW		G																									
3	GWA-40	Waste Water	WW		G																									
4	GWA-41	Waste Water	WW		G																									
5	GWA-41R	Waste Water	WW		G																									
6	GWA-42	Waste Water	WW		G																									
7	GWA-43	Waste Water	WW		G																									
8	GWA-43R	Waste Water	WW		G																									
9	GWC-44	Waste Water	WW		G	8/15/22	1040		3	2	1																			
10	GWC-45	Waste Water	WW		G																									
11	GWC-45R	Waste Water	WW		G																									
12	GWC-45R	Waste Water	WW		G	8/15/22	1035		3	2	1																			
ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION		DATE	TIME	ACCEPTED BY / AFFILIATION		DATE	TIME	SAMPLE CONDITIONS		TEMP IN C		Received on Ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples Intact (Y/N)													
		Will Leaker		8/18/22	0800	Atoya Garner / Pace		8/18/22	0800																					
		Atoya Garner		8/18/22	0935	Ryan Williams / Pace		8/18/22	0935																					
		Ryan Williams		8/18/22	1045	Ryan Williams / Pace		8/18/22	1045																					

SAMPLER NAME AND SIGNATURE: Will Leaker, Meredith Duncan, Kevin Stephenson
 PRINT Name of SAMPLER: Will Leaker, Meredith Duncan, Kevin Stephenson
 SIGNATURE of SAMPLER: [Signatures]
 DATE Signed: 8/15/22



Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>.

Section A Required Client Information: Company: Georgia Power, Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308, Phone: (470) 217-0008, Fax: (470) 217-0008, Email: krunnik@southemco.com, Requester Due Date: Standard

Section B Required Project Information: Report To: Kristen Jurnko, Cassidy Sutherland, Copy To: Laura Midliff, Ben Hodges, Mike Smiley, Noelia Ganji, Purchase Order #: Bowen LE Calls 98410, Project Name: Bowen LE Calls 98410, Project #:

Section C Invoice Information: Attention: Company Name: Georgia Power, Address: 241 Ralph McGill Blvd, NE, Atlanta, GA 30308, Pace Quote: Pace Project Manager: nicole.dobos@pacelabs.com, Pace Profile #: 10850-4

Regulatory Agency: State / Location: GA

Requested Analytic Filtered (Y/N)

ITEM #	SAMPLE ID (A-Z, 0-9 / . -) Sample IDs must be unique	MATRIX Drinking Water Water Waste Water Process Water Surface Water Wine Other TS	CODE DW WW PW SW WV OT	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test			Residual Chlorine (Y/N)			
						DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	III/IV + State Metals	Cl, F, SO4		TDS		
13	GWC-47			WG	G	8/15/22	1355		3 2	1												7 43	017
14	GWC-47R			WG	G	8/15/22	1237		3 2	1												7 35	018
15	GWC-48			WG	G	8/15/22	1605		3 2	1												4 89	019
16	GWC-48R			WG	G	8/15/22	1438		3 2	1												7 81	020
17	GWC-49Z			WG	G	8/15/22	1540		3 2	1												5 06	021
18	DUP-1			WG	G	8/15/22			3 2	1													
19	DUP-2			WG	G																		
20	FB-1			WG	G																		
21	FB-2			WG	G																		
22	FB-3			WG	G																		
23	FB-4			WG	G	8/15/22	1635		3 2	1													
24	FB-5			WG	G																		

RELIQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Will Locker	8/18/22	0800	Atoya Garner	8/18/22	0800
Atoya Garner	8/18/22	0935	Ryan Williams	8/18/22	0935
Ryan Williams	8/18/22	1045	Sean Henderson	8/18/22	1045

SAMPLER NAME AND SIGNATURE: Will Locker, Meredith Duncan, Kevin Stephenson

PRINT Name of SAMPLER: Will Locker, Meredith Duncan, Kevin Stephenson

SIGNATURE of SAMPLER: *[Signatures]*

DATE Signed: 8/15/22

TEMP in C

Received on Ice (Y/N)

Custody Sealed (Y/N)

Cooler (Y/N)

Samples Intact (Y/N)



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CHAIN-OF-CUSTODY / Analytical Request Document

Page : 3 Of 3

Client Information:
 Name: Georgia Power
 Address: 241 Ralph McGill Blvd NE
 Atlanta, GA 30308
 Email: kgurim@southemco.com
 Phone: (470) 217-0008
 Fax: [Blank]
 Requested Due Date: Standard

Project Information:
 Report To: Kristen Juritko, Cassidy Sutherland
 Copy To: Laura Melker, Ben Hodges, Mike Sritley
 Purchase Order #: Noelia Gampl
 Project Name: Bowen LF Cells 98110
 Project #: [Blank]

Attention:
 Company Name: Georgia Power
 Address: 241 Ralph McGill Blvd, NE, Atlanta, GA 30308
 Pace Quote: [Blank]
 Pace Project Manager: nicole.d'oleo@pacelabs.com
 Pace Profile #: 10850-4

Regulatory Agency: [Blank]
State / Location: GA

ITEM #	MATRIX CODE (A-Z, 0-9 / -)	MATRIX TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS							Analyses Test	Y/N	Requested Analysts Filtered (Y/N)	Residual Chlorine (Y/N)	TEMP In C	SAMPLE CONDITIONS																								
			DATE	TIME		Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol						Other	III/IV + State Metals	Cl, F, SO4	TDS	Received on ce (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples niact (Y/N)																	
25	EB-1	WG	G																																							
26	EB-2	WG	G																																							
27	EB-3	WG	G																																							
28																																										
29																																										
30																																										
31																																										
32																																										
33																																										
34																																										
35																																										
36																																										

RELEASING BY / AFFILIATION: Will Leaker
DATE: 8/18/22
TIME: 0935
ACCEPTED BY / AFFILIATION: Atoya Garner
DATE: 8/18/22
TIME: 0800
TEMP In C: [Blank]
Received on ce (Y/N): [Blank]
Custody Sealed (Y/N): [Blank]
Cooler (Y/N): [Blank]
Samples niact (Y/N): [Blank]



Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>.

CHAIN-OF-CUSTODY / Analytical Request Document

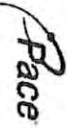
Page: 1 Of 3

Section A		Section B		Section C	
Required Client Information:	Company: Georgia Power Address: 241 Ralph McGill Blvd. NE Atlanta, GA 30308 Phone: (470) 217-0008 Email: kyhrink@southemco.com Requested Due Date: Standard	Report To: Kriston Jurnko, Cassidy Sutherland Copy To: Laura Midlitt, Ben Hodges, Mike Smiley Purchase Order #:	Attention:	Company Name: Georgia Power Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308 Pace Quote: Pace Project Manager: nicola.d'oro@pacelabs.com. Pace Profile #:	Regulatory Agency
Requested Project Information:		Project Name: Bowen LE Cells 9810	Requested Analysis Filtered (Y/N)	State / Location	CA

ITEM #	MATRIX	CODE	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives						Analyses Test			Residual Chlorine (Y/N)	
			DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	III/IV + State Metals		Cl, F, SO4
1	GWA-39RZ	WG G	8/18/22	0935	32	1							X	X	X	7.45	028
2	GWA-39Z	WG G											X	X	X		
3	GWA-40	WG G											X	X	X		
4	GWA-41	WG G											X	X	X		
5	GWA-41R	WG G											X	X	X		
6	GWA-42	WG G											X	X	X		
7	GWA-43	WG G											X	X	X		
8	GWA-43R	WG G											X	X	X		
9	GWC-44	WG G											X	X	X		
10	GWC-45	WG G											X	X	X		
11	GWC-45R	WG G											X	X	X		
12	GWC-46R	WG G											X	X	X		

RELEASING BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Will Loaker	8/18/22	0800	Atoya Garner	8/18/22	0800	
Atrina Garner	8/18/22	0935	Dyan Williams	8/18/22	0935	
Lynell Williams	8/18/22	1045	Lynell Williams	8/18/22	1045	

PRINT NAME of SAMPLER: [Signature]
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed: 8/18/22



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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A Required Client Information: Section B Required Project Information: Section C Invoice Information: Page : 2 Of 3

Company: Georgia Power	Report To: Kristen Jurriko, Cassidy Sutherland	Attention:	Company Name: Georgia Power	Requested Analytic: Filtered (Y/N)
Address: 241 Ralph McGill Blvd, NE Atlanta, GA 30308	Copy To: Laura Midditt, Ben Hodges, Mike Smiley	Address:	241 Ralph McGill Blvd, NE Atlanta, GA 30308	Regulatory Agency
Email: kojuntek@southemco.com	Noella Gangl	Pace Quote:		State / Location
Phone: (470) 217-0008	Purchase Order #: Bowen LF Cells 9810	Pace Project Manager:	nicole.doleo@paceelabs.com	GA
Requested Due Date: Standard	Project #:	Pace Profile #:	10850-4	

ITEM #	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Residual Chlorine (Y/N)		
					DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol			Other	III/IV + State Metals
13	GWC-47	WG G																	
14	GWC-47R	WG G																	
15	GWC-48	WG G																	
16	GWC-49R	WG G																	
17	GWC-49Z	WG G																	
18	DUP-1	WG G																	
19	DUP-2	WG G																	
20	FB-1	WQ G																	
21	FB-2	WQ G																	
22	FB-3	WQ G																	
23	FB-4	WQ G																	
24	FB-5	WQ G																	

REQUISITIONED BY / AFFILIATION: Will Lauber
 ACCEPTED BY / AFFILIATION: Ataya Garner
 DATE: 8/18/22 0800
 DATE: 9/18/22 0800
 TIME: 0800
 TIME: 0800

PRINT Name of SAMPLER: Will Lauber | Signature: [Signature] | Date Signed: 8/18/22
 SIGNATURE OF SAMPLER: [Signature] | DATE SIGNED: 8/18/22

TEMP in C: _____
 Received on Ice (Y/N): _____
 Custody Sealed Cooler (Y/N): _____
 Samples Intact (Y/N): _____



Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pass-standard-terms.pdf>.

CHAIN-OF-CUSTODY / Analytical Request Document

Page : 3 Of 3

Section A Required Client Information: Company: Georgia Power, Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308, Email: krynika@pacelabs.com, Phone: (470) 217-0008, Fax: [blank], Requested Due Date: Standard

Section B Required Project Information: Report To: Kristen Jurinko, Cassidy Sutherland, Copy To: Laura Mikell, Ben Hodges, Mike Snitley, Purchase Order #: Noelia Garpi, Project Name: Bowen LF Cells 9S 10, Project #: [blank]

Section C Invoice Information: Attention: [blank], Company Name: Georgia Power, Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308, Pace Quote: [blank], Pace Project Manager: nicole.d'oneo@pacelabs.com, Pace Profile #: 10850-4

SAMPLE ID
One Character per box.
(A-Z, 0-9 / , -)
Sample IDs must be unique

MATRIX
Dewar Water DW
Drinking Water DW
Waste Water WT
Wastewater WW
Process Water PW
Sewage Sewage
Oil Oil
Wipe Wipe
Air Air
Other Other
Tissue TS

MATRIX CODE (see valid codes to left)
SAMPLE TYPE (G=GRAB C=COMP)

COLLECTED
DATE TIME
SAMPLE TEMP AT COLLECTION

OF CONTAINERS
Unpreserved
H2SO4
HNO3
HCl
NaOH
Na2S2O3
Methanol
Other

Analyses Test Y/N
III/IV + State Metals
Cl, F, SO4
TDS

Requested Analysis Filtered (Y/N)

Residual Chlorine (Y/N)

ITEM #	MATRIX CODE	SAMPLE TYPE	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	III/IV + State Metals	Cl, F, SO4	TDS	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	
25	EB-1	WG G	8/14/22	1533	3	2	1								X	X	X	X			015
26	EB-2	WG G													X	X	X	X			
27	EB-3	WG G													X	X	X	X			
28																					
29																					
30																					
31																					
32																					
33																					
34																					
35																					
36																					

ADDITIONAL COMMENTS

REINVOICED BY / AFFILIATION

DATE

TIME

ACCEPTED BY / AFFILIATION

DATE

TIME

SAMPLE CONDITIONS

Will Locker
Atoya Garner
Lynor Williams Per

8/18/22 0800
9/18/22 0935
9/15/22 1645

Atoya Garner
Lynor Williams
Lynor Williams

8/18/22 0800
8/19/22 0935
8/18/22 1645

TEMP in C
Received on Ice (Y/N)
Custody Sealed Cooler (Y/N)
Samples Intact (Y/N)

PRINT Name of SAMPLER: Will Locker, Signature: Will Locker, DATE signed: 8/18/22
PRINT Name of STANDARD ER: Lynn Williams, Signature: Lynn Williams, DATE signed: 8/18/22

Regulatory Agency: GA

State / Location: GA

September 06, 2022

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory between August 18, 2022 and August 22, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Noelia Gangi, Georgia Power
Ben Hodges, Georgia Power
Kristen Jurinko
Carole Lieu, Stantec
Laura Midkiff, Georgia Power
Ms. Lauren Petty, Southern Company
Michael Smilley, Georgia Power
Brian Steele, Stantec
Andrew Stevens, Stantec
Cassidy Sutherland, Stantec



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92621399001	GWA-4RZ	Water	08/17/22 09:35	08/18/22 09:35
92621399002	GWA-50R	Water	08/17/22 11:27	08/18/22 09:35
92621399003	GWC-6	Water	08/17/22 13:08	08/18/22 09:35
92621399004	GWC-6RZ	Water	08/17/22 11:24	08/18/22 09:35
92621399005	GWC-7Z	Water	08/17/22 10:35	08/18/22 09:35
92621399006	GWC-8Z	Water	08/17/22 13:30	08/18/22 09:35
92621399007	GWC-8RR	Water	08/17/22 12:05	08/18/22 09:35
92621399008	GWC-9	Water	08/17/22 13:05	08/18/22 09:35
92621399009	GWC-10	Water	08/17/22 15:05	08/18/22 09:35
92621399010	FB-2	Water	08/17/22 14:22	08/18/22 09:35
92621399011	GWA-1	Water	08/16/22 10:20	08/18/22 09:35
92621399012	GWA-2	Water	08/16/22 13:55	08/18/22 09:35
92621399013	GWA-2R	Water	08/16/22 11:50	08/18/22 09:35
92621399014	GWA-3A	Water	08/16/22 12:04	08/18/22 09:35
92621399015	GWA-50	Water	08/16/22 14:07	08/18/22 09:35
92621399016	GWC-5	Water	08/16/22 14:44	08/18/22 09:35
92621399017	DUP-1	Water	08/16/22 00:00	08/18/22 09:35
92621399018	FB-1	Water	08/16/22 15:28	08/18/22 09:35
92621399019	GWC-10R	Water	08/18/22 10:10	08/22/22 08:52
92621399020	GWC-11	Water	08/18/22 11:30	08/22/22 08:52
92621399021	GWC-11R	Water	08/18/22 12:35	08/22/22 08:52
92621399022	GWC-12	Water	08/18/22 14:47	08/22/22 08:52
92621399023	GWC-13	Water	08/18/22 13:21	08/22/22 08:52
92621399024	GWC-14Z	Water	08/18/22 13:00	08/22/22 08:52
92621399025	DUP-2	Water	08/18/22 00:00	08/22/22 08:52
92621399026	FB-3	Water	08/18/22 15:30	08/22/22 08:52
92621399027	GWC-13RZ	Water	08/19/22 09:26	08/22/22 08:52
92621399028	GWC-15R	Water	08/19/22 11:05	08/22/22 08:52
92621399029	GWC-15Z	Water	08/19/22 10:52	08/22/22 08:52
92621399030	DUP-3	Water	08/19/22 00:00	08/22/22 08:52
92621399031	FB-4	Water	08/19/22 11:40	08/22/22 08:52

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92621399001	GWA-4RZ	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92621399002	GWA-50R	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92621399003	GWC-6	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92621399004	GWC-6RZ	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92621399005	GWC-7Z	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92621399006	GWC-8Z	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92621399007	GWC-8RR	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92621399008	GWC-9	EPA 6010D	KH	2
		EPA 6020B	CW1	15

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92621399009	GWC-10	EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92621399010	FB-2	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	2
92621399011	GWA-1	EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
92621399012	GWA-2	SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92621399013	GWA-2R	EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
92621399014	GWA-3A	EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92621399015	GWA-50	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92621399016	GWC-5	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92621399017	DUP-1	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	KH	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92621399018	FB-1	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92621399019	GWC-10R	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92621399020	GWC-11	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92621399021	GWC-11R	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92621399022	GWC-12	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92621399023	GWC-13	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92621399024	GWC-14Z	EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
92621399025	DUP-2	SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92621399026	FB-3	EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
92621399027	GWC-13RZ	EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
92621399028	GWC-15R	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
92621399029	GWC-15Z	EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
92621399030	DUP-3	EPA 300.0 Rev 2.1 1993	JCM	3
		EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab ID	Sample ID	Method	Analysts	Analytes Reported
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3
92621399031	FB-4	EPA 6010D	DRB	2
		EPA 6020B	CW1	15
		EPA 7470A	VB	1
		SM 2540C-2015	BTS	1
		EPA 300.0 Rev 2.1 1993	JCM	3

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92621399001	GWA-4RZ					
	Performed by	Customer			09/06/22 16:49	
	pH	6.49	Std. Units		09/06/22 16:49	
EPA 6010D	Calcium	54.7	mg/L	1.0	08/24/22 20:31	
EPA 6020B	Barium	0.034	mg/L	0.0050	09/01/22 21:38	
EPA 6020B	Cobalt	0.015	mg/L	0.0050	09/01/22 21:38	
SM 2540C-2015	Total Dissolved Solids	226	mg/L	25.0	08/22/22 13:47	
EPA 300.0 Rev 2.1 1993	Chloride	2.6	mg/L	1.0	08/25/22 08:18	
EPA 300.0 Rev 2.1 1993	Fluoride	0.11	mg/L	0.10	08/25/22 08:18	
EPA 300.0 Rev 2.1 1993	Sulfate	18.1	mg/L	1.0	08/25/22 08:18	
92621399002	GWA-50R					
	Performed by	Customer			09/06/22 16:49	
	pH	5.70	Std. Units		09/06/22 16:49	
EPA 6010D	Calcium	3.8	mg/L	1.0	08/24/22 20:35	
EPA 6020B	Barium	0.0091	mg/L	0.0050	09/01/22 21:44	
EPA 6020B	Copper	0.0098	mg/L	0.0050	09/01/22 21:44	
EPA 6020B	Nickel	0.0011J	mg/L	0.0050	09/01/22 21:44	
EPA 6020B	Silver	0.0021J	mg/L	0.0050	09/01/22 21:44	
SM 2540C-2015	Total Dissolved Solids	18.0J	mg/L	25.0	08/22/22 13:48	
EPA 300.0 Rev 2.1 1993	Fluoride	0.063J	mg/L	0.10	08/25/22 08:34	
EPA 300.0 Rev 2.1 1993	Sulfate	0.55J	mg/L	1.0	08/25/22 08:34	
92621399003	GWC-6					
	Performed by	Customer			09/06/22 16:50	
	pH	7.30	Std. Units		09/06/22 16:50	
EPA 6010D	Calcium	15.8	mg/L	1.0	08/24/22 20:40	
EPA 6020B	Barium	0.0065	mg/L	0.0050	09/01/22 21:50	
EPA 6020B	Chromium	0.0025J	mg/L	0.0050	09/01/22 21:50	
SM 2540C-2015	Total Dissolved Solids	53.0	mg/L	25.0	08/22/22 13:48	
EPA 300.0 Rev 2.1 1993	Chloride	0.89J	mg/L	1.0	08/25/22 08:49	
EPA 300.0 Rev 2.1 1993	Fluoride	0.064J	mg/L	0.10	08/25/22 08:49	
EPA 300.0 Rev 2.1 1993	Sulfate	1.6	mg/L	1.0	08/25/22 08:49	
92621399004	GWC-6RZ					
	Performed by	Customer			09/06/22 16:50	
	pH	6.64	Std. Units		09/06/22 16:50	
EPA 6010D	Calcium	10	mg/L	1.0	08/24/22 20:45	
EPA 6020B	Barium	0.0068	mg/L	0.0050	09/01/22 21:56	
EPA 6020B	Beryllium	0.000098J	mg/L	0.00050	09/01/22 21:56	
EPA 6020B	Chromium	0.0024J	mg/L	0.0050	09/01/22 21:56	
SM 2540C-2015	Total Dissolved Solids	33.0	mg/L	25.0	08/22/22 13:48	
EPA 300.0 Rev 2.1 1993	Chloride	0.99J	mg/L	1.0	08/25/22 09:05	
EPA 300.0 Rev 2.1 1993	Fluoride	0.070J	mg/L	0.10	08/25/22 09:05	
EPA 300.0 Rev 2.1 1993	Sulfate	1.2	mg/L	1.0	08/25/22 09:05	
92621399005	GWC-7Z					
	Performed by	Customer			09/06/22 16:51	
	pH	7.34	Std. Units		09/06/22 16:51	
EPA 6010D	Calcium	27.2	mg/L	1.0	08/24/22 20:50	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92621399005		GWC-7Z				
EPA 6020B	Antimony	0.0011J	mg/L	0.0030	09/02/22 19:59	
EPA 6020B	Barium	0.014	mg/L	0.0050	09/02/22 19:59	
EPA 6020B	Boron	0.011J	mg/L	0.040	09/02/22 19:59	
EPA 6020B	Thallium	0.00024J	mg/L	0.0010	09/02/22 19:59	
SM 2540C-2015	Total Dissolved Solids	83.0	mg/L	25.0	08/22/22 13:48	
EPA 300.0 Rev 2.1 1993	Fluoride	0.073J	mg/L	0.10	08/25/22 09:20	
EPA 300.0 Rev 2.1 1993	Sulfate	0.91J	mg/L	1.0	08/25/22 09:20	
92621399006		GWC-8Z				
	Performed by	Customer			09/06/22 16:51	
	pH	6.36	Std. Units		09/06/22 16:51	
EPA 6010D	Calcium	10.4	mg/L	1.0	08/24/22 20:54	
EPA 6020B	Antimony	0.0010J	mg/L	0.0030	09/02/22 20:22	
EPA 6020B	Barium	0.017	mg/L	0.0050	09/02/22 20:22	
EPA 6020B	Beryllium	0.00010J	mg/L	0.00050	09/02/22 20:22	
EPA 6020B	Boron	0.012J	mg/L	0.040	09/02/22 20:22	
EPA 6020B	Chromium	0.0014J	mg/L	0.0050	09/02/22 20:22	
SM 2540C-2015	Total Dissolved Solids	41.0	mg/L	25.0	08/22/22 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	1.3	mg/L	1.0	08/25/22 09:36	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.10	08/25/22 09:36	
EPA 300.0 Rev 2.1 1993	Sulfate	0.58J	mg/L	1.0	08/25/22 09:36	
92621399007		GWC-8RR				
	Performed by	Customer			09/06/22 16:51	
	pH	7.87	Std. Units		09/06/22 16:51	
EPA 6010D	Calcium	24.0	mg/L	1.0	08/24/22 20:59	
EPA 6020B	Barium	0.013	mg/L	0.0050	09/02/22 20:28	
EPA 6020B	Chromium	0.0011J	mg/L	0.0050	09/02/22 20:28	
SM 2540C-2015	Total Dissolved Solids	89.0	mg/L	25.0	08/22/22 13:50	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.10	08/25/22 09:51	
EPA 300.0 Rev 2.1 1993	Sulfate	0.53J	mg/L	1.0	08/25/22 09:51	
92621399008		GWC-9				
	Performed by	Customer			09/06/22 16:51	
	pH	4.57	Std. Units		09/06/22 16:51	
EPA 6010D	Calcium	2.5	mg/L	1.0	08/24/22 21:13	
EPA 6020B	Barium	0.047	mg/L	0.0050	09/02/22 20:34	
EPA 6020B	Beryllium	0.00017J	mg/L	0.00050	09/02/22 20:34	
EPA 6020B	Cobalt	0.00043J	mg/L	0.0050	09/02/22 20:34	
EPA 6020B	Nickel	0.0011J	mg/L	0.0050	09/02/22 20:34	
SM 2540C-2015	Total Dissolved Solids	25.0	mg/L	25.0	08/22/22 13:50	
EPA 300.0 Rev 2.1 1993	Chloride	1.9	mg/L	1.0	08/25/22 11:29	
EPA 300.0 Rev 2.1 1993	Fluoride	0.067J	mg/L	0.10	08/25/22 11:29	
EPA 300.0 Rev 2.1 1993	Sulfate	2.5	mg/L	1.0	08/25/22 11:29	
92621399009		GWC-10				
	Performed by	Customer			09/06/22 16:52	
	pH	7.01	Std. Units		09/06/22 16:52	
EPA 6010D	Calcium	36.7	mg/L	1.0	08/24/22 21:18	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92621399009	GWC-10					
EPA 6020B	Barium	0.016	mg/L	0.0050	09/02/22 20:40	
EPA 6020B	Beryllium	0.000070J	mg/L	0.00050	09/02/22 20:40	
EPA 6020B	Cadmium	0.00018J	mg/L	0.00050	09/02/22 20:40	
EPA 6020B	Chromium	0.0013J	mg/L	0.0050	09/02/22 20:40	
EPA 6020B	Cobalt	0.00051J	mg/L	0.0050	09/02/22 20:40	
SM 2540C-2015	Total Dissolved Solids	128	mg/L	25.0	08/22/22 13:26	
EPA 300.0 Rev 2.1 1993	Chloride	1.6	mg/L	1.0	08/25/22 11:45	
EPA 300.0 Rev 2.1 1993	Fluoride	0.094J	mg/L	0.10	08/25/22 11:45	
EPA 300.0 Rev 2.1 1993	Sulfate	1.1	mg/L	1.0	08/25/22 11:45	
92621399011	GWA-1					
	Performed by	Customer			09/06/22 16:52	
	pH	7.36	Std. Units		09/06/22 16:52	
EPA 6010D	Calcium	34.0	mg/L	1.0	08/24/22 21:28	
EPA 6020B	Antimony	0.0084	mg/L	0.0030	09/02/22 21:04	
EPA 6020B	Barium	0.017	mg/L	0.0050	09/02/22 21:04	
SM 2540C-2015	Total Dissolved Solids	159	mg/L	25.0	08/22/22 13:24	
EPA 300.0 Rev 2.1 1993	Chloride	0.99J	mg/L	1.0	08/25/22 12:16	
EPA 300.0 Rev 2.1 1993	Fluoride	0.089J	mg/L	0.10	08/25/22 12:16	
EPA 300.0 Rev 2.1 1993	Sulfate	0.78J	mg/L	1.0	08/25/22 12:16	
92621399012	GWA-2					
	Performed by	Customer			09/06/22 16:52	
	pH	6.63	Std. Units		09/06/22 16:52	
EPA 6010D	Calcium	39.5	mg/L	1.0	08/24/22 21:32	
EPA 6020B	Barium	0.021	mg/L	0.0050	09/02/22 21:10	
SM 2540C-2015	Total Dissolved Solids	182	mg/L	25.0	08/22/22 13:24	
EPA 300.0 Rev 2.1 1993	Chloride	1.1	mg/L	1.0	08/25/22 12:31	
EPA 300.0 Rev 2.1 1993	Fluoride	0.086J	mg/L	0.10	08/25/22 12:31	
EPA 300.0 Rev 2.1 1993	Sulfate	58.5	mg/L	1.0	08/25/22 12:31	
92621399013	GWA-2R					
	Performed by	Customer			09/06/22 16:52	
	pH	7.11	Std. Units		09/06/22 16:52	
EPA 6010D	Calcium	37.9	mg/L	1.0	08/24/22 21:37	
EPA 6020B	Antimony	0.0020J	mg/L	0.0030	09/02/22 21:16	
EPA 6020B	Arsenic	0.0033J	mg/L	0.0050	09/02/22 21:16	
EPA 6020B	Barium	0.027	mg/L	0.0050	09/02/22 21:16	
EPA 6020B	Cobalt	0.00040J	mg/L	0.0050	09/02/22 21:16	
SM 2540C-2015	Total Dissolved Solids	123	mg/L	25.0	08/22/22 13:24	
EPA 300.0 Rev 2.1 1993	Chloride	0.82J	mg/L	1.0	08/25/22 12:46	
EPA 300.0 Rev 2.1 1993	Fluoride	0.090J	mg/L	0.10	08/25/22 12:46	
EPA 300.0 Rev 2.1 1993	Sulfate	7.8	mg/L	1.0	08/25/22 12:46	
92621399014	GWA-3A					
	Performed by	Customer			09/06/22 16:53	
	pH	7.74	Std. Units		09/06/22 16:53	
EPA 6010D	Calcium	22.2	mg/L	1.0	08/24/22 21:42	
EPA 6020B	Barium	0.0067	mg/L	0.0050	09/02/22 21:22	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92621399014	GWA-3A					
SM 2540C-2015	Total Dissolved Solids	85.0	mg/L	25.0	08/22/22 13:24	
EPA 300.0 Rev 2.1 1993	Chloride	2.5	mg/L	1.0	08/25/22 13:02	
EPA 300.0 Rev 2.1 1993	Fluoride	0.082J	mg/L	0.10	08/25/22 13:02	
EPA 300.0 Rev 2.1 1993	Sulfate	3.5	mg/L	1.0	08/25/22 13:02	
92621399015	GWA-50					
	Performed by	Customer			09/06/22 16:53	
	pH	5.29	Std. Units		09/06/22 16:53	
EPA 6010D	Calcium	1.6	mg/L	1.0	08/24/22 21:47	
EPA 6020B	Barium	0.0072	mg/L	0.0050	09/02/22 21:28	
EPA 6020B	Copper	0.0014J	mg/L	0.0050	09/02/22 21:28	
EPA 6020B	Nickel	0.00071J	mg/L	0.0050	09/02/22 21:28	
EPA 300.0 Rev 2.1 1993	Chloride	0.69J	mg/L	1.0	08/25/22 13:17	
EPA 300.0 Rev 2.1 1993	Fluoride	0.060J	mg/L	0.10	08/25/22 13:17	
92621399016	GWC-5					
	Performed by	Customer			09/06/22 16:53	
	pH	5.84	Std. Units		09/06/22 16:53	
EPA 6010D	Zinc	0.030	mg/L	0.020	08/24/22 21:51	
EPA 6010D	Calcium	3.7	mg/L	1.0	08/24/22 21:51	
EPA 6020B	Barium	0.013	mg/L	0.0050	09/02/22 21:34	
EPA 6020B	Beryllium	0.00060	mg/L	0.00050	09/02/22 21:34	
EPA 6020B	Copper	0.021	mg/L	0.0050	09/02/22 21:34	
EPA 6020B	Nickel	0.0087	mg/L	0.0050	09/02/22 21:34	
EPA 300.0 Rev 2.1 1993	Fluoride	0.062J	mg/L	0.10	08/25/22 14:45	
EPA 300.0 Rev 2.1 1993	Sulfate	1.0	mg/L	1.0	08/25/22 14:45	
92621399017	DUP-1					
EPA 6010D	Calcium	37.7	mg/L	1.0	08/24/22 22:10	
EPA 6020B	Antimony	0.0021J	mg/L	0.0030	09/02/22 21:40	
EPA 6020B	Arsenic	0.0030J	mg/L	0.0050	09/02/22 21:40	
EPA 6020B	Barium	0.028	mg/L	0.0050	09/02/22 21:40	
EPA 6020B	Cobalt	0.00042J	mg/L	0.0050	09/02/22 21:40	
SM 2540C-2015	Total Dissolved Solids	137	mg/L	25.0	08/22/22 13:26	
EPA 300.0 Rev 2.1 1993	Chloride	1.3	mg/L	1.0	08/25/22 23:11	
EPA 300.0 Rev 2.1 1993	Fluoride	0.087J	mg/L	0.10	08/25/22 23:11	
EPA 300.0 Rev 2.1 1993	Sulfate	8.5	mg/L	1.0	08/25/22 23:11	
92621399018	FB-1					
EPA 6010D	Zinc	0.0095J	mg/L	0.020	08/30/22 13:49	
EPA 6010D	Calcium	5.8	mg/L	1.0	08/30/22 13:49	
92621399019	GWC-10R					
	Performed by	Customer			08/22/22 13:45	
	pH	7.52	Std. Units		08/22/22 13:45	
EPA 6010D	Calcium	48.5	mg/L	1.0	08/30/22 13:54	M1
EPA 6020B	Barium	0.025	mg/L	0.0050	09/02/22 21:52	
SM 2540C-2015	Total Dissolved Solids	135	mg/L	25.0	08/23/22 14:30	
EPA 300.0 Rev 2.1 1993	Chloride	2.5	mg/L	1.0	09/01/22 00:57	M1

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92621399019	GWC-10R					
EPA 300.0 Rev 2.1 1993	Fluoride	0.051J	mg/L	0.10	09/01/22 00:57	
EPA 300.0 Rev 2.1 1993	Sulfate	1.5	mg/L	1.0	09/01/22 00:57	M1
92621399020	GWC-11					
	Performed by	Customer			08/22/22 13:46	
	pH	6.08	Std. Units		08/22/22 13:46	
EPA 6010D	Calcium	10.2	mg/L	1.0	08/30/22 15:51	
EPA 6020B	Barium	0.0078	mg/L	0.0050	09/02/22 22:10	
SM 2540C-2015	Total Dissolved Solids	59.0	mg/L	25.0	08/23/22 14:30	
EPA 300.0 Rev 2.1 1993	Chloride	1.2	mg/L	1.0	09/01/22 02:24	
EPA 300.0 Rev 2.1 1993	Sulfate	1.6	mg/L	1.0	09/01/22 02:24	
92621399021	GWC-11R					
	Performed by	Customer			08/22/22 13:46	
	pH	7.57	Std. Units		08/22/22 13:46	
EPA 6010D	Calcium	36.9	mg/L	1.0	08/30/22 15:56	
EPA 6020B	Barium	0.019	mg/L	0.0050	09/02/22 22:16	
EPA 6020B	Chromium	0.0046J	mg/L	0.0050	09/02/22 22:16	
SM 2540C-2015	Total Dissolved Solids	141	mg/L	25.0	08/23/22 14:30	
EPA 300.0 Rev 2.1 1993	Chloride	1.7	mg/L	1.0	09/01/22 02:39	
EPA 300.0 Rev 2.1 1993	Sulfate	1.9	mg/L	1.0	09/01/22 02:39	
92621399022	GWC-12					
	Performed by	Customer			08/22/22 13:46	
	pH	6.03	Std. Units		08/22/22 13:46	
EPA 6010D	Zinc	0.014J	mg/L	0.020	08/30/22 16:01	
EPA 6010D	Calcium	9.2	mg/L	1.0	08/30/22 16:01	
EPA 6020B	Arsenic	0.0037J	mg/L	0.0050	09/02/22 22:22	
EPA 6020B	Barium	0.022	mg/L	0.0050	09/02/22 22:22	
EPA 6020B	Cadmium	0.00052	mg/L	0.00050	09/02/22 22:22	
EPA 6020B	Cobalt	0.0028J	mg/L	0.0050	09/02/22 22:22	
EPA 6020B	Nickel	0.0023J	mg/L	0.0050	09/02/22 22:22	
SM 2540C-2015	Total Dissolved Solids	48.0	mg/L	25.0	08/23/22 14:30	
EPA 300.0 Rev 2.1 1993	Chloride	1.0	mg/L	1.0	09/01/22 03:12	
EPA 300.0 Rev 2.1 1993	Fluoride	0.052J	mg/L	0.10	09/01/22 03:12	
92621399023	GWC-13					
	Performed by	Customer			08/22/22 13:46	
	pH	6.95	Std. Units		08/22/22 13:46	
EPA 6010D	Calcium	33.0	mg/L	1.0	08/30/22 16:05	
EPA 6020B	Barium	0.021	mg/L	0.0050	09/02/22 22:28	
EPA 6020B	Chromium	0.0044J	mg/L	0.0050	09/02/22 22:28	
SM 2540C-2015	Total Dissolved Solids	132	mg/L	25.0	08/23/22 14:30	
EPA 300.0 Rev 2.1 1993	Chloride	3.4	mg/L	1.0	09/01/22 03:27	
EPA 300.0 Rev 2.1 1993	Fluoride	0.061J	mg/L	0.10	09/01/22 03:27	
EPA 300.0 Rev 2.1 1993	Sulfate	16.0	mg/L	1.0	09/01/22 03:27	
92621399024	GWC-14Z					
	Performed by	Customer			08/22/22 13:46	

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab Sample ID	Client Sample ID	Result	Units	Report Limit	Analyzed	Qualifiers
Method	Parameters					
92621399024	GWC-14Z					
	pH	5.95	Std. Units		08/22/22 13:46	
EPA 6010D	Calcium	14.7	mg/L	1.0	08/30/22 16:10	
EPA 6020B	Barium	0.014	mg/L	0.0050	09/02/22 22:34	
EPA 6020B	Beryllium	0.00011J	mg/L	0.00050	09/02/22 22:34	
SM 2540C-2015	Total Dissolved Solids	83.0	mg/L	25.0	08/23/22 14:30	
EPA 300.0 Rev 2.1 1993	Chloride	4.3	mg/L	1.0	09/01/22 03:41	
EPA 300.0 Rev 2.1 1993	Sulfate	9.2	mg/L	1.0	09/01/22 03:41	
92621399025	DUP-2					
EPA 6010D	Calcium	10.7	mg/L	1.0	08/30/22 16:15	
EPA 6020B	Barium	0.0082	mg/L	0.0050	09/02/22 23:09	
EPA 6020B	Boron	0.0097J	mg/L	0.040	09/02/22 23:09	
EPA 6020B	Chromium	0.0012J	mg/L	0.0050	09/02/22 23:09	
SM 2540C-2015	Total Dissolved Solids	64.0	mg/L	25.0	08/23/22 14:30	
EPA 300.0 Rev 2.1 1993	Chloride	1.2	mg/L	1.0	09/01/22 03:56	
EPA 300.0 Rev 2.1 1993	Fluoride	0.050J	mg/L	0.10	09/01/22 03:56	
EPA 300.0 Rev 2.1 1993	Sulfate	1.7	mg/L	1.0	09/01/22 03:56	
92621399027	GWC-13RZ					
	Performed by	Customer			08/22/22 13:47	
	pH	6.66	Std. Units		08/22/22 13:47	
EPA 6010D	Calcium	47.3	mg/L	1.0	08/30/22 16:36	
EPA 6020B	Barium	0.10	mg/L	0.0050	09/02/22 23:21	
EPA 6020B	Boron	0.015J	mg/L	0.040	09/02/22 23:21	
SM 2540C-2015	Total Dissolved Solids	243	mg/L	25.0	08/23/22 14:35	
EPA 300.0 Rev 2.1 1993	Chloride	6.4	mg/L	1.0	09/01/22 04:25	
EPA 300.0 Rev 2.1 1993	Fluoride	0.14	mg/L	0.10	09/01/22 04:25	
EPA 300.0 Rev 2.1 1993	Sulfate	65.7	mg/L	1.0	09/01/22 04:25	
92621399028	GWC-15R					
	Performed by	Customer			08/22/22 13:47	
	pH	7.50	Std. Units		08/22/22 13:47	
EPA 6010D	Calcium	40.4	mg/L	1.0	08/30/22 16:40	
EPA 6020B	Antimony	0.0011J	mg/L	0.0030	09/02/22 23:45	
EPA 6020B	Barium	0.016	mg/L	0.0050	09/02/22 23:45	
SM 2540C-2015	Total Dissolved Solids	152	mg/L	25.0	08/23/22 14:35	
EPA 300.0 Rev 2.1 1993	Chloride	1.4	mg/L	1.0	09/01/22 05:23	
EPA 300.0 Rev 2.1 1993	Fluoride	0.054J	mg/L	0.10	09/01/22 05:23	
EPA 300.0 Rev 2.1 1993	Sulfate	6.9	mg/L	1.0	09/01/22 05:23	
92621399029	GWC-15Z					
	Performed by	Customer			08/22/22 13:47	
	pH	7.60	Std. Units		08/22/22 13:47	
EPA 6010D	Calcium	28.1	mg/L	1.0	08/30/22 16:45	
EPA 6020B	Barium	0.011	mg/L	0.0050	09/02/22 23:51	
SM 2540C-2015	Total Dissolved Solids	112	mg/L	25.0	08/23/22 14:35	
EPA 300.0 Rev 2.1 1993	Chloride	0.88J	mg/L	1.0	09/01/22 05:37	M1
EPA 300.0 Rev 2.1 1993	Fluoride	0.053J	mg/L	0.10	09/01/22 05:37	
EPA 300.0 Rev 2.1 1993	Sulfate	0.87J	mg/L	1.0	09/01/22 05:37	M1

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92621399030	DUP-3					
EPA 6010D	Calcium	27.9	mg/L	1.0	08/30/22 16:50	
EPA 6020B	Barium	0.011	mg/L	0.0050	09/03/22 00:09	
EPA 300.0 Rev 2.1 1993	Chloride	0.93J	mg/L	1.0	09/01/22 06:40	
EPA 300.0 Rev 2.1 1993	Fluoride	0.054J	mg/L	0.10	09/01/22 06:40	
EPA 300.0 Rev 2.1 1993	Sulfate	0.87J	mg/L	1.0	09/01/22 06:40	
92621399031	FB-4					
SM 2540C-2015	Total Dissolved Solids	103	mg/L	25.0	08/23/22 15:30	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Sample: GWA-4RZ **Lab ID: 92621399001** Collected: 08/17/22 09:35 Received: 08/18/22 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		09/06/22 16:49		
pH	6.49	Std. Units			1		09/06/22 16:49		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 20:31	7440-66-6	
Calcium	54.7	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 20:31	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/01/22 12:40	09/01/22 21:38	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/01/22 12:40	09/01/22 21:38	7440-38-2	
Barium	0.034	mg/L	0.0050	0.00067	1	09/01/22 12:40	09/01/22 21:38	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/01/22 12:40	09/01/22 21:38	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/01/22 12:40	09/01/22 21:38	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/01/22 12:40	09/01/22 21:38	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/01/22 12:40	09/01/22 21:38	7440-47-3	
Cobalt	0.015	mg/L	0.0050	0.00039	1	09/01/22 12:40	09/01/22 21:38	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/01/22 12:40	09/01/22 21:38	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/01/22 12:40	09/01/22 21:38	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/01/22 12:40	09/01/22 21:38	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/01/22 12:40	09/01/22 21:38	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/01/22 12:40	09/01/22 21:38	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/01/22 12:40	09/01/22 21:38	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/01/22 12:40	09/01/22 21:38	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:17	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	226	mg/L	25.0	10.0	1		08/22/22 13:47		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	2.6	mg/L	1.0	0.60	1		08/25/22 08:18	16887-00-6	
Fluoride	0.11	mg/L	0.10	0.050	1		08/25/22 08:18	16984-48-8	
Sulfate	18.1	mg/L	1.0	0.50	1		08/25/22 08:18	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWA-50R	Lab ID: 92621399002	Collected: 08/17/22 11:27	Received: 08/18/22 09:35	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/06/22 16:49		
pH	5.70	Std. Units			1		09/06/22 16:49		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 20:35	7440-66-6	
Calcium	3.8	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 20:35	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/01/22 12:40	09/01/22 21:44	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/01/22 12:40	09/01/22 21:44	7440-38-2	
Barium	0.0091	mg/L	0.0050	0.00067	1	09/01/22 12:40	09/01/22 21:44	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/01/22 12:40	09/01/22 21:44	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/01/22 12:40	09/01/22 21:44	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/01/22 12:40	09/01/22 21:44	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/01/22 12:40	09/01/22 21:44	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/01/22 12:40	09/01/22 21:44	7440-48-4	
Copper	0.0098	mg/L	0.0050	0.0010	1	09/01/22 12:40	09/01/22 21:44	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/01/22 12:40	09/01/22 21:44	7439-92-1	
Nickel	0.0011J	mg/L	0.0050	0.00071	1	09/01/22 12:40	09/01/22 21:44	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/01/22 12:40	09/01/22 21:44	7782-49-2	
Silver	0.0021J	mg/L	0.0050	0.00044	1	09/01/22 12:40	09/01/22 21:44	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/01/22 12:40	09/01/22 21:44	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/01/22 12:40	09/01/22 21:44	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:33	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	18.0J	mg/L	25.0	10.0	1		08/22/22 13:48		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		08/25/22 08:34	16887-00-6	
Fluoride	0.063J	mg/L	0.10	0.050	1		08/25/22 08:34	16984-48-8	
Sulfate	0.55J	mg/L	1.0	0.50	1		08/25/22 08:34	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-6		Lab ID: 92621399003		Collected: 08/17/22 13:08		Received: 08/18/22 09:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/06/22 16:50		
pH	7.30	Std. Units			1		09/06/22 16:50		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 20:40	7440-66-6	
Calcium	15.8	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 20:40	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/01/22 12:40	09/01/22 21:50	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/01/22 12:40	09/01/22 21:50	7440-38-2	
Barium	0.0065	mg/L	0.0050	0.00067	1	09/01/22 12:40	09/01/22 21:50	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/01/22 12:40	09/01/22 21:50	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/01/22 12:40	09/01/22 21:50	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/01/22 12:40	09/01/22 21:50	7440-43-9	
Chromium	0.0025J	mg/L	0.0050	0.0011	1	09/01/22 12:40	09/01/22 21:50	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/01/22 12:40	09/01/22 21:50	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/01/22 12:40	09/01/22 21:50	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/01/22 12:40	09/01/22 21:50	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/01/22 12:40	09/01/22 21:50	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/01/22 12:40	09/01/22 21:50	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/01/22 12:40	09/01/22 21:50	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/01/22 12:40	09/01/22 21:50	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/01/22 12:40	09/01/22 21:50	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:36	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	53.0	mg/L	25.0	10.0	1		08/22/22 13:48		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	0.89J	mg/L	1.0	0.60	1		08/25/22 08:49	16887-00-6	
Fluoride	0.064J	mg/L	0.10	0.050	1		08/25/22 08:49	16984-48-8	
Sulfate	1.6	mg/L	1.0	0.50	1		08/25/22 08:49	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-6RZ		Lab ID: 92621399004		Collected: 08/17/22 11:24		Received: 08/18/22 09:35		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/06/22 16:50		
pH	6.64	Std. Units			1		09/06/22 16:50		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 20:45	7440-66-6	
Calcium	10	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 20:45	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/01/22 12:40	09/01/22 21:56	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/01/22 12:40	09/01/22 21:56	7440-38-2	
Barium	0.0068	mg/L	0.0050	0.00067	1	09/01/22 12:40	09/01/22 21:56	7440-39-3	
Beryllium	0.000098J	mg/L	0.00050	0.000054	1	09/01/22 12:40	09/01/22 21:56	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/01/22 12:40	09/01/22 21:56	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/01/22 12:40	09/01/22 21:56	7440-43-9	
Chromium	0.0024J	mg/L	0.0050	0.0011	1	09/01/22 12:40	09/01/22 21:56	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/01/22 12:40	09/01/22 21:56	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/01/22 12:40	09/01/22 21:56	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/01/22 12:40	09/01/22 21:56	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/01/22 12:40	09/01/22 21:56	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/01/22 12:40	09/01/22 21:56	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/01/22 12:40	09/01/22 21:56	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/01/22 12:40	09/01/22 21:56	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/01/22 12:40	09/01/22 21:56	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:39	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	33.0	mg/L	25.0	10.0	1		08/22/22 13:48		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.99J	mg/L	1.0	0.60	1		08/25/22 09:05	16887-00-6	
Fluoride	0.070J	mg/L	0.10	0.050	1		08/25/22 09:05	16984-48-8	
Sulfate	1.2	mg/L	1.0	0.50	1		08/25/22 09:05	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-7Z **Lab ID: 92621399005** Collected: 08/17/22 10:35 Received: 08/18/22 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer								
pH	7.34	Std. Units			1		09/06/22 16:51		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 20:50	7440-66-6	
Calcium	27.2	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 20:50	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	0.0011J	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 19:59	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 19:59	7440-38-2	
Barium	0.014	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 19:59	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 19:59	7440-41-7	
Boron	0.011J	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 19:59	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 19:59	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 19:59	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 19:59	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 19:59	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 19:59	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 19:59	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 19:59	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 19:59	7440-22-4	
Thallium	0.00024J	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 19:59	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 19:59	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:41	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	83.0	mg/L	25.0	10.0	1		08/22/22 13:48		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	ND	mg/L	1.0	0.60	1		08/25/22 09:20	16887-00-6	
Fluoride	0.073J	mg/L	0.10	0.050	1		08/25/22 09:20	16984-48-8	
Sulfate	0.91J	mg/L	1.0	0.50	1		08/25/22 09:20	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Sample: GWC-8Z **Lab ID: 92621399006** Collected: 08/17/22 13:30 Received: 08/18/22 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer								
pH	6.36	Std. Units					09/06/22 16:51		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 20:54	7440-66-6	
Calcium	10.4	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 20:54	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	0.0010J	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 20:22	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 20:22	7440-38-2	
Barium	0.017	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 20:22	7440-39-3	
Beryllium	0.00010J	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 20:22	7440-41-7	
Boron	0.012J	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 20:22	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 20:22	7440-43-9	
Chromium	0.0014J	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 20:22	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 20:22	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 20:22	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 20:22	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 20:22	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 20:22	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 20:22	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 20:22	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 20:22	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:44	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	41.0	mg/L	25.0	10.0	1		08/22/22 13:50		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	1.3	mg/L	1.0	0.60	1		08/25/22 09:36	16887-00-6	
Fluoride	0.062J	mg/L	0.10	0.050	1		08/25/22 09:36	16984-48-8	
Sulfate	0.58J	mg/L	1.0	0.50	1		08/25/22 09:36	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-8RR **Lab ID: 92621399007** Collected: 08/17/22 12:05 Received: 08/18/22 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		09/06/22 16:51		
pH	7.87	Std. Units			1		09/06/22 16:51		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 20:59	7440-66-6	
Calcium	24.0	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 20:59	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 20:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 20:28	7440-38-2	
Barium	0.013	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 20:28	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 20:28	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 20:28	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 20:28	7440-43-9	
Chromium	0.0011J	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 20:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 20:28	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 20:28	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 20:28	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 20:28	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 20:28	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 20:28	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 20:28	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 20:28	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:47	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	89.0	mg/L	25.0	10.0	1		08/22/22 13:50		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	ND	mg/L	1.0	0.60	1		08/25/22 09:51	16887-00-6	
Fluoride	0.062J	mg/L	0.10	0.050	1		08/25/22 09:51	16984-48-8	
Sulfate	0.53J	mg/L	1.0	0.50	1		08/25/22 09:51	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-9 **Lab ID: 92621399008** Collected: 08/17/22 13:05 Received: 08/18/22 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						09/06/22 16:51		
pH	4.57	Std. Units					09/06/22 16:51		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 21:13	7440-66-6	
Calcium	2.5	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 21:13	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 20:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 20:34	7440-38-2	
Barium	0.047	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 20:34	7440-39-3	
Beryllium	0.00017J	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 20:34	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 20:34	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 20:34	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 20:34	7440-47-3	
Cobalt	0.00043J	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 20:34	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 20:34	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 20:34	7439-92-1	
Nickel	0.0011J	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 20:34	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 20:34	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 20:34	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 20:34	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 20:34	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:49	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	25.0	mg/L	25.0	10.0	1		08/22/22 13:50		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	1.9	mg/L	1.0	0.60	1		08/25/22 11:29	16887-00-6	
Fluoride	0.067J	mg/L	0.10	0.050	1		08/25/22 11:29	16984-48-8	
Sulfate	2.5	mg/L	1.0	0.50	1		08/25/22 11:29	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-10	Lab ID: 92621399009	Collected: 08/17/22 15:05	Received: 08/18/22 09:35	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/06/22 16:52		
pH	7.01	Std. Units			1		09/06/22 16:52		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 21:18	7440-66-6	
Calcium	36.7	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 21:18	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 20:40	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 20:40	7440-38-2	
Barium	0.016	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 20:40	7440-39-3	
Beryllium	0.000070J	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 20:40	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 20:40	7440-42-8	
Cadmium	0.00018J	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 20:40	7440-43-9	
Chromium	0.0013J	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 20:40	7440-47-3	
Cobalt	0.00051J	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 20:40	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 20:40	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 20:40	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 20:40	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 20:40	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 20:40	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 20:40	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 20:40	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 15:52	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	128	mg/L	25.0	10.0	1		08/22/22 13:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.6	mg/L	1.0	0.60	1		08/25/22 11:45	16887-00-6	
Fluoride	0.094J	mg/L	0.10	0.050	1		08/25/22 11:45	16984-48-8	
Sulfate	1.1	mg/L	1.0	0.50	1		08/25/22 11:45	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: FB-2		Lab ID: 92621399010		Collected: 08/17/22 14:22	Received: 08/18/22 09:35	Matrix: Water				
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 21:23	7440-66-6		
Calcium	ND	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 21:23	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 20:58	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 20:58	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 20:58	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 20:58	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 20:58	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 20:58	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 20:58	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 20:58	7440-48-4		
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 20:58	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 20:58	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 20:58	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 20:58	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 20:58	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 20:58	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 20:58	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 16:00	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		08/22/22 13:26			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/25/22 12:00	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/25/22 12:00	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/25/22 12:00	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWA-1	Lab ID: 92621399011	Collected: 08/16/22 10:20		Received: 08/18/22 09:35		Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/06/22 16:52		
pH	7.36	Std. Units			1		09/06/22 16:52		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 21:28	7440-66-6	
Calcium	34.0	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 21:28	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0084	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 21:04	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 21:04	7440-38-2	
Barium	0.017	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 21:04	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 21:04	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 21:04	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 21:04	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 21:04	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 21:04	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 21:04	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 21:04	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 21:04	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 21:04	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 21:04	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 21:04	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 21:04	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 16:02	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	159	mg/L	25.0	10.0	1		08/22/22 13:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.99J	mg/L	1.0	0.60	1		08/25/22 12:16	16887-00-6	
Fluoride	0.089J	mg/L	0.10	0.050	1		08/25/22 12:16	16984-48-8	
Sulfate	0.78J	mg/L	1.0	0.50	1		08/25/22 12:16	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWA-2 **Lab ID: 92621399012** Collected: 08/16/22 13:55 Received: 08/18/22 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						09/06/22 16:52		
pH	6.63	Std. Units			1		09/06/22 16:52		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 21:32	7440-66-6	
Calcium	39.5	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 21:32	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 21:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 21:10	7440-38-2	
Barium	0.021	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 21:10	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 21:10	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 21:10	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 21:10	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 21:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 21:10	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 21:10	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 21:10	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 21:10	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 21:10	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 21:10	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 21:10	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 21:10	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 16:05	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	182	mg/L	25.0	10.0	1		08/22/22 13:24		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	1.1	mg/L	1.0	0.60	1		08/25/22 12:31	16887-00-6	
Fluoride	0.086J	mg/L	0.10	0.050	1		08/25/22 12:31	16984-48-8	
Sulfate	58.5	mg/L	1.0	0.50	1		08/25/22 12:31	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWA-2R	Lab ID: 92621399013	Collected: 08/16/22 11:50	Received: 08/18/22 09:35	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/06/22 16:52		
pH	7.11	Std. Units			1		09/06/22 16:52		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 21:37	7440-66-6	
Calcium	37.9	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 21:37	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0020J	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 21:16	7440-36-0	
Arsenic	0.0033J	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 21:16	7440-38-2	
Barium	0.027	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 21:16	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 21:16	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 21:16	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 21:16	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 21:16	7440-47-3	
Cobalt	0.00040J	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 21:16	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 21:16	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 21:16	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 21:16	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 21:16	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 21:16	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 21:16	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 21:16	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 16:08	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	123	mg/L	25.0	10.0	1		08/22/22 13:24		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.82J	mg/L	1.0	0.60	1		08/25/22 12:46	16887-00-6	
Fluoride	0.090J	mg/L	0.10	0.050	1		08/25/22 12:46	16984-48-8	
Sulfate	7.8	mg/L	1.0	0.50	1		08/25/22 12:46	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWA-3A **Lab ID: 92621399014** Collected: 08/16/22 12:04 Received: 08/18/22 09:35 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer						09/06/22 16:53
pH	7.74	Std. Units					09/06/22 16:53

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 21:42	7440-66-6
Calcium	22.2	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 21:42	7440-70-2

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 21:22	7440-36-0
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 21:22	7440-38-2
Barium	0.0067	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 21:22	7440-39-3
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 21:22	7440-41-7
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 21:22	7440-42-8
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 21:22	7440-43-9
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 21:22	7440-47-3
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 21:22	7440-48-4
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 21:22	7440-50-8
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 21:22	7439-92-1
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 21:22	7440-02-0
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 21:22	7782-49-2
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 21:22	7440-22-4
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 21:22	7440-28-0
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 21:22	7440-62-2

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 16:10	7439-97-6
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	85.0	mg/L	25.0	10.0	1	08/22/22 13:24		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	2.5	mg/L	1.0	0.60	1	08/25/22 13:02	16887-00-6
Fluoride	0.082J	mg/L	0.10	0.050	1	08/25/22 13:02	16984-48-8
Sulfate	3.5	mg/L	1.0	0.50	1	08/25/22 13:02	14808-79-8

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWA-50	Lab ID: 92621399015	Collected: 08/16/22 14:07	Received: 08/18/22 09:35	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/06/22 16:53		
pH	5.29	Std. Units			1		09/06/22 16:53		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 21:47	7440-66-6	
Calcium	1.6	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 21:47	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 21:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 21:28	7440-38-2	
Barium	0.0072	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 21:28	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 21:28	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 21:28	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 21:28	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 21:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 21:28	7440-48-4	
Copper	0.0014J	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 21:28	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 21:28	7439-92-1	
Nickel	0.00071J	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 21:28	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 21:28	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 21:28	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 21:28	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 21:28	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	08/31/22 11:00	08/31/22 16:13	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		08/22/22 13:25		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.69J	mg/L	1.0	0.60	1		08/25/22 13:17	16887-00-6	
Fluoride	0.060J	mg/L	0.10	0.050	1		08/25/22 13:17	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		08/25/22 13:17	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-5	Lab ID: 92621399016	Collected: 08/16/22 14:44		Received: 08/18/22 09:35		Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		09/06/22 16:53		
pH	5.84	Std. Units			1		09/06/22 16:53		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	0.030	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 21:51	7440-66-6	
Calcium	3.7	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 21:51	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 21:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 21:34	7440-38-2	
Barium	0.013	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 21:34	7440-39-3	
Beryllium	0.00060	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 21:34	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 21:34	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 21:34	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 21:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 21:34	7440-48-4	
Copper	0.021	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 21:34	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 21:34	7439-92-1	
Nickel	0.0087	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 21:34	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 21:34	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 21:34	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 21:34	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 21:34	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:15	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		08/22/22 13:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	ND	mg/L	1.0	0.60	1		08/25/22 14:45	16887-00-6	
Fluoride	0.062J	mg/L	0.10	0.050	1		08/25/22 14:45	16984-48-8	
Sulfate	1.0	mg/L	1.0	0.50	1		08/25/22 14:45	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: DUP-1	Lab ID: 92621399017		Collected: 08/16/22 00:00	Received: 08/18/22 09:35	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/24/22 14:07	08/24/22 22:10	7440-66-6	
Calcium	37.7	mg/L	1.0	0.12	1	08/24/22 14:07	08/24/22 22:10	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	0.0021J	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 21:40	7440-36-0	
Arsenic	0.0030J	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 21:40	7440-38-2	
Barium	0.028	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 21:40	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 21:40	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 21:40	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 21:40	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 21:40	7440-47-3	
Cobalt	0.00042J	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 21:40	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 21:40	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 21:40	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 21:40	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 21:40	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 21:40	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 21:40	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 21:40	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:26	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	137	mg/L	25.0	10.0	1		08/22/22 13:26		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.3	mg/L	1.0	0.60	1		08/25/22 23:11	16887-00-6	
Fluoride	0.087J	mg/L	0.10	0.050	1		08/25/22 23:11	16984-48-8	
Sulfate	8.5	mg/L	1.0	0.50	1		08/25/22 23:11	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: FB-1		Lab ID: 92621399018		Collected: 08/16/22 15:28		Received: 08/18/22 09:35		Matrix: Water		
Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual	
			Limit	MDL	DF					
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	0.0095J	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 13:49	7440-66-6		
Calcium	5.8	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 13:49	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 21:46	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 21:46	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 21:46	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 21:46	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 21:46	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 21:46	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 21:46	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 21:46	7440-48-4		
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 21:46	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 21:46	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 21:46	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 21:46	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 21:46	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 21:46	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 21:46	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:29	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		08/22/22 13:26			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		08/25/22 23:26	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		08/25/22 23:26	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		08/25/22 23:26	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-10R	Lab ID: 92621399019	Collected: 08/18/22 10:10	Received: 08/22/22 08:52	Matrix: Water					
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/22/22 13:45		
pH	7.52	Std. Units			1		08/22/22 13:45		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 13:54	7440-66-6	
Calcium	48.5	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 13:54	7440-70-2	M1
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 21:52	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 21:52	7440-38-2	
Barium	0.025	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 21:52	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 21:52	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 21:52	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 21:52	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 21:52	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 21:52	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 21:52	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 21:52	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 21:52	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 21:52	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 21:52	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 21:52	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 21:52	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:31	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	135	mg/L	25.0	10.0	1		08/23/22 14:30		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.5	mg/L	1.0	0.60	1		09/01/22 00:57	16887-00-6	M1
Fluoride	0.051J	mg/L	0.10	0.050	1		09/01/22 00:57	16984-48-8	
Sulfate	1.5	mg/L	1.0	0.50	1		09/01/22 00:57	14808-79-8	M1

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Sample: GWC-11 **Lab ID: 92621399020** Collected: 08/18/22 11:30 Received: 08/22/22 08:52 Matrix: Water

Parameters	Results	Units	Report			Prepared	Analyzed	CAS No.	Qual
			Limit	MDL	DF				
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/22/22 13:46		
pH	6.08	Std. Units			1		08/22/22 13:46		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 15:51	7440-66-6	
Calcium	10.2	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 15:51	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 22:10	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 22:10	7440-38-2	
Barium	0.0078	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 22:10	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 22:10	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 22:10	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 22:10	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 22:10	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 22:10	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 22:10	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 22:10	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 22:10	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 22:10	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 22:10	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 22:10	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 22:10	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:34	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	59.0	mg/L	25.0	10.0	1		08/23/22 14:30		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	1.2	mg/L	1.0	0.60	1		09/01/22 02:24	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/01/22 02:24	16984-48-8	
Sulfate	1.6	mg/L	1.0	0.50	1		09/01/22 02:24	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-11R		Lab ID: 92621399021		Collected: 08/18/22 12:35		Received: 08/22/22 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/22/22 13:46		
pH	7.57	Std. Units			1		08/22/22 13:46		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 15:56	7440-66-6	
Calcium	36.9	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 15:56	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 22:16	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 22:16	7440-38-2	
Barium	0.019	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 22:16	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 22:16	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 22:16	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 22:16	7440-43-9	
Chromium	0.0046J	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 22:16	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 22:16	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 22:16	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 22:16	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 22:16	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 22:16	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 22:16	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 22:16	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 22:16	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:42	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	141	mg/L	25.0	10.0	1		08/23/22 14:30		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.7	mg/L	1.0	0.60	1		09/01/22 02:39	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/01/22 02:39	16984-48-8	
Sulfate	1.9	mg/L	1.0	0.50	1		09/01/22 02:39	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-12 **Lab ID: 92621399022** Collected: 08/18/22 14:47 Received: 08/22/22 08:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/22/22 13:46		
pH	6.03	Std. Units			1		08/22/22 13:46		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	0.014J	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 16:01	7440-66-6	
Calcium	9.2	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 16:01	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 22:22	7440-36-0	
Arsenic	0.0037J	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 22:22	7440-38-2	
Barium	0.022	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 22:22	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 22:22	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 22:22	7440-42-8	
Cadmium	0.00052	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 22:22	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 22:22	7440-47-3	
Cobalt	0.0028J	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 22:22	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 22:22	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 22:22	7439-92-1	
Nickel	0.0023J	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 22:22	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 22:22	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 22:22	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 22:22	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 22:22	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:44	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	48.0	mg/L	25.0	10.0	1		08/23/22 14:30		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	1.0	mg/L	1.0	0.60	1		09/01/22 03:12	16887-00-6	
Fluoride	0.052J	mg/L	0.10	0.050	1		09/01/22 03:12	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/01/22 03:12	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-13	Lab ID: 92621399023	Collected: 08/18/22 13:21		Received: 08/22/22 08:52		Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/22/22 13:46		
pH	6.95	Std. Units			1		08/22/22 13:46		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 16:05	7440-66-6	
Calcium	33.0	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 16:05	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 22:28	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 22:28	7440-38-2	
Barium	0.021	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 22:28	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 22:28	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 22:28	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 22:28	7440-43-9	
Chromium	0.0044J	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 22:28	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 22:28	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 22:28	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 22:28	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 22:28	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 22:28	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 22:28	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 22:28	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 22:28	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:47	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	132	mg/L	25.0	10.0	1		08/23/22 14:30		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	3.4	mg/L	1.0	0.60	1		09/01/22 03:27	16887-00-6	
Fluoride	0.061J	mg/L	0.10	0.050	1		09/01/22 03:27	16984-48-8	
Sulfate	16.0	mg/L	1.0	0.50	1		09/01/22 03:27	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-14Z **Lab ID: 92621399024** Collected: 08/18/22 13:00 Received: 08/22/22 08:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/22/22 13:46		
pH	5.95	Std. Units			1		08/22/22 13:46		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 16:10	7440-66-6	
Calcium	14.7	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 16:10	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:03	09/02/22 22:34	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:03	09/02/22 22:34	7440-38-2	
Barium	0.014	mg/L	0.0050	0.00067	1	09/02/22 12:03	09/02/22 22:34	7440-39-3	
Beryllium	0.00011J	mg/L	0.00050	0.000054	1	09/02/22 12:03	09/02/22 22:34	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:03	09/02/22 22:34	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:03	09/02/22 22:34	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:03	09/02/22 22:34	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:03	09/02/22 22:34	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:03	09/02/22 22:34	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:03	09/02/22 22:34	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:03	09/02/22 22:34	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:03	09/02/22 22:34	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:03	09/02/22 22:34	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:03	09/02/22 22:34	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:03	09/02/22 22:34	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:50	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	83.0	mg/L	25.0	10.0	1		08/23/22 14:30		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	4.3	mg/L	1.0	0.60	1		09/01/22 03:41	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/01/22 03:41	16984-48-8	
Sulfate	9.2	mg/L	1.0	0.50	1		09/01/22 03:41	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: DUP-2	Lab ID: 92621399025		Collected: 08/18/22 00:00	Received: 08/22/22 08:52	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 16:15	7440-66-6	
Calcium	10.7	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 16:15	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:19	09/02/22 23:09	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:19	09/02/22 23:09	7440-38-2	
Barium	0.0082	mg/L	0.0050	0.00067	1	09/02/22 12:19	09/02/22 23:09	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:19	09/02/22 23:09	7440-41-7	
Boron	0.0097J	mg/L	0.040	0.0086	1	09/02/22 12:19	09/02/22 23:09	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:19	09/02/22 23:09	7440-43-9	
Chromium	0.0012J	mg/L	0.0050	0.0011	1	09/02/22 12:19	09/02/22 23:09	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:19	09/02/22 23:09	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:19	09/02/22 23:09	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:19	09/02/22 23:09	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:19	09/02/22 23:09	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:19	09/02/22 23:09	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:19	09/02/22 23:09	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:19	09/02/22 23:09	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:19	09/02/22 23:09	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:52	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	64.0	mg/L	25.0	10.0	1		08/23/22 14:30		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	1.2	mg/L	1.0	0.60	1		09/01/22 03:56	16887-00-6	
Fluoride	0.050J	mg/L	0.10	0.050	1		09/01/22 03:56	16984-48-8	
Sulfate	1.7	mg/L	1.0	0.50	1		09/01/22 03:56	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: FB-3		Lab ID: 92621399026		Collected: 08/18/22 15:30	Received: 08/22/22 08:52	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA								
Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 16:20	7440-66-6		
Calcium	ND	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 16:20	7440-70-2		
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA								
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:19	09/02/22 23:15	7440-36-0		
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:19	09/02/22 23:15	7440-38-2		
Barium	ND	mg/L	0.0050	0.00067	1	09/02/22 12:19	09/02/22 23:15	7440-39-3		
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:19	09/02/22 23:15	7440-41-7		
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:19	09/02/22 23:15	7440-42-8		
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:19	09/02/22 23:15	7440-43-9		
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:19	09/02/22 23:15	7440-47-3		
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:19	09/02/22 23:15	7440-48-4		
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:19	09/02/22 23:15	7440-50-8		
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:19	09/02/22 23:15	7439-92-1		
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:19	09/02/22 23:15	7440-02-0		
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:19	09/02/22 23:15	7782-49-2		
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:19	09/02/22 23:15	7440-22-4		
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:19	09/02/22 23:15	7440-28-0		
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:19	09/02/22 23:15	7440-62-2		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA								
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:55	7439-97-6		
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA								
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		08/23/22 14:35			
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.60	1		09/01/22 04:10	16887-00-6		
Fluoride	ND	mg/L	0.10	0.050	1		09/01/22 04:10	16984-48-8		
Sulfate	ND	mg/L	1.0	0.50	1		09/01/22 04:10	14808-79-8		

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-13RZ **Lab ID: 92621399027** Collected: 08/19/22 09:26 Received: 08/22/22 08:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer				1		08/22/22 13:47		
pH	6.66	Std. Units			1		08/22/22 13:47		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 16:36	7440-66-6	
Calcium	47.3	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 16:36	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:19	09/02/22 23:21	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:19	09/02/22 23:21	7440-38-2	
Barium	0.10	mg/L	0.0050	0.00067	1	09/02/22 12:19	09/02/22 23:21	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:19	09/02/22 23:21	7440-41-7	
Boron	0.015J	mg/L	0.040	0.0086	1	09/02/22 12:19	09/02/22 23:21	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:19	09/02/22 23:21	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:19	09/02/22 23:21	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:19	09/02/22 23:21	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:19	09/02/22 23:21	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:19	09/02/22 23:21	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:19	09/02/22 23:21	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:19	09/02/22 23:21	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:19	09/02/22 23:21	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:19	09/02/22 23:21	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:19	09/02/22 23:21	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 12:57	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	243	mg/L	25.0	10.0	1		08/23/22 14:35		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	6.4	mg/L	1.0	0.60	1		09/01/22 04:25	16887-00-6	
Fluoride	0.14	mg/L	0.10	0.050	1		09/01/22 04:25	16984-48-8	
Sulfate	65.7	mg/L	1.0	0.50	1		09/01/22 04:25	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-15R **Lab ID: 92621399028** Collected: 08/19/22 11:05 Received: 08/22/22 08:52 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
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Field Data

Analytical Method:
Pace Analytical Services - Charlotte

Performed by	Customer								
pH	7.50	Std. Units					08/22/22 13:47		

6010D ATL ICP

Analytical Method: EPA 6010D Preparation Method: EPA 3010A
Pace Analytical Services - Peachtree Corners, GA

Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 16:40	7440-66-6	
Calcium	40.4	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 16:40	7440-70-2	

6020 MET ICPMS

Analytical Method: EPA 6020B Preparation Method: EPA 3005A
Pace Analytical Services - Peachtree Corners, GA

Antimony	0.0011J	mg/L	0.0030	0.00078	1	09/02/22 12:19	09/02/22 23:45	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:19	09/02/22 23:45	7440-38-2	
Barium	0.016	mg/L	0.0050	0.00067	1	09/02/22 12:19	09/02/22 23:45	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:19	09/02/22 23:45	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:19	09/02/22 23:45	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:19	09/02/22 23:45	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:19	09/02/22 23:45	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:19	09/02/22 23:45	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:19	09/02/22 23:45	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:19	09/02/22 23:45	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:19	09/02/22 23:45	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:19	09/02/22 23:45	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:19	09/02/22 23:45	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:19	09/02/22 23:45	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:19	09/02/22 23:45	7440-62-2	

7470 Mercury

Analytical Method: EPA 7470A Preparation Method: EPA 7470A
Pace Analytical Services - Peachtree Corners, GA

Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 13:00	7439-97-6	
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2540C Total Dissolved Solids

Analytical Method: SM 2540C-2015
Pace Analytical Services - Peachtree Corners, GA

Total Dissolved Solids	152	mg/L	25.0	10.0	1		08/23/22 14:35		
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300.0 IC Anions 28 Days

Analytical Method: EPA 300.0 Rev 2.1 1993
Pace Analytical Services - Asheville

Chloride	1.4	mg/L	1.0	0.60	1		09/01/22 05:23	16887-00-6	
Fluoride	0.054J	mg/L	0.10	0.050	1		09/01/22 05:23	16984-48-8	
Sulfate	6.9	mg/L	1.0	0.50	1		09/01/22 05:23	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: GWC-15Z		Lab ID: 92621399029		Collected: 08/19/22 10:52		Received: 08/22/22 08:52		Matrix: Water	
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		08/22/22 13:47		
pH	7.60	Std. Units			1		08/22/22 13:47		
6010D ATL ICP									
Analytical Method: EPA 6010D Preparation Method: EPA 3010A									
Pace Analytical Services - Peachtree Corners, GA									
Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 16:45	7440-66-6	
Calcium	28.1	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 16:45	7440-70-2	
6020 MET ICPMS									
Analytical Method: EPA 6020B Preparation Method: EPA 3005A									
Pace Analytical Services - Peachtree Corners, GA									
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:19	09/02/22 23:51	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:19	09/02/22 23:51	7440-38-2	
Barium	0.011	mg/L	0.0050	0.00067	1	09/02/22 12:19	09/02/22 23:51	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:19	09/02/22 23:51	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:19	09/02/22 23:51	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:19	09/02/22 23:51	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:19	09/02/22 23:51	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:19	09/02/22 23:51	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:19	09/02/22 23:51	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:19	09/02/22 23:51	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:19	09/02/22 23:51	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:19	09/02/22 23:51	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:19	09/02/22 23:51	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:19	09/02/22 23:51	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:19	09/02/22 23:51	7440-62-2	
7470 Mercury									
Analytical Method: EPA 7470A Preparation Method: EPA 7470A									
Pace Analytical Services - Peachtree Corners, GA									
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 13:03	7439-97-6	
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015									
Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	112	mg/L	25.0	10.0	1		08/23/22 14:35		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	0.88J	mg/L	1.0	0.60	1		09/01/22 05:37	16887-00-6	M1
Fluoride	0.053J	mg/L	0.10	0.050	1		09/01/22 05:37	16984-48-8	
Sulfate	0.87J	mg/L	1.0	0.50	1		09/01/22 05:37	14808-79-8	M1

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: DUP-3		Lab ID: 92621399030		Collected: 08/19/22 00:00	Received: 08/22/22 08:52	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 16:50	7440-66-6	
Calcium	27.9	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 16:50	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:19	09/03/22 00:09	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:19	09/03/22 00:09	7440-38-2	
Barium	0.011	mg/L	0.0050	0.00067	1	09/02/22 12:19	09/03/22 00:09	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:19	09/03/22 00:09	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:19	09/03/22 00:09	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:19	09/03/22 00:09	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:19	09/03/22 00:09	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:19	09/03/22 00:09	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:19	09/03/22 00:09	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:19	09/03/22 00:09	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:19	09/03/22 00:09	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:19	09/03/22 00:09	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:19	09/03/22 00:09	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:19	09/03/22 00:09	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:19	09/03/22 00:09	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 13:05	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	ND	mg/L	25.0	10.0	1		08/23/22 15:30		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	0.93J	mg/L	1.0	0.60	1		09/01/22 06:40	16887-00-6	
Fluoride	0.054J	mg/L	0.10	0.050	1		09/01/22 06:40	16984-48-8	
Sulfate	0.87J	mg/L	1.0	0.50	1		09/01/22 06:40	14808-79-8	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Sample: FB-4		Lab ID: 92621399031		Collected: 08/19/22 11:40	Received: 08/22/22 08:52	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
6010D ATL ICP		Analytical Method: EPA 6010D Preparation Method: EPA 3010A Pace Analytical Services - Peachtree Corners, GA							
Zinc	ND	mg/L	0.020	0.0085	1	08/30/22 10:11	08/30/22 16:55	7440-66-6	
Calcium	ND	mg/L	1.0	0.12	1	08/30/22 10:11	08/30/22 16:55	7440-70-2	
6020 MET ICPMS		Analytical Method: EPA 6020B Preparation Method: EPA 3005A Pace Analytical Services - Peachtree Corners, GA							
Antimony	ND	mg/L	0.0030	0.00078	1	09/02/22 12:19	09/03/22 00:15	7440-36-0	
Arsenic	ND	mg/L	0.0050	0.0022	1	09/02/22 12:19	09/03/22 00:15	7440-38-2	
Barium	ND	mg/L	0.0050	0.00067	1	09/02/22 12:19	09/03/22 00:15	7440-39-3	
Beryllium	ND	mg/L	0.00050	0.000054	1	09/02/22 12:19	09/03/22 00:15	7440-41-7	
Boron	ND	mg/L	0.040	0.0086	1	09/02/22 12:19	09/03/22 00:15	7440-42-8	
Cadmium	ND	mg/L	0.00050	0.00011	1	09/02/22 12:19	09/03/22 00:15	7440-43-9	
Chromium	ND	mg/L	0.0050	0.0011	1	09/02/22 12:19	09/03/22 00:15	7440-47-3	
Cobalt	ND	mg/L	0.0050	0.00039	1	09/02/22 12:19	09/03/22 00:15	7440-48-4	
Copper	ND	mg/L	0.0050	0.0010	1	09/02/22 12:19	09/03/22 00:15	7440-50-8	
Lead	ND	mg/L	0.0010	0.00089	1	09/02/22 12:19	09/03/22 00:15	7439-92-1	
Nickel	ND	mg/L	0.0050	0.00071	1	09/02/22 12:19	09/03/22 00:15	7440-02-0	
Selenium	ND	mg/L	0.0050	0.0014	1	09/02/22 12:19	09/03/22 00:15	7782-49-2	
Silver	ND	mg/L	0.0050	0.00044	1	09/02/22 12:19	09/03/22 00:15	7440-22-4	
Thallium	ND	mg/L	0.0010	0.00018	1	09/02/22 12:19	09/03/22 00:15	7440-28-0	
Vanadium	ND	mg/L	0.010	0.0019	1	09/02/22 12:19	09/03/22 00:15	7440-62-2	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A Pace Analytical Services - Peachtree Corners, GA							
Mercury	ND	mg/L	0.00020	0.00013	1	09/01/22 09:30	09/01/22 13:13	7439-97-6	
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	103	mg/L	25.0	10.0	1		08/23/22 15:30		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		09/01/22 06:55	16887-00-6	
Fluoride	ND	mg/L	0.10	0.050	1		09/01/22 06:55	16984-48-8	
Sulfate	ND	mg/L	1.0	0.50	1		09/01/22 06:55	14808-79-8	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch:	718953	Analysis Method:	EPA 6010D
QC Batch Method:	EPA 3010A	Analysis Description:	6010D ATL
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92621399001, 92621399002, 92621399003, 92621399004, 92621399005, 92621399006, 92621399007, 92621399008, 92621399009, 92621399010, 92621399011, 92621399012, 92621399013, 92621399014, 92621399015, 92621399016, 92621399017

METHOD BLANK: 3747357 Matrix: Water
Associated Lab Samples: 92621399001, 92621399002, 92621399003, 92621399004, 92621399005, 92621399006, 92621399007, 92621399008, 92621399009, 92621399010, 92621399011, 92621399012, 92621399013, 92621399014, 92621399015, 92621399016, 92621399017

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/24/22 19:52	
Zinc	mg/L	ND	0.020	0.0085	08/24/22 19:52	

LABORATORY CONTROL SAMPLE: 3747358

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	108	80-120	
Zinc	mg/L	1	1.1	109	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3747359 3747360

Parameter	Units	92619782002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Calcium	mg/L	ND	1	1	2.0	2.0	110	110	75-125	0	20	
Zinc	mg/L	299 ug/L	1	1	1.4	1.4	108	108	75-125	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch: 720318 Analysis Method: EPA 6010D
QC Batch Method: EPA 3010A Analysis Description: 6010D ATL
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621399018, 92621399019, 92621399020, 92621399021, 92621399022, 92621399023, 92621399024, 92621399025, 92621399026, 92621399027, 92621399028, 92621399029, 92621399030, 92621399031

METHOD BLANK: 3753528 Matrix: Water
Associated Lab Samples: 92621399018, 92621399019, 92621399020, 92621399021, 92621399022, 92621399023, 92621399024, 92621399025, 92621399026, 92621399027, 92621399028, 92621399029, 92621399030, 92621399031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Calcium	mg/L	ND	1.0	0.12	08/30/22 13:40	
Zinc	mg/L	ND	0.020	0.0085	08/30/22 13:40	

LABORATORY CONTROL SAMPLE: 3753529

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Calcium	mg/L	1	1.1	113	80-120	
Zinc	mg/L	1	1.1	110	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3753530 3753531

Parameter	Units	92621399019 Result	MS		MSD		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
			Spike Conc.	MS Spike Conc.	MS Result	MSD Result						
Calcium	mg/L	48.5	1	1	48.4	48.1	-14	-46	75-125	1	20	M1
Zinc	mg/L	ND	1	1	1.1	1.1	106	106	75-125	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch: 720924 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621399001, 92621399002, 92621399003, 92621399004

METHOD BLANK: 3756527 Matrix: Water
Associated Lab Samples: 92621399001, 92621399002, 92621399003, 92621399004

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/01/22 21:26	
Arsenic	mg/L	ND	0.0050	0.0022	09/01/22 21:26	
Barium	mg/L	ND	0.0050	0.00067	09/01/22 21:26	
Beryllium	mg/L	ND	0.00050	0.000054	09/01/22 21:26	
Boron	mg/L	ND	0.040	0.0086	09/01/22 21:26	
Cadmium	mg/L	ND	0.00050	0.00011	09/01/22 21:26	
Chromium	mg/L	ND	0.0050	0.0011	09/01/22 21:26	
Cobalt	mg/L	ND	0.0050	0.00039	09/01/22 21:26	
Copper	mg/L	ND	0.0050	0.0010	09/01/22 21:26	
Lead	mg/L	ND	0.0010	0.00089	09/01/22 21:26	
Nickel	mg/L	ND	0.0050	0.00071	09/01/22 21:26	
Selenium	mg/L	ND	0.0050	0.0014	09/01/22 21:26	
Silver	mg/L	ND	0.0050	0.00044	09/01/22 21:26	
Thallium	mg/L	ND	0.0010	0.00018	09/01/22 21:26	
Vanadium	mg/L	ND	0.010	0.0019	09/01/22 21:26	

LABORATORY CONTROL SAMPLE: 3756528

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	108	80-120	
Arsenic	mg/L	0.1	0.099	99	80-120	
Barium	mg/L	0.1	0.10	102	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Boron	mg/L	1	1.0	100	80-120	
Cadmium	mg/L	0.1	0.10	103	80-120	
Chromium	mg/L	0.1	0.099	99	80-120	
Cobalt	mg/L	0.1	0.097	97	80-120	
Copper	mg/L	0.1	0.10	101	80-120	
Lead	mg/L	0.1	0.099	99	80-120	
Nickel	mg/L	0.1	0.10	100	80-120	
Selenium	mg/L	0.1	0.098	98	80-120	
Silver	mg/L	0.1	0.10	101	80-120	
Thallium	mg/L	0.1	0.10	104	80-120	
Vanadium	mg/L	0.1	0.10	100	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3756529 3756530												
Parameter	Units	92622664005		MS	MSD	MS		MSD		% Rec Limits	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec			
Antimony	mg/L	<0.00078	0.1	0.1	0.10	0.11	104	107	75-125	4	20	
Arsenic	mg/L	<0.0022	0.1	0.1	0.095	0.097	95	97	75-125	2	20	
Barium	mg/L	0.0092	0.1	0.1	0.11	0.11	98	102	75-125	4	20	
Beryllium	mg/L	0.00056	0.1	0.1	0.095	0.098	95	97	75-125	2	20	
Boron	mg/L	0.015J	1	1	0.96	0.98	94	97	75-125	2	20	
Cadmium	mg/L	<0.00011	0.1	0.1	0.099	0.10	98	103	75-125	5	20	
Chromium	mg/L	<0.0011	0.1	0.1	0.096	0.098	95	97	75-125	2	20	
Cobalt	mg/L	<0.00039	0.1	0.1	0.093	0.095	93	95	75-125	2	20	
Copper	mg/L	0.0010J	0.1	0.1	0.097	0.10	96	98	75-125	2	20	
Lead	mg/L	<0.00089	0.1	0.1	0.095	0.099	95	99	75-125	4	20	
Nickel	mg/L	0.0033J	0.1	0.1	0.099	0.10	96	97	75-125	1	20	
Selenium	mg/L	<0.0014	0.1	0.1	0.094	0.096	94	96	75-125	2	20	
Silver	mg/L	<0.00044	0.1	0.1	0.095	0.099	95	99	75-125	4	20	
Thallium	mg/L	<0.00018	0.1	0.1	0.099	0.10	99	101	75-125	2	20	
Vanadium	mg/L	<0.0019	0.1	0.1	0.094	0.098	94	98	75-125	4	20	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch: 721237 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621399005, 92621399006, 92621399007, 92621399008, 92621399009, 92621399010, 92621399011, 92621399012, 92621399013, 92621399014, 92621399015, 92621399016, 92621399017, 92621399018, 92621399019, 92621399020, 92621399021, 92621399022, 92621399023, 92621399024

METHOD BLANK: 3757915 Matrix: Water
Associated Lab Samples: 92621399005, 92621399006, 92621399007, 92621399008, 92621399009, 92621399010, 92621399011, 92621399012, 92621399013, 92621399014, 92621399015, 92621399016, 92621399017, 92621399018, 92621399019, 92621399020, 92621399021, 92621399022, 92621399023, 92621399024

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/02/22 19:47	
Arsenic	mg/L	ND	0.0050	0.0022	09/02/22 19:47	
Barium	mg/L	ND	0.0050	0.00067	09/02/22 19:47	
Beryllium	mg/L	ND	0.00050	0.000054	09/02/22 19:47	
Boron	mg/L	ND	0.040	0.0086	09/02/22 19:47	
Cadmium	mg/L	ND	0.00050	0.00011	09/02/22 19:47	
Chromium	mg/L	ND	0.0050	0.0011	09/02/22 19:47	
Cobalt	mg/L	ND	0.0050	0.00039	09/02/22 19:47	
Copper	mg/L	ND	0.0050	0.0010	09/02/22 19:47	
Lead	mg/L	ND	0.0010	0.00089	09/02/22 19:47	
Nickel	mg/L	ND	0.0050	0.00071	09/02/22 19:47	
Selenium	mg/L	ND	0.0050	0.0014	09/02/22 19:47	
Silver	mg/L	ND	0.0050	0.00044	09/02/22 19:47	
Thallium	mg/L	ND	0.0010	0.00018	09/02/22 19:47	
Vanadium	mg/L	ND	0.010	0.0019	09/02/22 19:47	

LABORATORY CONTROL SAMPLE: 3757916

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	112	80-120	
Arsenic	mg/L	0.1	0.10	103	80-120	
Barium	mg/L	0.1	0.11	106	80-120	
Beryllium	mg/L	0.1	0.10	102	80-120	
Boron	mg/L	1	1.0	102	80-120	
Cadmium	mg/L	0.1	0.11	105	80-120	
Chromium	mg/L	0.1	0.11	108	80-120	
Cobalt	mg/L	0.1	0.10	104	80-120	
Copper	mg/L	0.1	0.10	103	80-120	
Lead	mg/L	0.1	0.10	103	80-120	
Nickel	mg/L	0.1	0.11	105	80-120	
Selenium	mg/L	0.1	0.10	101	80-120	
Silver	mg/L	0.1	0.10	103	80-120	
Thallium	mg/L	0.1	0.11	105	80-120	
Vanadium	mg/L	0.1	0.11	108	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Parameter	Units	92621399005		3757917		3757918		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result								
Antimony	mg/L	0.0011J	0.1	0.1	0.11	0.11	112	114	75-125	2	20			
Arsenic	mg/L	ND	0.1	0.1	0.11	0.11	105	108	75-125	3	20			
Barium	mg/L	0.014	0.1	0.1	0.12	0.12	106	109	75-125	2	20			
Beryllium	mg/L	ND	0.1	0.1	0.10	0.10	103	103	75-125	0	20			
Boron	mg/L	0.011J	1	1	1.0	1.1	103	105	75-125	2	20			
Cadmium	mg/L	ND	0.1	0.1	0.10	0.11	103	106	75-125	3	20			
Chromium	mg/L	ND	0.1	0.1	0.11	0.11	108	108	75-125	1	20			
Cobalt	mg/L	ND	0.1	0.1	0.10	0.11	104	105	75-125	1	20			
Copper	mg/L	ND	0.1	0.1	0.10	0.10	104	103	75-125	1	20			
Lead	mg/L	ND	0.1	0.1	0.10	0.10	102	105	75-125	3	20			
Nickel	mg/L	ND	0.1	0.1	0.11	0.11	107	105	75-125	2	20			
Selenium	mg/L	ND	0.1	0.1	0.10	0.10	101	104	75-125	2	20			
Silver	mg/L	ND	0.1	0.1	0.10	0.10	103	105	75-125	2	20			
Thallium	mg/L	0.00024J	0.1	0.1	0.10	0.11	105	107	75-125	2	20			
Vanadium	mg/L	ND	0.1	0.1	0.11	0.11	109	110	75-125	0	20			

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch: 721240 Analysis Method: EPA 6020B
QC Batch Method: EPA 3005A Analysis Description: 6020 MET
Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92621399025, 92621399026, 92621399027, 92621399028, 92621399029, 92621399030, 92621399031

METHOD BLANK: 3757929 Matrix: Water
Associated Lab Samples: 92621399025, 92621399026, 92621399027, 92621399028, 92621399029, 92621399030, 92621399031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Antimony	mg/L	ND	0.0030	0.00078	09/02/22 22:57	
Arsenic	mg/L	ND	0.0050	0.0022	09/02/22 22:57	
Barium	mg/L	ND	0.0050	0.00067	09/02/22 22:57	
Beryllium	mg/L	ND	0.00050	0.000054	09/02/22 22:57	
Boron	mg/L	ND	0.040	0.0086	09/02/22 22:57	
Cadmium	mg/L	ND	0.00050	0.00011	09/02/22 22:57	
Chromium	mg/L	ND	0.0050	0.0011	09/02/22 22:57	
Cobalt	mg/L	ND	0.0050	0.00039	09/02/22 22:57	
Copper	mg/L	ND	0.0050	0.0010	09/02/22 22:57	
Lead	mg/L	ND	0.0010	0.00089	09/02/22 22:57	
Nickel	mg/L	ND	0.0050	0.00071	09/02/22 22:57	
Selenium	mg/L	ND	0.0050	0.0014	09/02/22 22:57	
Silver	mg/L	ND	0.0050	0.00044	09/02/22 22:57	
Thallium	mg/L	ND	0.0010	0.00018	09/02/22 22:57	
Vanadium	mg/L	ND	0.010	0.0019	09/02/22 22:57	

LABORATORY CONTROL SAMPLE: 3757930

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Antimony	mg/L	0.1	0.11	112	80-120	
Arsenic	mg/L	0.1	0.10	101	80-120	
Barium	mg/L	0.1	0.10	104	80-120	
Beryllium	mg/L	0.1	0.097	97	80-120	
Boron	mg/L	1	0.99	99	80-120	
Cadmium	mg/L	0.1	0.10	104	80-120	
Chromium	mg/L	0.1	0.10	104	80-120	
Cobalt	mg/L	0.1	0.10	101	80-120	
Copper	mg/L	0.1	0.10	100	80-120	
Lead	mg/L	0.1	0.10	102	80-120	
Nickel	mg/L	0.1	0.10	102	80-120	
Selenium	mg/L	0.1	0.099	99	80-120	
Silver	mg/L	0.1	0.10	103	80-120	
Thallium	mg/L	0.1	0.10	104	80-120	
Vanadium	mg/L	0.1	0.10	104	80-120	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3758268 3758269												
Parameter	Units	92621399027		MS	MSD	MS		MSD		% Rec Limits	Max RPD	Qual
		Result	Conc.	Spike Conc.	Spike Conc.	Result	Result	% Rec	% Rec			
Antimony	mg/L	ND	0.1	0.1	0.11	0.11	110	112	75-125	1	20	
Arsenic	mg/L	ND	0.1	0.1	0.10	0.10	102	104	75-125	1	20	
Barium	mg/L	0.10	0.1	0.1	0.20	0.20	99	103	75-125	2	20	
Beryllium	mg/L	ND	0.1	0.1	0.095	0.097	95	97	75-125	3	20	
Boron	mg/L	0.015J	1	1	0.99	1.0	97	98	75-125	1	20	
Cadmium	mg/L	ND	0.1	0.1	0.10	0.10	101	102	75-125	0	20	
Chromium	mg/L	ND	0.1	0.1	0.11	0.10	106	104	75-125	2	20	
Cobalt	mg/L	ND	0.1	0.1	0.10	0.099	101	99	75-125	2	20	
Copper	mg/L	ND	0.1	0.1	0.098	0.097	98	97	75-125	1	20	
Lead	mg/L	ND	0.1	0.1	0.10	0.10	100	100	75-125	1	20	
Nickel	mg/L	ND	0.1	0.1	0.10	0.10	101	100	75-125	1	20	
Selenium	mg/L	ND	0.1	0.1	0.10	0.098	99	97	75-125	2	20	
Silver	mg/L	ND	0.1	0.1	0.099	0.099	99	99	75-125	0	20	
Thallium	mg/L	ND	0.1	0.1	0.10	0.10	101	101	75-125	0	20	
Vanadium	mg/L	ND	0.1	0.1	0.11	0.11	107	107	75-125	0	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

QC Batch:	720617	Analysis Method:	EPA 7470A
QC Batch Method:	EPA 7470A	Analysis Description:	7470 Mercury
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92621399001, 92621399002, 92621399003, 92621399004, 92621399005, 92621399006, 92621399007, 92621399008, 92621399009, 92621399010, 92621399011, 92621399012, 92621399013, 92621399014, 92621399015

METHOD BLANK: 3754840 Matrix: Water

Associated Lab Samples: 92621399001, 92621399002, 92621399003, 92621399004, 92621399005, 92621399006, 92621399007, 92621399008, 92621399009, 92621399010, 92621399011, 92621399012, 92621399013, 92621399014, 92621399015

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	08/31/22 15:12	

LABORATORY CONTROL SAMPLE: 3754841

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0024	98	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3754842 3754843

Parameter	Units	92621399001		3754843		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result						
Mercury	mg/L	ND	0.0025	0.0025	0.0026	0.0026	106	103	75-125	2	20

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch: 720854 Analysis Method: EPA 7470A
QC Batch Method: EPA 7470A Analysis Description: 7470 Mercury
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621399016, 92621399017, 92621399018, 92621399019, 92621399020, 92621399021, 92621399022, 92621399023, 92621399024, 92621399025, 92621399026, 92621399027, 92621399028, 92621399029, 92621399030, 92621399031

METHOD BLANK: 3756236 Matrix: Water
Associated Lab Samples: 92621399016, 92621399017, 92621399018, 92621399019, 92621399020, 92621399021, 92621399022, 92621399023, 92621399024, 92621399025, 92621399026, 92621399027, 92621399028, 92621399029, 92621399030, 92621399031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Mercury	mg/L	ND	0.00020	0.00013	09/01/22 12:10	

LABORATORY CONTROL SAMPLE: 3756237

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	mg/L	0.0025	0.0026	102	80-120	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3756238 3756239

Parameter	Units	92621399016		3756239		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual	
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result							MSD Result
Mercury	mg/L	ND	0.0025	0.0025	0.0026	0.0026	106	103	75-125	2	20	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch:	718686	Analysis Method:	SM 2540C-2015
QC Batch Method:	SM 2540C-2015	Analysis Description:	2540C Total Dissolved Solids
		Laboratory:	Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92621399009, 92621399010, 92621399011, 92621399012, 92621399013, 92621399014, 92621399015, 92621399016, 92621399017, 92621399018

METHOD BLANK: 3746096 Matrix: Water
Associated Lab Samples: 92621399009, 92621399010, 92621399011, 92621399012, 92621399013, 92621399014, 92621399015, 92621399016, 92621399017, 92621399018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	08/22/22 13:24	

LABORATORY CONTROL SAMPLE: 3746097

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	377	94	80-120	

SAMPLE DUPLICATE: 3746098

Parameter	Units	92621399011 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	159	149	6	25	

SAMPLE DUPLICATE: 3746099

Parameter	Units	92621596009 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	191	204	7	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch: 718687 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621399001, 92621399002, 92621399003, 92621399004, 92621399005, 92621399006, 92621399007, 92621399008

METHOD BLANK: 3746100 Matrix: Water
Associated Lab Samples: 92621399001, 92621399002, 92621399003, 92621399004, 92621399005, 92621399006, 92621399007, 92621399008

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	08/22/22 13:45	

LABORATORY CONTROL SAMPLE: 3746101

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	374	94	80-120	

SAMPLE DUPLICATE: 3746102

Parameter	Units	92620047014 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	50.0	55.0	10	25	

SAMPLE DUPLICATE: 3746115

Parameter	Units	92621399001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	226	225	0	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch: 718925 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92621399019, 92621399020, 92621399021, 92621399022, 92621399023, 92621399024, 92621399025, 92621399026, 92621399027, 92621399028, 92621399029

METHOD BLANK: 3747275 Matrix: Water
Associated Lab Samples: 92621399019, 92621399020, 92621399021, 92621399022, 92621399023, 92621399024, 92621399025, 92621399026, 92621399027, 92621399028, 92621399029

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	08/23/22 14:29	

LABORATORY CONTROL SAMPLE: 3747276

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	366	92	80-120	

SAMPLE DUPLICATE: 3747277

Parameter	Units	92620047023 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	125	127	2	25	

SAMPLE DUPLICATE: 3747278

Parameter	Units	92621399021 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	141	141	0	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

QC Batch: 719069

Analysis Method: SM 2540C-2015

QC Batch Method: SM 2540C-2015

Analysis Description: 2540C Total Dissolved Solids

Laboratory: Pace Analytical Services - Peachtree Corners, GA

Associated Lab Samples: 92621399030, 92621399031

METHOD BLANK: 3748069

Matrix: Water

Associated Lab Samples: 92621399030, 92621399031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	10.0	08/23/22 15:30	

LABORATORY CONTROL SAMPLE: 3748070

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	386	96	80-120	

SAMPLE DUPLICATE: 3748071

Parameter	Units	92620682001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	46.0	55.0	18	25	

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch: 719421 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92621399001, 92621399002, 92621399003, 92621399004, 92621399005, 92621399006, 92621399007, 92621399008, 92621399009, 92621399010, 92621399011, 92621399012, 92621399013, 92621399014, 92621399015, 92621399016

METHOD BLANK: 3749772 Matrix: Water
Associated Lab Samples: 92621399001, 92621399002, 92621399003, 92621399004, 92621399005, 92621399006, 92621399007, 92621399008, 92621399009, 92621399010, 92621399011, 92621399012, 92621399013, 92621399014, 92621399015, 92621399016

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/25/22 05:24	
Fluoride	mg/L	ND	0.10	0.050	08/25/22 05:24	
Sulfate	mg/L	ND	1.0	0.50	08/25/22 05:24	

LABORATORY CONTROL SAMPLE: 3749773

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	47.2	94	90-110	
Fluoride	mg/L	2.5	2.4	97	90-110	
Sulfate	mg/L	50	48.6	97	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3749774 3749775

Parameter	Units	92621844002 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Chloride	mg/L	98.7	50	50	139	140	81	82	90-110	0	10	M1
Fluoride	mg/L	0.57	2.5	2.5	3.1	3.1	101	101	90-110	0	10	
Sulfate	mg/L	51.8	50	50	99.0	99.3	94	95	90-110	0	10	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3749776 3749777

Parameter	Units	92621399007 Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec	% Rec Limits	Max		Qual
										RPD	RPD	
Chloride	mg/L	ND	50	50	48.6	49.1	96	97	90-110	1	10	
Fluoride	mg/L	0.062J	2.5	2.5	2.6	2.6	101	102	90-110	1	10	
Sulfate	mg/L	0.53J	50	50	49.3	50.1	98	99	90-110	2	10	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch: 719561 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville

Associated Lab Samples: 92621399017, 92621399018

METHOD BLANK: 3750175 Matrix: Water

Associated Lab Samples: 92621399017, 92621399018

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/25/22 21:26	
Fluoride	mg/L	ND	0.10	0.050	08/25/22 21:26	
Sulfate	mg/L	ND	1.0	0.50	08/25/22 21:26	

LABORATORY CONTROL SAMPLE: 3750176

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.5	103	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	50.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3750177 3750178

Parameter	Units	92622228003		MS Spike Conc.		MSD Spike Conc.		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Conc.	Result	Result						
Chloride	mg/L	17.4	50	50	68.6	69.2	102	104	90-110	1	10		
Fluoride	mg/L	<0.050	2.5	2.5	2.9	2.9	115	115	90-110	0	10	M1	
Sulfate	mg/L	40.6	50	50	90.3	90.5	99	100	90-110	0	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3750179 3750180

Parameter	Units	92621826008		MS Spike Conc.		MSD Spike Conc.		% Rec	% Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	Conc.	Conc.	Conc.	Result	Result						
Chloride	mg/L	162	50	50	161	120	-3	-84	90-110	29	10	M1, R1	
Fluoride	mg/L	0.11	2.5	2.5	4.0	4.2	157	163	90-110	3	10	M1	
Sulfate	mg/L	ND	50	50	51.9	52.7	103	105	90-110	1	10		

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

QC Batch: 720260 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92621399019, 92621399020, 92621399021, 92621399022, 92621399023, 92621399024, 92621399025, 92621399026, 92621399027, 92621399028, 92621399029, 92621399030, 92621399031

METHOD BLANK: 3753399 Matrix: Water
Associated Lab Samples: 92621399019, 92621399020, 92621399021, 92621399022, 92621399023, 92621399024, 92621399025, 92621399026, 92621399027, 92621399028, 92621399029, 92621399030, 92621399031

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	08/31/22 23:15	
Fluoride	mg/L	ND	0.10	0.050	08/31/22 23:15	
Sulfate	mg/L	ND	1.0	0.50	08/31/22 23:15	

LABORATORY CONTROL SAMPLE: 3753400

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	49.8	100	90-110	
Fluoride	mg/L	2.5	2.7	108	90-110	
Sulfate	mg/L	50	50.1	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3753401 3753402

Parameter	Units	92621399019		3753402		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chloride	mg/L	2.5	50	50	59.3	59.3	113	114	90-110	0	10 M1
Fluoride	mg/L	0.051J	2.5	2.5	2.6	2.6	102	104	90-110	2	10
Sulfate	mg/L	1.5	50	50	57.8	57.8	113	113	90-110	0	10 M1

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3753403 3753404

Parameter	Units	92621399029		3753404		MS % Rec	MSD % Rec	% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result						
Chloride	mg/L	0.88J	50	50	58.0	57.9	114	114	90-110	0	10 M1
Fluoride	mg/L	0.053J	2.5	2.5	2.6	2.6	102	103	90-110	1	10
Sulfate	mg/L	0.87J	50	50	57.5	57.6	113	113	90-110	0	10 M1

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

M1 Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.
R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2
Pace Project No.: 92621399

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92621399001	GWA-4RZ				
92621399002	GWA-50R				
92621399003	GWC-6				
92621399004	GWC-6RZ				
92621399005	GWC-7Z				
92621399006	GWC-8Z				
92621399007	GWC-8RR				
92621399008	GWC-9				
92621399009	GWC-10				
92621399011	GWA-1				
92621399012	GWA-2				
92621399013	GWA-2R				
92621399014	GWA-3A				
92621399015	GWA-50				
92621399016	GWC-5				
92621399019	GWC-10R				
92621399020	GWC-11				
92621399021	GWC-11R				
92621399022	GWC-12				
92621399023	GWC-13				
92621399024	GWC-14Z				
92621399027	GWC-13RZ				
92621399028	GWC-15R				
92621399029	GWC-15Z				
92621399001	GWA-4RZ	EPA 3010A	718953	EPA 6010D	719356
92621399002	GWA-50R	EPA 3010A	718953	EPA 6010D	719356
92621399003	GWC-6	EPA 3010A	718953	EPA 6010D	719356
92621399004	GWC-6RZ	EPA 3010A	718953	EPA 6010D	719356
92621399005	GWC-7Z	EPA 3010A	718953	EPA 6010D	719356
92621399006	GWC-8Z	EPA 3010A	718953	EPA 6010D	719356
92621399007	GWC-8RR	EPA 3010A	718953	EPA 6010D	719356
92621399008	GWC-9	EPA 3010A	718953	EPA 6010D	719356
92621399009	GWC-10	EPA 3010A	718953	EPA 6010D	719356
92621399010	FB-2	EPA 3010A	718953	EPA 6010D	719356
92621399011	GWA-1	EPA 3010A	718953	EPA 6010D	719356
92621399012	GWA-2	EPA 3010A	718953	EPA 6010D	719356
92621399013	GWA-2R	EPA 3010A	718953	EPA 6010D	719356
92621399014	GWA-3A	EPA 3010A	718953	EPA 6010D	719356
92621399015	GWA-50	EPA 3010A	718953	EPA 6010D	719356
92621399016	GWC-5	EPA 3010A	718953	EPA 6010D	719356
92621399017	DUP-1	EPA 3010A	718953	EPA 6010D	719356
92621399018	FB-1	EPA 3010A	720318	EPA 6010D	720408
92621399019	GWC-10R	EPA 3010A	720318	EPA 6010D	720408
92621399020	GWC-11	EPA 3010A	720318	EPA 6010D	720408
92621399021	GWC-11R	EPA 3010A	720318	EPA 6010D	720408
92621399022	GWC-12	EPA 3010A	720318	EPA 6010D	720408
92621399023	GWC-13	EPA 3010A	720318	EPA 6010D	720408
92621399024	GWC-14Z	EPA 3010A	720318	EPA 6010D	720408

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92621399025	DUP-2	EPA 3010A	720318	EPA 6010D	720408
92621399026	FB-3	EPA 3010A	720318	EPA 6010D	720408
92621399027	GWC-13RZ	EPA 3010A	720318	EPA 6010D	720408
92621399028	GWC-15R	EPA 3010A	720318	EPA 6010D	720408
92621399029	GWC-15Z	EPA 3010A	720318	EPA 6010D	720408
92621399030	DUP-3	EPA 3010A	720318	EPA 6010D	720408
92621399031	FB-4	EPA 3010A	720318	EPA 6010D	720408
92621399001	GWA-4RZ	EPA 3005A	720924	EPA 6020B	721094
92621399002	GWA-50R	EPA 3005A	720924	EPA 6020B	721094
92621399003	GWC-6	EPA 3005A	720924	EPA 6020B	721094
92621399004	GWC-6RZ	EPA 3005A	720924	EPA 6020B	721094
92621399005	GWC-7Z	EPA 3005A	721237	EPA 6020B	721356
92621399006	GWC-8Z	EPA 3005A	721237	EPA 6020B	721356
92621399007	GWC-8RR	EPA 3005A	721237	EPA 6020B	721356
92621399008	GWC-9	EPA 3005A	721237	EPA 6020B	721356
92621399009	GWC-10	EPA 3005A	721237	EPA 6020B	721356
92621399010	FB-2	EPA 3005A	721237	EPA 6020B	721356
92621399011	GWA-1	EPA 3005A	721237	EPA 6020B	721356
92621399012	GWA-2	EPA 3005A	721237	EPA 6020B	721356
92621399013	GWA-2R	EPA 3005A	721237	EPA 6020B	721356
92621399014	GWA-3A	EPA 3005A	721237	EPA 6020B	721356
92621399015	GWA-50	EPA 3005A	721237	EPA 6020B	721356
92621399016	GWC-5	EPA 3005A	721237	EPA 6020B	721356
92621399017	DUP-1	EPA 3005A	721237	EPA 6020B	721356
92621399018	FB-1	EPA 3005A	721237	EPA 6020B	721356
92621399019	GWC-10R	EPA 3005A	721237	EPA 6020B	721356
92621399020	GWC-11	EPA 3005A	721237	EPA 6020B	721356
92621399021	GWC-11R	EPA 3005A	721237	EPA 6020B	721356
92621399022	GWC-12	EPA 3005A	721237	EPA 6020B	721356
92621399023	GWC-13	EPA 3005A	721237	EPA 6020B	721356
92621399024	GWC-14Z	EPA 3005A	721237	EPA 6020B	721356
92621399025	DUP-2	EPA 3005A	721240	EPA 6020B	721359
92621399026	FB-3	EPA 3005A	721240	EPA 6020B	721359
92621399027	GWC-13RZ	EPA 3005A	721240	EPA 6020B	721359
92621399028	GWC-15R	EPA 3005A	721240	EPA 6020B	721359
92621399029	GWC-15Z	EPA 3005A	721240	EPA 6020B	721359
92621399030	DUP-3	EPA 3005A	721240	EPA 6020B	721359
92621399031	FB-4	EPA 3005A	721240	EPA 6020B	721359
92621399001	GWA-4RZ	EPA 7470A	720617	EPA 7470A	720674
92621399002	GWA-50R	EPA 7470A	720617	EPA 7470A	720674
92621399003	GWC-6	EPA 7470A	720617	EPA 7470A	720674
92621399004	GWC-6RZ	EPA 7470A	720617	EPA 7470A	720674
92621399005	GWC-7Z	EPA 7470A	720617	EPA 7470A	720674
92621399006	GWC-8Z	EPA 7470A	720617	EPA 7470A	720674
92621399007	GWC-8RR	EPA 7470A	720617	EPA 7470A	720674
92621399008	GWC-9	EPA 7470A	720617	EPA 7470A	720674
92621399009	GWC-10	EPA 7470A	720617	EPA 7470A	720674

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92621399010	FB-2	EPA 7470A	720617	EPA 7470A	720674
92621399011	GWA-1	EPA 7470A	720617	EPA 7470A	720674
92621399012	GWA-2	EPA 7470A	720617	EPA 7470A	720674
92621399013	GWA-2R	EPA 7470A	720617	EPA 7470A	720674
92621399014	GWA-3A	EPA 7470A	720617	EPA 7470A	720674
92621399015	GWA-50	EPA 7470A	720617	EPA 7470A	720674
92621399016	GWC-5	EPA 7470A	720854	EPA 7470A	720932
92621399017	DUP-1	EPA 7470A	720854	EPA 7470A	720932
92621399018	FB-1	EPA 7470A	720854	EPA 7470A	720932
92621399019	GWC-10R	EPA 7470A	720854	EPA 7470A	720932
92621399020	GWC-11	EPA 7470A	720854	EPA 7470A	720932
92621399021	GWC-11R	EPA 7470A	720854	EPA 7470A	720932
92621399022	GWC-12	EPA 7470A	720854	EPA 7470A	720932
92621399023	GWC-13	EPA 7470A	720854	EPA 7470A	720932
92621399024	GWC-14Z	EPA 7470A	720854	EPA 7470A	720932
92621399025	DUP-2	EPA 7470A	720854	EPA 7470A	720932
92621399026	FB-3	EPA 7470A	720854	EPA 7470A	720932
92621399027	GWC-13RZ	EPA 7470A	720854	EPA 7470A	720932
92621399028	GWC-15R	EPA 7470A	720854	EPA 7470A	720932
92621399029	GWC-15Z	EPA 7470A	720854	EPA 7470A	720932
92621399030	DUP-3	EPA 7470A	720854	EPA 7470A	720932
92621399031	FB-4	EPA 7470A	720854	EPA 7470A	720932
92621399001	GWA-4RZ	SM 2540C-2015	718687		
92621399002	GWA-50R	SM 2540C-2015	718687		
92621399003	GWC-6	SM 2540C-2015	718687		
92621399004	GWC-6RZ	SM 2540C-2015	718687		
92621399005	GWC-7Z	SM 2540C-2015	718687		
92621399006	GWC-8Z	SM 2540C-2015	718687		
92621399007	GWC-8RR	SM 2540C-2015	718687		
92621399008	GWC-9	SM 2540C-2015	718687		
92621399009	GWC-10	SM 2540C-2015	718686		
92621399010	FB-2	SM 2540C-2015	718686		
92621399011	GWA-1	SM 2540C-2015	718686		
92621399012	GWA-2	SM 2540C-2015	718686		
92621399013	GWA-2R	SM 2540C-2015	718686		
92621399014	GWA-3A	SM 2540C-2015	718686		
92621399015	GWA-50	SM 2540C-2015	718686		
92621399016	GWC-5	SM 2540C-2015	718686		
92621399017	DUP-1	SM 2540C-2015	718686		
92621399018	FB-1	SM 2540C-2015	718686		
92621399019	GWC-10R	SM 2540C-2015	718925		
92621399020	GWC-11	SM 2540C-2015	718925		
92621399021	GWC-11R	SM 2540C-2015	718925		
92621399022	GWC-12	SM 2540C-2015	718925		
92621399023	GWC-13	SM 2540C-2015	718925		
92621399024	GWC-14Z	SM 2540C-2015	718925		
92621399025	DUP-2	SM 2540C-2015	718925		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 1&2

Pace Project No.: 92621399

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92621399026	FB-3	SM 2540C-2015	718925		
92621399027	GWC-13RZ	SM 2540C-2015	718925		
92621399028	GWC-15R	SM 2540C-2015	718925		
92621399029	GWC-15Z	SM 2540C-2015	718925		
92621399030	DUP-3	SM 2540C-2015	719069		
92621399031	FB-4	SM 2540C-2015	719069		
92621399001	GWA-4RZ	EPA 300.0 Rev 2.1 1993	719421		
92621399002	GWA-50R	EPA 300.0 Rev 2.1 1993	719421		
92621399003	GWC-6	EPA 300.0 Rev 2.1 1993	719421		
92621399004	GWC-6RZ	EPA 300.0 Rev 2.1 1993	719421		
92621399005	GWC-7Z	EPA 300.0 Rev 2.1 1993	719421		
92621399006	GWC-8Z	EPA 300.0 Rev 2.1 1993	719421		
92621399007	GWC-8RR	EPA 300.0 Rev 2.1 1993	719421		
92621399008	GWC-9	EPA 300.0 Rev 2.1 1993	719421		
92621399009	GWC-10	EPA 300.0 Rev 2.1 1993	719421		
92621399010	FB-2	EPA 300.0 Rev 2.1 1993	719421		
92621399011	GWA-1	EPA 300.0 Rev 2.1 1993	719421		
92621399012	GWA-2	EPA 300.0 Rev 2.1 1993	719421		
92621399013	GWA-2R	EPA 300.0 Rev 2.1 1993	719421		
92621399014	GWA-3A	EPA 300.0 Rev 2.1 1993	719421		
92621399015	GWA-50	EPA 300.0 Rev 2.1 1993	719421		
92621399016	GWC-5	EPA 300.0 Rev 2.1 1993	719421		
92621399017	DUP-1	EPA 300.0 Rev 2.1 1993	719561		
92621399018	FB-1	EPA 300.0 Rev 2.1 1993	719561		
92621399019	GWC-10R	EPA 300.0 Rev 2.1 1993	720260		
92621399020	GWC-11	EPA 300.0 Rev 2.1 1993	720260		
92621399021	GWC-11R	EPA 300.0 Rev 2.1 1993	720260		
92621399022	GWC-12	EPA 300.0 Rev 2.1 1993	720260		
92621399023	GWC-13	EPA 300.0 Rev 2.1 1993	720260		
92621399024	GWC-14Z	EPA 300.0 Rev 2.1 1993	720260		
92621399025	DUP-2	EPA 300.0 Rev 2.1 1993	720260		
92621399026	FB-3	EPA 300.0 Rev 2.1 1993	720260		
92621399027	GWC-13RZ	EPA 300.0 Rev 2.1 1993	720260		
92621399028	GWC-15R	EPA 300.0 Rev 2.1 1993	720260		
92621399029	GWC-15Z	EPA 300.0 Rev 2.1 1993	720260		
92621399030	DUP-3	EPA 300.0 Rev 2.1 1993	720260		
92621399031	FB-4	EPA 300.0 Rev 2.1 1993	720260		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta

Sample Condition Upon Receipt

Client Name: GA Power

Project # WO#: 92621399



Courier: Commercial Fed Ex UPS USPS Client Other:

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 8/18/22

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen? Yes No N/A

Thermometer: IR Gun ID: 214 Type of Ice: Wet Blue None

Cooler Temp: 3.3 Correction Factor: 0.0 Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C): 3.3

USDA Regulated Soil (N/A, water sample) Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: W			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: Date/Time:

Project Manager SCURF Review: Date:

Project Manager SRF Review: Date:



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92621399

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Project # **PM: NMG** Due Date: **09/01/22**

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

CLIENT: GA-GA Power

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic 2N Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
4																													
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11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92621399

PM: NMG

Due Date: 09/01/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG9A-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1																												
2																												
3																												
4																												
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10																												
11																												
12																												

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/ubs/pas-standard-terms.pdf>.

Section B

Section C

Page : 1 of 3

CHAIN-OF-CUSTODY / Analytical Request Document

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

Required Client Information:
 Company: Georgia Power
 Address: 241 Ralph McGill Blvd. NE
 Atlanta, GA 30308
 Email: kjarjunk@sculenco.com
 Phone: (470) 217-0008
 Fax: Standard
 Requested Due Date: Standard

Required Project Information:
 Report To: Kristien Juriniko, Cassidy Sutherland
 Copy To: Laura Melkoff, Ben Hodges, Mike Smiley
 Project Name: Noodle Garini
 Purchase Order #: Bowen LF Cells 1&2
 Project #:

Invoice Information:
 Attention: Company Name: Georgia Power
 Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308
 Pace Quote: Pace Project Manager: nicole.d@pace@pace.com
 Pace Profile #: 10850-4

Regulatory Agency: State / Location: GA

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS							Requested Analysis: Filtered (Y/N)			Residual Chlorine (Y/N)	TEMP in C	Received on ice (Y/N)	Custody Sealed (Y/N)	Cooler (Y/N)	Samples intact (Y/N)																			
			DATE	TIME		Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Analyses Test	Y/N							Y/N	Y/N																	
1	GWA-1	WG G																																						
2	GWA-2	WG G																																						
3	GWA-2R	WG G																																						
4	GWA-3A	WG G																																						
5	GWA-4RZ	WG G	8/17/22	0935																																				
6	GWA-50	WG G																																						
7	GWA-50R	WG G	8/17/22	1127																																				
8	GWC-5	WG G																																						
9	GWC-6	WG G	8/17/22	1308																																				
10	GWC-6R2	WG G	8/17/22	1124																																				
11	GWC 7Z	WG G	8/17/22	1035																																				
12	GWC-8Z	WG G	8/17/22	1330																																				

ADDITIONAL COMMENTS:

RELINQUISHED BY / AFFILIATION: Will Leaker

ACCEPTED BY / AFFILIATION: Atoya Garner

DATE: 8/18/22

TIME: 0800

DATE: 8/18/22

TIME: 0800

SAMPLE CONDITIONS: 6.36

SAMPLER NAME AND SIGNATURE:

PRINT Name of SAMPLER: Will Leaker, Meredith Duncan, Kevin Stephensen

SIGNATURE of SAMPLER: *[Signature]* DATE signed: 8/17/22



Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>.

CHAIN-OF-CUSTODY / Analytical Request Document

Section A

Required Client Information:

Company: Georgia Power
 Address: 241 Ralph McGill Blvd, NE Atlanta, GA 30308
 Phone: (470) 217-0008 Fax:
 Email: inquiry@southernco.com

Required Project Information:

Report To: Kristin Junco, Cassidy Suberland
 Copy To: Laura Midgett, Ben Hodges, Mike Smiley
 Project Name: Bowen LE Cells 1&2
 Project #:
 Requested Due Date: Standard

Attention:
 Company Name: Georgia Power
 Address: 241 Ralph McGill Blvd, NE, Atlanta, GA 30308
 Pace Quote:
 Pace Project Manager: nicole.d'oliveo@paceclabs.com
 Pace Profile #: 10880-4

Regulatory Agency:
 State / Location: GA

Page: 3 of 3

ITEM #	SAMPLE ID One Character per box: (A-Z, 0-9 / , -) Sample IDs must be unique	MATRIX Drinking Water Waste Water Surface Water Process Water Wastewater Oil Wipe Air Other Tissue	CODE DIY WVI WNI P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test			Residual Chlorine (Y/N)								
						DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N	III/IV + State Metals		Cl, F, SO4	TDS						
25	DUP-1			WG	G																							
26	DUP-2			WG	G																							
27	DUP-3			WG	G																							
28	FB-1			WG	G																							
29	FB-2			WG	G		8/17/22	1422		3	2		1															
30	FB-3			WG	G																							
31	FB-4			WG	G																							
32	FB-5			WG	G																							
33	EB-1			WG	G																							
34	EB-2			WG	G																							
35	EB-3			WG	G																							
36																												

RELINQUISHED BY / AFFILIATION

Will Laaker
 Atoya Garner
 Ryan Williams / Pace

ACCEPTED BY / AFFILIATION

Atoya Garner
 Ryan Williams / Pace
 Ryan Williams / Pace

DATE: 8/18/22 8/18/22 8/19/22
 TIME: 0800 0935 1045 0800 0935 1045

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Will Laaker, Meredith Dungan, Kevin Stephenscn
 SIGNATURE of SAMPLER: *[Signature]* DATE Signed: 8/17/22

TEMP in C
 Received on ice (Y/N)
 Custody Sealed Cooler (Y/N)
 Samples Intact (Y/N)



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CHAIN-OF-CUSTODY / Analytical Request Document

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

Section A
Required Client Information:

Company: Georgia Power
Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308
Email: kajunika@southemco.com
Phone: (470) 217-0008
Requested Due Date: Standard

Section B
Required Project Information:

Report To: Kristen Juniko, Cassidy Sutherland
Copy To: Laura Midkiff, Ben Hodges, Mike Smiley
Purchase Order #: Noelia Gargi
Project Name: Bowen LF Cells 1&2
Project #:

Section C
Invoice Information:

Attention: Georgia Power
Company Name: Georgia Power
Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308
Pace Quote:
Pace Project Manager: nicole.d@ce@paceelabs.com
Pace Profile #: 10850-4

Regulatory Agency
State / Location
GA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9, '-', '-') Sample IDs must be unique	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives	Analyses Test	Requested Analyte Filtered (Y/N)	Residual Chlorine (Y/N)					
						DATE	TIME											
		Dinking Water Waste Water Process Sewer/Solid OI Wipe Air Other Tissue	DW WT WV P SL OL WP AR OT TS						Unpreserved H2SO4 HNO3 HCl NaOH Na2S2O3 Methanol Other	III/IV + State Metals Cl, F, SO4 TDS								
1	GWA-1			WG	G	8/16/22	1020		3	2	1						7.36	11
2	GWA-2			WG	G	8/16/22	1355		3	2	1						6.63	12
3	GWA-2R			WG	G	8/16/22	1150		3	2	1						7.11	13
4	GWA-3A			WG	G	8/16/22	1204		3	2	1						7.74	14
5	GWA-4RZ			WG	G													
6	GWA-50			WG	G	8/16/22	1407		3	2	1						5.29	15
7	GWA-50R			WG	G													
8	GWC-5			WG	G	8/16/22	1444		3	2	1						5.84	16
9	GWC-6			WG	G													
10	GWC-6RZ			WG	G													
11	GWC-7Z			WG	G													
12	GWC-8Z			WG	G													

REINFORCED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME
Will Laaker	8/18/22	0800	Ateya Garner	8/18/22	0800
Ateya Garner	8/18/22	0935	Ryan Williams	8/18/22	0935
Ryan Williams	8/18/22	1045	Bruno Garcia	8/18/22	1045

TEMP in C
Received on ice (Y/N)
Custody Sealed Cooler (Y/N)
Samples intact (Y/N)

SAMPLER NAME AND SIGNATURE		DATE SIGNED:
PRINT Name of SAMPLER: Meredith Duran, Will Laaker, Kevin Stephens on		8/16/22
SIGNATURE of SAMPLER: <i>Meredith Duran</i>		



CHAIN-OF-CUSTODY / Analytical Request Document

The Chain-of-Custody is a LEGAL DOCUMENT. All relevant fields must be completed accurately.
 Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pace-standard-terms.pdf>.

Section A
Required Client Information:

Company: Georgia Power
 Address: 241 Ralph McGill Blvd, NE Atlanta, GA 30308
 Email: kprunha@southemco.com
 Phone: (470) 217-0008
 Project Name: Bowen LF Cells 1&2
 Project #: Standard

Section B
Required Project Information:

Report To: Kristen Juntko, Cassidy Suberland
 Copy To: Laura Madril, Ben Rodgers, Mike Smiley
 Noelle Ganti
 Purchase Order #: Bowen LF Cells 1&2
 Project Name: Bowen LF Cells 1&2
 Project #:

Section C
Invoice Information:

Company Name: Georgia Power
 Address: 241 Ralph McGill Blvd, NE Atlanta, GA 30308
 Pace Quote: Pace Project Manager: nicole.duncan@pacelabs.com
 Pace Profile #: 10850-4
 Regulatory Agency: GA
 State / Location: GA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / . -) Sample IDs must be unique	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analysis Test			Residual Chlorine (Y/N)																		
						DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N	Y/N		Y/N																	
25	DUP-1	Driving Water	DW	WG	G	8/16/22	---	3	2	1																												
26	DUP-2	Waste Water	WW	WG	G																																	
27	DUP-3	Product	P	WG	G																																	
28	FB-1	Scrubbed Oil	SO	WG	G	8/16/22	1528		3	2	1																											
29	FB-2	Oil	O	WG	G																																	
30	FB-3	Wipe	W	WG	G																																	
31	FB-4	Oil	O	WG	G																																	
32	FB-5	Wipe	W	WG	G																																	
33	EB-1	Oil	O	WG	G																																	
34	EB-2	Oil	O	WG	G																																	
35	EB-3	Oil	O	WG	G																																	
36																																						

REQUISITIONED BY / AFFILIATION: Will Locker
DATE: 8/18/22
TIME: 0800

ACCEPTED BY / AFFILIATION: Araya Garner
DATE: 8/18/22
TIME: 0800

REQUISITIONED BY / AFFILIATION: Araya Garner
DATE: 8/18/22
TIME: 0935

ACCEPTED BY / AFFILIATION: Ryan W. White
DATE: 8/18/22
TIME: 0935

REQUISITIONED BY / AFFILIATION: Ryan W. White
DATE: 8/18/22
TIME: 1045

ACCEPTED BY / AFFILIATION: Amanda Sparks
DATE: 8/18/22
TIME: 1045

SAMPLER NAME AND SIGNATURE:
 PRINT Name of SAMPLER: Meredith Duncan, Will Locker, Kevin Stephenson
 SIGNATURE of SAMPLER: [Signatures]
 DATE Signed: 8/16/22

TEMP in C:
 Received on Ice (Y/N)
 Custody Sealed (Y/N)
 Cooler (Y/N)
 Samples Intact (Y/N)



Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pass-standard/terms.pdf>.

CHAIN-OF-CUSTODY / Analytical Request Document

Section A
Requested Client Information:
 Company: Georgia Power
 Address: 241 Ralph McGill Blvd. NE
 Atlanta, GA 30308
 Phone: (470) 217-0008
 Email: inquiry@pacelabs.com
 Requested Due Date: Standard

Section B
Required Project Information:
 Report To: Kristin Junkin, Cassidy Sutherland
 Copy To: Laura Midkiff, Ben Hodges, Mike Sratley
 Project Name: Bowen LF Cells 1&2
 Purchase Order #: Bowen LF Cells 1&2
 Project #: Bowen LF Cells 1&2

Section C
Attention:
 Company Name: Georgia Power
 Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308
 Pace Quote:
 Pace Project Manager: nicole.d@pacelabs.com
 Pace Profile #: 10850-4

Regulatory Agency:
 State / Location: GA

Requested Analysis Filtered (Y/N)

Page: 2 of 3

SAMPLE ID
 One Character per box.
 (A-Z, 0-9 /, -)
 Sample IDs must be unique

ITEM #	MATRIX	CODE	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	PRESERVATIVES							Analyses Test	Residual Chlorine (Y/N)		
					DATE	TIME		# OF CONTAINERS	Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3			Methanol	Other
13	GWC-8RR	DNV	WG	G										X	X	X		
14	GWC-9	WT	WG	G										X	X	X		
15	GWC-10	WW	WG	G										X	X	X		
16	GWC-10R	P	WG	G										X	X	X		
17	GWC-11	SL	WG	G										X	X	X		
18	GWC-11R	OL	WG	G										X	X	X		
19	GWC-12	W/P	WG	G										X	X	X		
20	GWC-13	AT	WG	G										X	X	X		
21	GWC-13RZ	OT	WG	G										X	X	X		
22	GWC-14Z	TS	WG	G										X	X	X		
23	GWC-15R		WG	G										X	X	X		
24	GWC-15Z		WG	G										X	X	X		

ADDITIONAL COMMENTS

RELINQUISHED BY / AFFILIATION: Will Looker
 DATE: 8/18/22
 TIME: 0800

ACCEPTED BY / AFFILIATION: Atiya Garner
 DATE: 8/18/22
 TIME: 0935

RELINQUISHED BY / AFFILIATION: Ryan W. Williams
 DATE: 8/16/22
 TIME: 1045

ACCEPTED BY / AFFILIATION: Ryan W. Williams
 DATE: 8/16/22
 TIME: 1045

REGULATORY AGENCY:
 State / Location: GA

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: Meredith Duncan, Will Looker, Kevin Stephenson
 SIGNATURE OF SAMPLER: *Meredith Duncan*
 DATE Signed: 8/16/22

SAMPLE CONDITIONS
 TEMP in C
 Received on ice (Y/N)
 Custody Sealed (Y/N)
 Cooler (Y/N)
 Samples intact (Y/N)

Project Manager SRF Review: _____
Date: _____

Project Manager SCURF Review: _____
Date: _____

Person contacted: _____
Date/Time: _____

CLIENT NOTIFICATION/RESOLUTION

PH Strip Lot# 10D4611

Lot ID of split containers

Field Data Required? Yes No

COMMENTS/SAMPLE DISCREPANCY

1	Chain of Custody Present?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
2	Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
3	Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
4	Rush Turn Around Time Requested?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
5	Sufficient Volume?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
6	Correct Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
7	-Face Containers Used?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
8	Containers Intact?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
9	Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
10	Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<input type="checkbox"/> N/A
11	Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
	Trip Blank Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A
	Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	<input type="checkbox"/> N/A

Comments/Discrepancy:

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

USA Regulated Soil (N/A, water sample) Cooler Temp Corrected (°C): 34/3.9

Cooler Temp: 214 Add/Subtract (°C) 6.0

Correction Factor:

Type of Ice: Wet Blue None

Thermometer: 214 Gun ID: _____

Packing Material: Bubble Wrap Bubble Bags None Other

Custody Seal Present? Yes No Seals Intact? Yes No

Courier: Commercial Fed Ex UPS USPS Client Other: _____

Sample Condition Upon Receipt: _____ Client Name: GA Power

Laboratory receiving samples: Asheville Eden Greenwood Huntersville Raleigh Me...

Project # _____
 PM: NMG
 CLIENT: GA-GA Power
 Due Date: 09/01/22
MO#: 92621399

Date/Initials Person Examining Contents: 8/22/22

Biological Tissue Frozen? Yes No N/A

DC# Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Page 78 of 85

Face

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

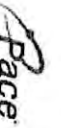
Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #
-----------	----------------------	-----------------	----------------------------	----------------------------	------------------------------	-------

pH Adjustment Log for Preserved Samples

Item#	1	2	3	4	5	6	7	8	9	10	11	12
BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)												
BP3U-250 mL Plastic Unpreserved (N/A)												
BP2U-500 mL Plastic Unpreserved (N/A)												
BP1U-1 liter Plastic Unpreserved (N/A)												
BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)												
BP3N-250 mL Plastic HNO3 (pH < 2)												
BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)												
BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)												
WGFW-Wide-mouthed Glass Jar Unpreserved												
AG1U-1 liter Amber Unpreserved (N/A) (Cl-)												
AG1H-1 liter Amber HCl (pH < 2)												
AG3U-250 mL Amber Unpreserved (N/A) (Cl-)												
AG1S-1 liter Amber H2SO4 (pH < 2)												
AG3S-250 mL Amber H2SO4 (pH < 2)												
DG9A-250 mL Amber NH4Cl (N/A)(Cl-)												
DG9H-40 mL VOA HCl (N/A)												
VG9T-40 mL VOA Na2S2O3 (N/A)												
VG9U-40 mL VOA Unpreserved (N/A)												
DG9V-40 mL VOA H3PO4 (N/A)												
DG9S-40 mL VOA H2SO4 (N/A)												
V/GK (3 vials per kit)-VPH/Gas kit (N/A)												
SP5T-125 mL Sterile Plastic (N/A - 13b)												
SP2T-250 mL Sterile Plastic (N/A - 13b)												
BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)												
AG0U-100 mL Amber Unpreserved (N/A) (Cl-)												
VSGU-20 mL Scintillation vials (N/A)												
DG9U-40 mL Amber Unpreserved vials (N/A)												

MO#: 92621399
 PM: MNG
 CLIENT: GR-GR Power
 Due Date: 09/01/22

*Check mark top half of box if pH and/or dechlorination is verified and
 Within the acceptance range for preservation samples.
 Exceptions: VOA, Coliform, TOC, Oil and Grease, PRO/8015 (water) DOC, LTHG
 **Bottom half of box is to list number of bottles
 ***Check all unpreserved Nitrates for chlorine



CHAIN-OF-CUSTODY / Analytical Request Document

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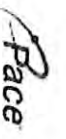
Section A
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/nubtr/pas-standard-terms.pdf>.

Required Client Information:		Required Project Information:		Section B	
Company: Georgia Power	Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308	Report To: Kristen Juritko, Cassidy Sutherland	Copy To: Laura Mickler, Ben Hodges, Mike Smitley	Project Name: Bowen LF Cells 1&2	Project #:
Email: kjuritko@scouthome.com	Phone: (470) 217-0038	Purchase Order #: Noelia Gargi	Company Name: Georgia Power	Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308	Attention:
Requested Due Date: Standard	Fax:	Project Name: Bowen LF Cells 1&2	Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308	Pace Project Manager: nicole.d'oleo@pacelabs.com	Pace Profile #: 10850-4
			Regulatory Agency		
			State / Location: GA		

ITEM #	SAMPLE ID (A-Z, 0-9, /, -) One character per box. Sample IDs must be unique	MATRIX Diluting Water Water Waste Water Product Soils/Solid Oil M Other Tanks	CODE DW WT WW P SL OL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	DATE	TIME	SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Y/N	Requested Analytes Filled (Y/N)	Residual Chlorine (Y/N)	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)							
										Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol								Other	III/IV + State Metals	Cl, F, SO4	TDS			
1	GWA-1			WG	G																									
2	GWA-2			WG	G																									
3	GWA-2R			WG	G																									
4	GWA-3A			WG	G																									
5	GWA-4RZ			WG	G																									
6	GWA-50			WG	G																									
7	GWA-50R			WG	G																									
8	GWC-5			WG	G																									
9	GWC-6			WG	G																									
10	GWC-8RZ			WG	G																									
11	GWC-7Z			WG	G																									
12	GWC-8Z			WG	G																									

RELINQUISHED BY / AFFILIATION		DATE		TIME		ACCEPTED BY / AFFILIATION		DATE		TIME		SAMPLE CONDITIONS	
Will Laker		8/22/22		0850		Bowen LF Cells 1&2		8/22/22		0852			
Bowen LF Cells 1&2		8/22/22		0938		Bowen LF Cells 1&2		8/22/22		0938			

SAMPLER NAME AND SIGNATURE		PRINT Name of SAMPLER:		DATE Signed:	
Will Laker, Meredith Duncan		Will Laker, Meredith Duncan		8/18/22	
SIGNATURE of SAMPLER:					



CHAIN-OF-CUSTODY / Analytical Request Document

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Section A
Required Client Information:

Company: Georgia Power
Address: 241 Ralph McGill Blvd. NE
Atlanta, GA 30308
Email: kjirumk@southemco.com
Phone: (470) 217-0008
Requested Due Date: Standard

Section B
Required Project Information:

Report To: Kristen Jurnko, Cassidy Suberland
Copy To: Laura Midlett, Ben Hodges, Mike Shilley
Purchase Order #: Noelia Gangi
Project Name: Bowen LF Cells 1&2
Project #:

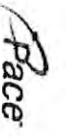
Section C
Invoice Information:

Company Name: Georgia Power
Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308
Phone:
Project Manager: nicole.d@ge.com
Face Profile #: 10850-4

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 / -) Sample IDs must be unique	MATRIX Drinking Water Waste Water Product Seawater Oil Wine Beer Tissue	CODE DW WW P SL OL WP WV A TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G-GRAB C-COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analytes Test	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)	SAMPLE CONDITIONS																	
						DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other					III/IV + State Metals	Cl, F, SO4	TDS	TEMP in C	Received on Ice (Y/N)	Custody Sealed Cooler (Y/N)	Samples Intact (Y/N)										
13	GWC-8RR																																					
14	GWC-9																																					
15	GWC-10																																					
16	GWC-10R						8/18/22	1010																														
17	GWC-11						8/18/22	1130																														
18	GWC-11R						8/18/22	1235																														
19	GWC-12						8/18/22	1447																														
20	GWC-13						8/18/22	1321																														
21	GWC-13RZ																																					
22	GWC-14Z						8/18/22	1300																														
23	GWC-15R																																					
24	GWC-15Z																																					

RELEASING BY / AFFILIATION: Will Locker
DATE: 8/22/22
TIME: 0800
SIGNATURE: Will Locker
ACCERTED BY / AFFILIATION: Kevin Stinson
DATE: 8/22/22
TIME: 0802
SIGNATURE: Kevin Stinson
RECEIVED BY / AFFILIATION: Ryan Williams
DATE: 8/22/22
TIME: 0938
SIGNATURE: Ryan Williams

TEMP in C:
Received on Ice (Y/N):
Custody Sealed Cooler (Y/N):
Samples Intact (Y/N):



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CHAIN-OF-CUSTODY / Analytical Request Document

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Required Client Information: Company: Georgia Power Address: 241 Ralph McGill Bldg. NE Atlanta, GA 30308 Email: knjurnik@southcon.com Phone: (470) 217-0008 Fax Requested Due Date: Standard	Required Project Information: Report To: Kristen Jurinika, Cassidy Sutherland Copy To: Laura Midkiff, Ben Hodges, Mike Srolley Purchase Order #: Noelia Gangi Project Name: Bowen LF Calls 182 Project #:
Inventory Information: Company Name: Georgia Power Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308 Pace Quote: Pace Project Manager: nicole.dolen@pacelabs.com Pace Profile #: 10850-4	Regulatory Agency: State / Location: GA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 /, -) Sample IDs must be unique	MATRIX Drinking Water Water Waste Water Product Water Seawater Oil Wine Air Other Tissue	CODE DW WT WW P SL CL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Y/N	Requested Analysis Filtered (Y/N)	Residual Chlorine (Y/N)																	
						DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other				III/IV + Slate Metals	Cl, F, SO4	TDS														
25	DUP-1			WG	G																																
26	DUP-2			WG	G	8/18/22			3	2																											
27	DUP-3			WG	G																																
28	FB-1			WQ	G																																
29	FB-2			WQ	G																																
30	FB-3			WQ	G	8/18/22	1530		3	2	1																										
31	FB-4			WQ	G																																
32	FB-5			WQ	G																																
33	EB-1			WQ	G																																
34	EB-2			WQ	G																																
35	EB-3			WQ	G																																
36																																					

ADDITIONAL COMMENTS	REMOVED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
	Will Locker	8/22/22	0850	Kristen Jurinika	8/22/22	0852	
	Byron Williams / Pace	8/22/22	0938	Shirley Parks	8/22/22	0938	

SAMPLER NAME AND SIGNATURE

PRINT Name of SAMPLER: Will Locker Meredith Duncan
 SIGNATURE of SAMPLER: *Will Locker Meredith Duncan*
 DATE Signed: 8/18/22

TEMP in C _____
 Received on Ice (Y/N) _____
 Custody Sealed Cooler (Y/N) _____
 Samples Intact (Y/N) _____

CHAIN-OF-CUSTODY / Analytical Request Document

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Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>.

Section A Required Client Information: Section B Required Project Information: Section C Invoice Information:

Company: Georgia Power	Report To: Kristen Lurino, Cassidy Sutherland	Attendee: Georgia Power
Address: 241 Ralph McGill Blvd NE	Copy To: Laura Midtitt, Ben Hodges, Mike Smiley	Company Name: Georgia Power
Atlanta, GA 30308	Purchase Order #: Noelia Garpi	Address: 241 Ralph McGill Blvd NE Atlanta, GA 30308
Email: knurmk@southemco.com	Project Name: Bowen Lf Cells 1&2	Pace Quote:
Phone: (470) 217-0008	Project #: Bowen Lf Cells 1&2	Pace Project Manager: nicole.doleo@pacelabs.com
Requested Data Date: Standard		Pace Profile #: 10950-4
		Requested Analysis Filtered (Y/N)
		State / Location
		GA

ITEM #	SAMPLE ID <small>One Character per box. (A-Z, 0-9 /, -) Sample IDs must be unique</small>	MATRIX <small>Drinking Water Waste Water Product Sew/Solid Oil Wipe Air Other Trace</small>	CODE <small>DW WT WW P SL OL WP AR OT TS</small>	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives								Analyses Test			Residual Chlorine (Y/N)							
						DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol	Other	Y/N	III/IV + State Metals	Cl, F, SO4		TDS						
13	GWC-8RR				WG	G																						
14	GWC-9				WG	G																						
15	GWC-10				WG	G																						
16	GWC-10R				WG	G																						
17	GWC-11				WG	G																						
18	GWC-11R				WG	G																						
19	GWC-12				WG	G																						
20	GWC-13				WG	G																						
21	GWC-13RZ				WG	G	8/19/22	0926	3	2	1																	
22	GWC-14Z				WG	G																						
23	GWC-15R				WG	G	8/19/22	1105	3	2	1																	
24	GWC-15Z				WG	G	8/19/22	1052	3	2	1																	

ADDITIONAL COMMENTS		RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS	
		Will Locker	8/22/22	0850	Karen Stephens	8/22/22	0852	TEMP in C	Received on Ice (Y/N)
		Karen Stephens	8/22/22	0852	Will Locker	8/22/22	0852	Custody Sealed (Y/N)	Cooler (Y/N)
		Karen Stephens	8/22/22	0852	Karen Stephens	8/22/22	0852	Samples intact (Y/N)	
		Karen Stephens	8/22/22	0852	Karen Stephens	8/22/22	0852		
		Karen Stephens	8/22/22	0852	Karen Stephens	8/22/22	0852		
		Karen Stephens	8/22/22	0852	Karen Stephens	8/22/22	0852		
		Karen Stephens	8/22/22	0852	Karen Stephens	8/22/22	0852		
		Karen Stephens	8/22/22	0852	Karen Stephens	8/22/22	0852		
		Karen Stephens	8/22/22	0852	Karen Stephens	8/22/22	0852		

October 16, 2022

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: Bowen LF Cells 9&10
Pace Project No.: 92630528

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 11, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Noelia Gangi, Georgia Power
Ben Hodges, Georgia Power
Kristen Jurinko
Carole Lieu, Stantec
Laura Midkiff, Georgia Power
Ms. Lauren Petty, Southern Company
Michael Smilley, Georgia Power
Brian Steele, Stantec
Andrew Stevens, Stantec
Tina Sullivan, ERM
Cassidy Sutherland, Stantec



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Bowen LF Cells 9&10

Pace Project No.: 92630528

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Bowen LF Cells 9&10

Pace Project No.: 92630528

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92630528001	GWC-44	Water	10/11/22 10:35	10/11/22 16:16
92630528002	DUP-1	Water	10/11/22 00:00	10/11/22 16:16
92630528003	FB-1	Water	10/11/22 10:45	10/11/22 16:16

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Bowen LF Cells 9&10

Pace Project No.: 92630528

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92630528001	GWC-44	EPA 300.0 Rev 2.1 1993	CDC	1
92630528002	DUP-1	EPA 300.0 Rev 2.1 1993	CDC	1
92630528003	FB-1	EPA 300.0 Rev 2.1 1993	CDC	1

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Bowen LF Cells 9&10

Pace Project No.: 92630528

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92630528001	GWC-44					
	Performed by	Customer			10/11/22 16:54	
	pH	4.13	Std. Units		10/11/22 16:54	
EPA 300.0 Rev 2.1 1993	Chloride	2.9	mg/L	1.0	10/14/22 11:02	
92630528002	DUP-1					
EPA 300.0 Rev 2.1 1993	Chloride	2.8	mg/L	1.0	10/14/22 13:02	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Bowen LF Cells 9&10

Pace Project No.: 92630528

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Sample: GWC-44									
Lab ID: 92630528001									
Collected: 10/11/22 10:35									
Received: 10/11/22 16:16									
Matrix: Water									
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer						10/11/22 16:54		
pH	4.13	Std. Units					10/11/22 16:54		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993									
Pace Analytical Services - Asheville									
Chloride	2.9	mg/L	1.0	0.60	1		10/14/22 11:02	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Bowen LF Cells 9&10

Pace Project No.: 92630528

Sample: DUP-1 **Lab ID: 92630528002** Collected: 10/11/22 00:00 Received: 10/11/22 16:16 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Chloride	2.8	mg/L	1.0	0.60	1		10/14/22 13:02	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Bowen LF Cells 9&10

Pace Project No.: 92630528

Sample: FB-1		Lab ID: 92630528003		Collected: 10/11/22 10:45	Received: 10/11/22 16:16	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Chloride	ND	mg/L	1.0	0.60	1		10/14/22 13:56	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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without the written consent of Pace Analytical Services, LLC.

QUALITY CONTROL DATA

Project: Bowen LF Cells 9&10

Pace Project No.: 92630528

QC Batch:	729863	Analysis Method:	EPA 300.0 Rev 2.1 1993
QC Batch Method:	EPA 300.0 Rev 2.1 1993	Analysis Description:	300.0 IC Anions
		Laboratory:	Pace Analytical Services - Asheville

Associated Lab Samples: 92630528001, 92630528002, 92630528003

METHOD BLANK: 3800548 Matrix: Water

Associated Lab Samples: 92630528001, 92630528002, 92630528003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.60	10/14/22 06:15	

LABORATORY CONTROL SAMPLE: 3800549

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	50	51.5	103	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3800550 3800551

Parameter	Units	92630338021		3800550		3800551		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Result	MSD Result	MS Result	MSD Result				
Chloride	mg/L	3.2	50	50	54.5	54.3	103	102	90-110	0	10

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3800552 3800553

Parameter	Units	92630528002		3800552		3800553		% Rec Limits	RPD	Max RPD	Qual
		MS Result	MSD Result	MS Result	MSD Result	MS Result	MSD Result				
Chloride	mg/L	2.8	50	50	55.1	54.8	105	104	90-110	1	10

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Bowen LF Cells 9&10

Pace Project No.: 92630528

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Bowen LF Cells 9&10

Pace Project No.: 92630528

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92630528001	GWC-44				
92630528001	GWC-44	EPA 300.0 Rev 2.1 1993	729863		
92630528002	DUP-1	EPA 300.0 Rev 2.1 1993	729863		
92630528003	FB-1	EPA 300.0 Rev 2.1 1993	729863		

REPORT OF LABORATORY ANALYSIS

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Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pace-standard-terms.pdf>.

CHAIN-OF-CUSTODY / Analytical Request Document

Section A Required Client Information: Company: Georgia Power, Address: 241 Ralph McGill Blvd. NE Atlanta, GA 30308, Phone: (470) 217-0008, Fax: (470) 217-0008, Email: kturnh@seouthemco.com, Requested Due Date: Standard

Section B Required Project Information: Report To: Kristen Jurhko, Cassidy Suberland, Copy To: Laura Mckitt, Ben Hodges, Mike Smiley, Noelia Ganji, Project Name: Bowen LF Cells 9&10, Purchase Order #: Bowen LF Cells 9&10, Project #: [blank]

Section C Invoicing Information: Attention: [blank], Company Name: Georgia Power, Address: 241 Ralph McGill Blvd. NE Atlanta, GA 30308, Pace Project Manager: nicole.d.oleo@pacelabs.com, Pace Profile #: 10850-4, Regulatory Agency: [blank], State / Location: GA

Page : 1 Of 1

ITEM #	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Residual Chlorine (Y/N)	pH:
			DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol			
1	GW-C44	G	10/11/22	1035		1										4.13
2	DUP-1	G	10/11/22			1										
3	FB-1	G	10/11/22	1045		1										
4																
5																
6																
7																
8																
9																
10																
11																
12																

REINQUIRED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
Meredith Duncan	10/11/22	1616	[Signature]	10/11/22	1616	TEMP in C Received on ice (Y/N) Custody Sealed Cooler (Y/N) Samples intact (Y/N)

SAMPLER NAME AND SIGNATURE: Meredith Duncan
 PRINT Name of SAMPLER: Meredith Duncan
 SIGNATURE of SAMPLER: [Signature]
 DATE Signed: 10/11/22

W0#: 92630528
92630528



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta

Sample Condition Upon Receipt

Client Name:

GA Power

Project #:

WO#: 92630528

PM: NMG

Due Date: 10/25/22

CLIENT: GA-GA Power

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

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 10/11/22

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen?

Yes No N/A

Thermometer:

IR Gun ID:

183

Type of Ice:

Wet Blue None

Cooler Temp:

2.4

Correction Factor: Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

2.4

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

	Comments/Discrepancy:
Chain of Custody Present? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	8.
Sample Labels Match COC? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: WG	
Headspace in VOA Vials (>5-6mm)? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present? <input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____

Date/Time: _____

Project Manager SCURF Review: _____

Date: _____

Project Manager SRF Review: _____

Date: _____



DC#_ Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO#: 92630528

Project #

PM: NMG

Due Date: 10/25/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
2	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
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10	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
11	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/
12	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/	/

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

October 27, 2022

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: BOWEN LF CELLS 9/10
Pace Project No.: 92632481

Dear Joju Abraham:

Enclosed are the analytical results for sample(s) received by the laboratory on October 21, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Noelia Gangi, Georgia Power
Ben Hodges, Georgia Power
Kristen Jurinko
Carole Lieu, Stantec
Laura Midkiff, Georgia Power
Ms. Lauren Petty, Southern Company
Michael Smilley, Georgia Power
Brian Steele, Stantec
Andrew Stevens, Stantec
Tina Sullivan, ERM
Cassidy Sutherland, Stantec



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: BOWEN LF CELLS 9/10

Pace Project No.: 92632481

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: BOWEN LF CELLS 9/10

Pace Project No.: 92632481

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92632481001	GWC-48	Water	10/21/22 11:10	10/21/22 14:00
92632481002	DUP-1	Water	10/21/22 11:10	10/21/22 14:00
92632481003	FB-1	Water	10/21/22 12:25	10/21/22 14:00

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: BOWEN LF CELLS 9/10

Pace Project No.: 92632481

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92632481001	GWC-48	SM 4500-CI-E-2011	ANM	1
92632481002	DUP-1	SM 4500-CI-E-2011	ANM	1
92632481003	FB-1	SM 4500-CI-E-2011	ANM	1

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: BOWEN LF CELLS 9/10

Pace Project No.: 92632481

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92632481001	GWC-48					
	Performed by	Customer			10/21/22 15:06	
	pH	4.79	Std. Units		10/21/22 15:06	
SM 4500-Cl-E-2011	Chloride	5.9	mg/L	1.0	10/26/22 16:28	
92632481002	DUP-1					
SM 4500-Cl-E-2011	Chloride	6.0	mg/L	1.0	10/26/22 16:30	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9/10

Pace Project No.: 92632481

Sample: GWC-48		Lab ID: 92632481001		Collected: 10/21/22 11:10	Received: 10/21/22 14:00	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		10/21/22 15:06		
pH	4.79	Std. Units			1		10/21/22 15:06		
4500 Chloride									
Analytical Method: SM 4500-Cl-E-2011 Pace Analytical Services - Asheville									
Chloride	5.9	mg/L	1.0	0.50	1		10/26/22 16:28	16887-00-6	

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9/10

Pace Project No.: 92632481

Sample: DUP-1 **Lab ID: 92632481002** Collected: 10/21/22 11:10 Received: 10/21/22 14:00 Matrix: Water

Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
4500 Chloride									
Analytical Method: SM 4500-Cl-E-2011									
Pace Analytical Services - Asheville									
Chloride	6.0	mg/L	1.0	0.50	1		10/26/22 16:30	16887-00-6	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: BOWEN LF CELLS 9/10

Pace Project No.: 92632481

Sample: FB-1		Lab ID: 92632481003		Collected: 10/21/22 12:25	Received: 10/21/22 14:00	Matrix: Water				
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual	
4500 Chloride		Analytical Method: SM 4500-Cl-E-2011 Pace Analytical Services - Asheville								
Chloride	ND	mg/L	1.0	0.50	1		10/26/22 16:33	16887-00-6		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: BOWEN LF CELLS 9/10

Pace Project No.: 92632481

QC Batch: 732940 Analysis Method: SM 4500-Cl-E-2011
 QC Batch Method: SM 4500-Cl-E-2011 Analysis Description: 4500 Chloride
 Laboratory: Pace Analytical Services - Asheville
 Associated Lab Samples: 92632481001, 92632481002, 92632481003

METHOD BLANK: 3814768 Matrix: Water
 Associated Lab Samples: 92632481001, 92632481002, 92632481003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Chloride	mg/L	ND	1.0	0.50	10/26/22 16:26	

LABORATORY CONTROL SAMPLE: 3814769

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chloride	mg/L	20	21.0	105	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3814770 3814771

Parameter	Units	92632481001		3814771		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.							
Chloride	mg/L	5.9	10	16.3	16.5	104	106	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3814772 3814773

Parameter	Units	92632481002		3814773		% Rec	% Rec	% Rec	Limits	RPD	Max RPD	Qual
		MS Result	MSD Spike Conc.	MS Result	MSD Spike Conc.							
Chloride	mg/L	6.0	10	16.6	16.6	106	106	90-110	0	10		

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: BOWEN LF CELLS 9/10

Pace Project No.: 92632481

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: BOWEN LF CELLS 9/10

Pace Project No.: 92632481

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92632481001	GWC-48				
92632481001	GWC-48	SM 4500-CI-E-2011	732940		
92632481002	DUP-1	SM 4500-CI-E-2011	732940		
92632481003	FB-1	SM 4500-CI-E-2011	732940		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Georgia Power

Project #

WO#: 92632481



92632481

Courier: Commercial Fed Ex Pace UPS USPS Other: Client

Custody Seal Present? Yes No Seals Intact? Yes No

Date/Initials Person Examining Contents: 05/21/22

Packing Material: Bubble Wrap Bubble Bags None Other

Biological Tissue Frozen

Yes No N/A

Thermometer:

IR Gun ID:

083

Type of Ice:

Wet

Blue

None

Cooler Temp:

5.5

Correction Factor:

Add/Subtract (°C)

0.0

Temp should be above freezing to 6°C

Samples out of temp criteria. Samples on ice, cooling process has begun

Cooler Temp Corrected (°C):

5.5

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

			Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.	
Sample Arrived within Hold Time?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.	
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.	
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.	
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.	
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.	
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.	
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.	
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.	
-Includes Date/Time/ID/Analysis Matrix: <u>W C</u>			
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.	
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.	
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted:

Date/Time:

Project Manager SCURF Review:

Date:

Project Manager SRF Review:

Date:



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92632481

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA Coiform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Project #

PM: NMG

Due Date: 11/04/22

CLIENT: GA-GA Power

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic ZN Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGFU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)		BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)	
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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



CHAIN-OF-CUSTODY / Analytical Request Document

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

Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/hubs/pas-standard-terms.pdf>.

Section A Required Client Information: **Section B** Required Project Information: **Section C** Analytical Information:

Company: Georgia Power
 Address: 241 Ralph McGill Blvd. NE
 Atlanta, GA 30308
 Email: kjlufnk@southernco.com
 Phone: (470) 217-0008
 Requested Due Date: **3 day TAT**

Report To: Kristen Jurinko, Cassidy Sutherland
 Copy To: Laura Midluff, Ben Hodges, Mike Smiley, Noelia Gangl
 Purchase Order #: Bowen LF Cells 9810
 Project Name: Bowen LF Cells 9810
 Project #: 10850-4

Company Name: Georgia Power
 Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308
 Pace Quota:
 Pace Project Manager: nicole.d'oleo@pacelabs.com
 Pace Profile #: 10850-4

Regulatory Agency
 State / Location: GA

ITEM #	MATRIX CODE <small>Drinking Water DW Wastewater WW Wastewater P Wastewater S Wastewater SL Wastewater SW Wastewater WP Wastewater AR Other OT Tissue TS</small>	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAV C=COMP)	COLLECTED		# OF CONTAINERS	Preservatives						Analytes Test Y/N	Requested Analytes Filtered (Y/N)	Residual Chlorine (Y/N)	pH
				DATE	TIME		H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol				
1		WG G		10/21/22	1110	1										4.79
2		WG G		10/21/22	1110	1										
3		WG G		10/21/22	1225	1										
4																
5																
6																
7																
8																
9																
10																
11																
12																

ADDITIONAL COMMENTS	RELINQUISHED BY / AFFILIATION	DATE	TIME	ACCEPTED BY / AFFILIATION	DATE	TIME	SAMPLE CONDITIONS
3 day TAT	William Loakey	10/21/22	1400	<i>[Signature]</i>	10/21/22	14:00	Sealed (Y/N) Cooled (Y/N) Custody (Y/N) Received on (Y/N) Temp in C

SAMPLER NAME AND SIGNATURE
 PRINT Name of SAMPLER: **Meredith Duncan**
 SIGNATURE of SAMPLER: *[Signature]* DATE Signed: 10/21/22

November 17, 2022

Joju Abraham
Georgia Power-CCR
2480 Maner Road
Atlanta, GA 30339

RE: Project: Bowen LF Cells 3&4
Pace Project No.: 92634569

Dear Joju Abraham:

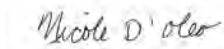
Enclosed are the analytical results for sample(s) received by the laboratory on November 03, 2022. The results relate only to the samples included in this report. Results reported herein conform to the applicable TNI/NELAC Standards and the laboratory's Quality Manual, where applicable, unless otherwise noted in the body of the report.

The test results provided in this final report were generated by each of the following laboratories within the Pace Network:

- Pace Analytical Services - Asheville
- Pace Analytical Services - Charlotte
- Pace Analytical Services - Peachtree Corners, GA

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

Sincerely,



Nicole D'Oleo
nicole.d'oleo@pacelabs.com
(704)875-9092
Project Manager

Enclosures

cc: Noelia Gangi, Georgia Power
Ben Hodges, Georgia Power
Kristen Jurinko
Carole Lieu, Stantec
Laura Midkiff, Georgia Power
Ms. Lauren Petty, Southern Company
Michael Smilley, Georgia Power
Brian Steele, Stantec
Andrew Stevens, Stantec
Tina Sullivan, ERM
Cassidy Sutherland, Stantec



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: Bowen LF Cells 3&4

Pace Project No.: 92634569

Pace Analytical Services Charlotte

South Carolina Laboratory ID: 99006

9800 Kinsey Ave. Ste 100, Huntersville, NC 28078

North Carolina Drinking Water Certification #: 37706

North Carolina Field Services Certification #: 5342

North Carolina Wastewater Certification #: 12

South Carolina Laboratory ID: 99006

South Carolina Certification #: 99006001

South Carolina Drinking Water Cert. #: 99006003

Florida/NELAP Certification #: E87627

Kentucky UST Certification #: 84

Louisiana DoH Drinking Water #: LA029

Virginia/VELAP Certification #: 460221

Pace Analytical Services Asheville

2225 Riverside Drive, Asheville, NC 28804

Florida/NELAP Certification #: E87648

North Carolina Drinking Water Certification #: 37712

North Carolina Wastewater Certification #: 40

South Carolina Laboratory ID: 99030

South Carolina Certification #: 99030001

Virginia/VELAP Certification #: 460222

Pace Analytical Services Peachtree Corners

110 Technology Pkwy, Peachtree Corners, GA 30092

Florida DOH Certification #: E87315

Georgia DW Inorganics Certification #: 812

North Carolina Certification #: 381

South Carolina Certification #: 98011001

REPORT OF LABORATORY ANALYSIS

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SAMPLE SUMMARY

Project: Bowen LF Cells 3&4
Pace Project No.: 92634569

Lab ID	Sample ID	Matrix	Date Collected	Date Received
92634569001	GWC-23R	Water	11/03/22 09:37	11/03/22 12:10
92634569002	DUP-1	Water	11/03/22 00:00	11/03/22 12:10
92634569003	FB-1	Water	11/03/22 10:20	11/03/22 12:10

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: Bowen LF Cells 3&4

Pace Project No.: 92634569

Lab ID	Sample ID	Method	Analysts	Analytes Reported
92634569001	GWC-23R	SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92634569002	DUP-1	SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	1
92634569003	FB-1	SM 2540C-2015	DL1	1
		EPA 300.0 Rev 2.1 1993	CDC	1

PASI-A = Pace Analytical Services - Asheville

PASI-C = Pace Analytical Services - Charlotte

PASI-GA = Pace Analytical Services - Peachtree Corners, GA

REPORT OF LABORATORY ANALYSIS

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SUMMARY OF DETECTION

Project: Bowen LF Cells 3&4

Pace Project No.: 92634569

Lab Sample ID Method	Client Sample ID Parameters	Result	Units	Report Limit	Analyzed	Qualifiers
92634569001	GWC-23R					
	Performed by	Customer			11/04/22 16:51	
	pH	6.65	Std. Units		11/04/22 16:51	
SM 2540C-2015	Total Dissolved Solids	573	mg/L	25.0	11/04/22 18:17	
EPA 300.0 Rev 2.1 1993	Sulfate	137	mg/L	3.0	11/05/22 07:21	
92634569002	DUP-1					
SM 2540C-2015	Total Dissolved Solids	547	mg/L	25.0	11/04/22 18:17	
EPA 300.0 Rev 2.1 1993	Sulfate	135	mg/L	3.0	11/05/22 07:35	
92634569003	FB-1					
SM 2540C-2015	Total Dissolved Solids	72.0	mg/L	25.0	11/04/22 18:18	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Bowen LF Cells 3&4

Pace Project No.: 92634569

Sample: GWC-23R		Lab ID: 92634569001		Collected: 11/03/22 09:37	Received: 11/03/22 12:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
Field Data									
Analytical Method: Pace Analytical Services - Charlotte									
Performed by	Customer				1		11/04/22 16:51		
pH	6.65	Std. Units			1		11/04/22 16:51		
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	573	mg/L	25.0	25.0	1		11/04/22 18:17		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Sulfate	137	mg/L	3.0	1.5	3		11/05/22 07:21	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Bowen LF Cells 3&4

Pace Project No.: 92634569

Sample: DUP-1		Lab ID: 92634569002		Collected: 11/03/22 00:00	Received: 11/03/22 12:10	Matrix: Water			
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids		Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA							
Total Dissolved Solids	547	mg/L	25.0	25.0	1		11/04/22 18:17		
300.0 IC Anions 28 Days		Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville							
Sulfate	135	mg/L	3.0	1.5	3		11/05/22 07:35	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: Bowen LF Cells 3&4

Pace Project No.: 92634569

Sample: FB-1 Lab ID: 92634569003 Collected: 11/03/22 10:20 Received: 11/03/22 12:10 Matrix: Water									
Parameters	Results	Units	Report Limit	MDL	DF	Prepared	Analyzed	CAS No.	Qual
2540C Total Dissolved Solids									
Analytical Method: SM 2540C-2015 Pace Analytical Services - Peachtree Corners, GA									
Total Dissolved Solids	72.0	mg/L	25.0	25.0	1		11/04/22 18:18		
300.0 IC Anions 28 Days									
Analytical Method: EPA 300.0 Rev 2.1 1993 Pace Analytical Services - Asheville									
Sulfate	ND	mg/L	1.0	0.50	1		11/05/22 03:51	14808-79-8	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: Bowen LF Cells 3&4
Pace Project No.: 92634569

QC Batch: 734861 Analysis Method: SM 2540C-2015
QC Batch Method: SM 2540C-2015 Analysis Description: 2540C Total Dissolved Solids
Laboratory: Pace Analytical Services - Peachtree Corners, GA
Associated Lab Samples: 92634569001, 92634569002, 92634569003

METHOD BLANK: 3824811 Matrix: Water
Associated Lab Samples: 92634569001, 92634569002, 92634569003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	ND	25.0	25.0	11/04/22 19:33	

LABORATORY CONTROL SAMPLE: 3824812

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	400	372	93	80-120	

SAMPLE DUPLICATE: 3824813

Parameter	Units	92634425001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	824	812	1	10	

SAMPLE DUPLICATE: 3824814

Parameter	Units	92634210001 Result	Dup Result	RPD	Max RPD	Qualifiers
Total Dissolved Solids	mg/L	1090	2660	84	10 D6	

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: Bowen LF Cells 3&4
Pace Project No.: 92634569

QC Batch: 734912 Analysis Method: EPA 300.0 Rev 2.1 1993
QC Batch Method: EPA 300.0 Rev 2.1 1993 Analysis Description: 300.0 IC Anions
Laboratory: Pace Analytical Services - Asheville
Associated Lab Samples: 92634569001, 92634569002, 92634569003

METHOD BLANK: 3824932 Matrix: Water
Associated Lab Samples: 92634569001, 92634569002, 92634569003

Parameter	Units	Blank Result	Reporting Limit	MDL	Analyzed	Qualifiers
Sulfate	mg/L	ND	1.0	0.50	11/04/22 23:15	

LABORATORY CONTROL SAMPLE: 3824933

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Sulfate	mg/L	50	49.8	100	90-110	

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3824934 3824935

Parameter	Units	92634083005		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Sulfate	mg/L	ND	50	50	54.1	54.6	107	109	90-110	1	10		

MATRIX SPIKE & MATRIX SPIKE DUPLICATE: 3826259 3826260

Parameter	Units	92634656004		MSD		MS		MSD		% Rec Limits	RPD	Max RPD	Qual
		Result	MS Spike Conc.	MSD Spike Conc.	MS Result	MSD Result	MS % Rec	MSD % Rec					
Sulfate	mg/L	59.3	50	50	106	106	94	92	90-110	1	10		

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

REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: Bowen LF Cells 3&4

Pace Project No.: 92634569

DEFINITIONS

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

ND - Not Detected at or above adjusted reporting limit.

TNTC - Too Numerous To Count

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

MDL - Adjusted Method Detection Limit.

PQL - Practical Quantitation Limit.

RL - Reporting Limit - The lowest concentration value that meets project requirements for quantitative data with known precision and bias for a specific analyte in a specific matrix.

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.

Acid preservation may not be appropriate for 2 Chloroethylvinyl ether.

A separate vial preserved to a pH of 4-5 is recommended in SW846 Chapter 4 for the analysis of Acrolein and Acrylonitrile by EPA Method 8260.

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

Reported results are not rounded until the final step prior to reporting. Therefore, calculated parameters that are typically reported as "Total" may vary slightly from the sum of the reported component parameters.

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

TNI - The NELAC Institute.

ANALYTE QUALIFIERS

D6 The precision between the sample and sample duplicate exceeded laboratory control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: Bowen LF Cells 3&4

Pace Project No.: 92634569

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
92634569001	GWC-23R				
92634569001	GWC-23R	SM 2540C-2015	734861		
92634569002	DUP-1	SM 2540C-2015	734861		
92634569003	FB-1	SM 2540C-2015	734861		
92634569001	GWC-23R	EPA 300.0 Rev 2.1 1993	734912		
92634569002	DUP-1	EPA 300.0 Rev 2.1 1993	734912		
92634569003	FB-1	EPA 300.0 Rev 2.1 1993	734912		

REPORT OF LABORATORY ANALYSIS

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DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

Laboratory receiving samples:

Asheville Eden Greenwood Huntersville Raleigh Mechanicsville Atlanta Kernersville

Sample Condition Upon Receipt

Client Name:

Georgia Power

Project #:

WO#: 92634569



92634569

Courier:

Commercial Fed Ex Pace UPS USPS Other: Client

Custody Seal Present? Yes No Seals Intact? Yes No

Packing Material: Bubble Wrap Bubble Bags None Other

Thermometer:

IR Gun ID: 230 Type of Ice: Wet Blue None

Cooler Temp: 6.8 Correction Factor: Add/Subtract (°C) 0.0

Cooler Temp Corrected (°C): 6.8

USDA Regulated Soil (N/A, water sample)

Did samples originate in a quarantine zone within the United States: CA, NY, or SC (check maps)? Yes No

Date/Initials Person Examining Contents: 7/13/22 AT

Biological Tissue Frozen?

Yes No N/A

Temp should be above freezing to 6°C Samples out of temp criteria. Samples on ice, cooling process has begun

Did samples originate from a foreign source (internationally, including Hawaii and Puerto Rico)? Yes No

		Comments/Discrepancy:
Chain of Custody Present?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	1.
Samples Arrived within Hold Time?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	2.
Short Hold Time Analysis (<72 hr.)?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	3.
Rush Turn Around Time Requested?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	4.
Sufficient Volume?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	5.
Correct Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	6.
-Pace Containers Used?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	
Containers Intact?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	7.
Dissolved analysis: Samples Field Filtered?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A	8.
Sample Labels Match COC?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	9.
-Includes Date/Time/ID/Analysis Matrix: W G		
Headspace in VOA Vials (>5-6mm)?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	10.
Trip Blank Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11.
Trip Blank Custody Seals Present?	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	

COMMENTS/SAMPLE DISCREPANCY

Field Data Required? Yes No

~~On Receipt~~

Lot ID of split containers:

CLIENT NOTIFICATION/RESOLUTION

Person contacted: _____ Date/Time: _____

Project Manager SCURF Review: _____ Date: _____

Project Manager SRF Review: _____ Date: _____



DC#_Title: ENV-FRM-HUN1-0083 v01_Sample Condition Upon Receipt

Effective Date: 05/12/2022

WO# : 92634569

Project #

PM: NMG

Due Date: 11/17/22

CLIENT: GA-GA Power

*Check mark top half of box if pH and/or dechlorination is verified and within the acceptance range for preservation samples.

Exceptions: VOA, Coliform, TOC, Oil and Grease, DRO/8015 (water) DOC, LLHg

**Bottom half of box is to list number of bottles

***Check all unpreserved Nitrates for chlorine

Item#	BP4U-125 mL Plastic Unpreserved (N/A) (Cl-)	BP3U-250 mL Plastic Unpreserved (N/A)	BP2U-500 mL Plastic Unpreserved (N/A)	BP1U-1 liter Plastic Unpreserved (N/A)	BP4S-125 mL Plastic H2SO4 (pH < 2) (Cl-)	BP3N-250 mL plastic HNO3 (pH < 2)	BP4Z-125 mL Plastic Zn Acetate & NaOH (>9)	BP4B-125 mL Plastic NaOH (pH > 12) (Cl-)	WGJU-Wide-mouthed Glass jar Unpreserved	AG1U-1 liter Amber Unpreserved (N/A) (Cl-)	AG1H-1 liter Amber HCl (pH < 2)	AG3U-250 mL Amber Unpreserved (N/A) (Cl-)	AG1S-1 liter Amber H2SO4 (pH < 2)	AG3S-250 mL Amber H2SO4 (pH < 2)	DG94-250 mL Amber NH4Cl (N/A)(Cl-)	DG9H-40 mL VOA HCl (N/A)	VG9T-40 mL VOA Na2S2O3 (N/A)	VG9U-40 mL VOA Unpreserved (N/A)	DG9V-40 mL VOA H3PO4 (N/A)	DG9S-40 mL VOA H2SO4 (N/A)	V/GK (3 vials per kit)-VPH/Gas kit (N/A)	SP5T-125 mL Sterile Plastic (N/A - lab)	SP2T-250 mL Sterile Plastic (N/A - lab)	BP3R-250 mL Plastic (NH2)2SO4 (9.3-9.7)	AG0U-100 mL Amber Unpreserved (N/A) (Cl-)	VSGU-20 mL Scintillation vials (N/A)	DG9U-40 mL Amber Unpreserved vials (N/A)		
1																													
2																													
3																													
4																													
5																													
6																													
7																													
8																													
9																													
10																													
11																													
12																													

pH Adjustment Log for Preserved Samples

Sample ID	Type of Preservative	pH upon receipt	Date preservation adjusted	Time preservation adjusted	Amount of Preservative added	Lot #

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

Page

Section A Required Client Information: Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at <https://info.pacelabs.com/nubvs/pas-standard-terms.pdf>.
 Section B Required Project Information: Invoice Information:
 Section C Analytical Request Document

Company: Georgia Power
 Address: 241 Ralph McGill Blvd. NE Atlanta, GA 30308
 Email: krunink@southemco.com
 Phone: (470) 217-0008
 Requested Due Date: Standard

Report To: Kristin Junnka, Cassidy Sutherland
 Copy To: Laura Midkiff, Ben Hodges, Mike Smalley
 Purchase Order #: Noella Gangl
 Project Name: Bowen LF Cells 364
 Project #:

Company Name: Georgia Power
 Address: 241 Ralph McGill Blvd. NE, Atlanta, GA 30308
 Pace Order #:
 Pace Project Manager: nicole.d@pacelabs.com
 Pace Profile #: 10830-4

Regulatory Agency
 State / Location
 GA

ITEM #	SAMPLE ID One Character per box. (A-Z, 0-9 /, -) Sample ids must be unique	MATRIX Drinking Water Water Wastewater Process Water Seawater Oil Wine Air Other Thurs	CODE DW WT WW SL WP AR OT TS	MATRIX CODE (see valid codes to left)	SAMPLE TYPE (G=GRAB C=COMP)	COLLECTED		SAMPLE TEMP AT COLLECTION	# OF CONTAINERS	Preservatives							Analyses Test	Y/N	Requested Analysis Filled (Y/N)						
						DATE	TIME			Unpreserved	H2SO4	HNO3	HCl	NaOH	Na2S2O3	Methanol				Other	Sulfate	TDS	Residual Chlorine (Y/N)		
1	GWC-23R			WG	G	11/3/22	0937	2	2																
2	DUP-1			WG	G	11/3/22	—	2	2																
3	FB-1			WG	G	11/3/22	1020	2	2																
4																									
5																									
6																									
7																									
8																									
9																									
10																									
11																									
12																									

REMIQUISHED BY / AFFILIATION: William Lackner
 DATE: 11/3/22
 TIME: 1210

ACCEPTED BY / AFFILIATION: *William Lackner*
 DATE: 11/3/22
 TIME: 1210

SAMPLER NAME AND SIGNATURE: William Lackner
 PRINT Name of SAMPLER:
 SIGNATURE of SAMPLER: *William Lackner*
 DATE Signed: 11/3/22

TEMP in C
 Received on Ice (Y/N)
 Custody Sealed Cooler (Y/N)
 Samples Intact (Y/N)

Data Evaluation Narrative

**Project: Plant Bowen CCR Event # 18 Groundwater Detection Monitoring/
Semiannual State Design and Operation Permit Monitoring**

Wood Project Number: 6122160287.2103.****

Site: Landfill Cells 3 & 4 - Plant Bowen, Georgia

Matrix: Groundwater

Pace SDG No: 92585058

Introduction

A data quality evaluation (DQE) was performed on the laboratory data reported for the CCR Event # 18 Groundwater Detection Monitoring Sampling Event and the Semiannual State Design and Operation (D&O) Permit sampling event conducted at Landfill Cells 3 & 4 at Plant Bowen, located in Cartersville, Georgia in January 2022. The samples were collected and analyzed per the protocols presented in the Plant Bowen *Field Sampling Plan* (FSP), Revision 1, Update 3 (Amec Foster Wheeler, 2017). The following sections provide summary discussions of the required data qualifications for the methods for samples collected. A Level II DQE validation was performed on the samples analyzed by the fixed-based laboratory within these sample delivery groups (SDGs). A Level II DQE consists of review of the following criteria: sample integrity, holding times, method blanks, laboratory control samples (LCSs), matrix spikes/matrix spike duplicate (MS/MSD) recoveries and relative percent differences (RPDs), post digestion spikes (PDS), where applicable, laboratory and field duplicate RPDs, field and/or equipment blanks, and reporting limits. Additionally, the data summary tables generated from the electronic data deliverable (EDD) were compared to the laboratory hardcopy data report to verify that the EDD and laboratory data report agree.

The data were reviewed using the laboratory’s precision and accuracy limits, the method requirements, and any requirements listed in the FSP. It should be noted that at the time of this review, a finalized QAPP was not provided. DQE data qualifications were applied, if necessary, using the procedures in USEPA National Functional Guidelines for Inorganic Data Review (USEPA, 2020), as guidance, and professional judgment using the following qualifiers:

<u>Qualifier</u>	<u>Usable Data</u>
J	The analyte was positively identified but the result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample. <i>SCS Definition: Value J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce as reliable of a value. Therefore, the value displayed (value J) is qualified by the laboratory as estimated.</i>
UJ	The analyte was analyzed for but was not detected above the level of the reported sample reporting/method detection limit. The reported method detection limit is approximate and may be inaccurate or imprecise.
U	Analyte was analyzed for but was not detected above the level of the reported sample reporting/method detection limit. <i>Note: SCS does not use the “U” flag except when reporting results for radium that are detected below the Minimum Detection Concentration (MDC).</i>
U*	This analyte should be considered “not-detected” because it was detected in an associated blank at a similar level.

<u>Qualifier</u>	<u>Unusable Data</u>
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be confirmed.
UR	The analyte was analyzed for but was not detected above the level of the reported sample reporting or method detection; however, the data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.

The analytical results for the samples reported in this SDG are usable with the qualifications discussed in this narrative. A summary of the data with associated qualifiers is presented in **Table 1**.

Deliverables

The data package as submitted to Wood Environment & Infrastructure Solutions, Inc. (Wood, formerly Amec Foster Wheeler) is complete to perform a Level II DQE for United States Environmental Protection Agency (USEPA) Methods SW6010D, SW6020B, SW7470A, EPA 300.0, SM 2320B and SM 2540C.

Sample Integrity

The groundwater samples were submitted to Pace Analytical Services, Inc. (Pace) in Peachtree Corners, Georgia and analyzed for CCR Appendix III metals and State D&O Permit metals by Method 6010D and 6020B, mercury by Method SW7470A, anions (chloride, fluoride, and sulfate) by Method 300.0, alkalinity by Method SW 2320B and total dissolved solids (TDS) by Method SM 2540C.

Based on the information provided on the Chain-of-Custody (COC) forms, the field samples arrived at the laboratory intact and within the temperature range and preservation requirements. Completed COC documents are included in the data package.

Sample Identification

This SDG contains the following groundwater and quality control (QC) samples:

Sample ID	Sample Date	DQE Level	Sample ID	Sample Date	DQE Level
GWC-16R	01/28/22	II	GWA-53	01/26/22	II
GWC-17R	01/28/22	II	GWA-53R	01/26/22	II
GWC-18	01/28/22	II	GWA-54	01/25/22	II
GWC-18R	01/27/22	II	GWA-55	01/26/22	II
GWC-19R	01/27/22	II	GWA-55R	01/27/22	II
GWC-20R	01/27/22	II	GWA-56	01/26/22	II
GWC-21R	01/28/22	II	<u>QA/QC Samples:</u>		
GWC-22R	01/27/22	II	EB-1	01/26/22	II
GWC-23R	01/28/22	II	FB-1*	01/25/22	II
GWC-24R	01/28/22	II	FB-2	01/26/22	II
GWC-25R	01/27/22	II	FB-3*	01/27/22	II
GWA-36RA	01/26/22	II	FB-4*	01/28/22	II
GWA-37	01/26/22	II	Dup-1	01/26/22	II
GWA-38	01/25/22	II	Dup-2	01/27/22	II
GWA-51RZ	01/26/22	II	Dup-3	01/28/22	II
GWA-52	01/25/22	II			

The samples reported in this SDG were collected from Landfill Cells 3&4 on January 25 through January 28, 2022. Sample Dup-1 is the field duplicate sample of GWA-55, Dup-2 is the field duplicate sample of GWC-18R, and Dup-3 is the field duplicate sample of GWC-24R. One field blank per day was collected, and one equipment blank was collected on the equipment used to sample the locations at Landfill Cells 3&4. *Sample IDs were modified per the GPC requested nomenclature for field blank samples FBL-1, FBL-3, and FBL-4 to FB-1, FB-3, and FB-4.

The analytical results for the metals, anions, alkalinity, and TDS data are usable with the qualifications discussed in this narrative. A summary of the data quality is presented below.

Metals (SW6010D/SW6020B/SW7470A)

The samples were submitted to Pace for CCR Appendix III and State D&O Permit metals by Method SW6010D, SW6020B, and/or mercury by SW7470A. The CCR Appendix III metals are: boron (B) and calcium (Ca). The State D&O Permit metals are: antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), selenium (Se), silver (Ag), thallium (Tl), vanadium (V), and zinc (Zn). Each of the Level II components were within QC limits except for MS/MSD recoveries and method and field blank contamination.

Holding Times

The sample analyses were performed within the 6 month and 28-day (for mercury) analysis holding times.

Method Blanks

One of the method blanks associated with samples in this SDG reported antimony between the reporting limit (RL) and the method detection limit (MDL). Results less than ten times the method blank are considered "not detected" as a possible laboratory artifact: **Reason Code: BL**.

Action: The antimony results for samples GWC-21R and DUP-2 were qualified as not detected due to laboratory blank contamination and flagged "U".*

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

MS/MSD analyses were performed for metals on samples GWA-38, GWA-52, GWA-55, GWC-16R, and GWC-18R and the recoveries and RPDs were within QC limits except for MS/MSD recoveries of Ca and Mg in sample GWC-18R.

Action: No qualification was necessary because the sample results were more than 4 times greater than the spike concentration.

Field Duplicate Precision

Three field duplicate pairs were submitted with this SDG and the RPDs were within QC limits.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

Field accuracy was measured through the collection of equipment/rinsate blanks and field blanks. Equipment rinsate blanks are collected to monitor the decontamination process and field blanks are collected to assess the water used to decontaminate the equipment and the containers into which samples are placed. The equipment blank sample submitted in this SDG did not contain metals, and no results were considered possible field artifacts. One or more of the field blanks contained the following analytes: arsenic. Results less than ten times the field blank are considered "not detected" as a possible field artifact: **Reason Code: BF.**

Action: The positive arsenic results less than ten times the field blanks were qualified as not detected due to possible field blank contamination and flagged "U".*

Reporting Limits

The laboratory RLs were below the screening values for samples submitted for the analysis of metals by USEPA Method SW6010D, SW6020B and 7470A. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory. The "J" qualifier was retained by the data validator.

Total and Dissolved Metals Comparison

If total and dissolved metals samples were collected, comparison of the total and dissolved results can aid in the representativeness of the total metals value versus the metals that may be associated with suspended solids and metals actually dissolved within the water column. The dissolved metals results should be less than or equal to the total metals concentration for positive results greater than 5 times the RL. No dissolved samples were collected and reported in this SDG.

Anions (EPA 300)

The samples were submitted to Pace for anions (chloride, fluoride, and sulfate) by Method 300.0, and each of the Level II components were within QC limits.

Holding Times

The sample analyses were performed within the 28-day analysis holding times.

Method Blanks

The method blank associated with the samples analyzed within this SDG did not contain anions indicating the analytical system was contaminant free during analysis.

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

An MS/MSD analysis was performed on samples GWA-53R and FB-4 and recoveries and RPDs were within QC limits.

Field Duplicate Precision

Three field duplicate pairs were submitted with this SDG and the RPDs were within QC limits.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

The equipment blank and field blank samples submitted in this SDG did not contain anions, and no results were considered possible field artifacts.

Reporting Limits

The laboratory RLs were below the screening values for samples submitted for the analysis of anions by USEPA Method 300. One sample, GWC-23R, was diluted for sulfate (2x) to place the concentration within the calibration range. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory. The "J" qualifier was retained by the data validator.

Alkalinity (SM 2320B)

The samples were submitted to Pace for alkalinity (total alkalinity, bicarbonate alkalinity, and carbonate alkalinity) by Method SM 2320B. Each of the Level II components were within QC limits.

Holding Times

The sample analyses were performed within the analysis holding times.

Method Blanks

The method blank associated with the samples analyzed within this SDG did not contain alkalinity.

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

An MS/MSD analysis was performed on samples GWA-52 and recoveries and RPDs were within QC limits.

Field Duplicate Precision

Three field duplicate pairs were submitted with this SDG and the RPDs were within QC limits.

Laboratory Duplicate Precision

Laboratory duplicates were not analyzed for any project samples in this SDG.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

The equipment blank and field blanks associated with the samples in this SDG did not contain alkalinity.

Reporting Limits

The laboratory RL was below the screening value of 500 mg/L for samples submitted for the analysis of alkalinity by Method SM 2320B and no samples required dilutions; therefore, RLs were met for this project. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory. The "J" qualifier was retained by the data validator.

TDS (SM 2540C)

The samples were submitted to Pace for TDS by Method SM 2540C. Each of the Level II components were within QC limits.

Holding Times

The sample analyses were performed within the 7-day analysis holding times.

Method Blanks

The method blank associated with the samples analyzed within this SDG did not contain TDS.

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Field Duplicate Precision

Three field duplicate pairs were submitted with this SDG and the RPDs were within QC limits.

Laboratory Duplicate Precision

Laboratory duplicates were analyzed for TDS on samples EB-1 and GWC-25R and the RPDs were within QC limits.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

The equipment blank and field blanks associated with the samples in this SDG did not contain TDS.

Reporting Limits

The laboratory RL was below the screening value of 500 mg/L for samples submitted for the analysis of TDS by Method SM 2540C and no samples required dilutions; therefore, RLs were met for this project. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory, however no TDS results were reported between the MDL and RL.

Overall Site Evaluation and Professional Judgment Flagging Changes

The chemical data included in this SDG was validated in general accordance with the guidelines contained in the project work plan and validation SOPs. Professional judgment was not used to modify flags for results reported in samples presented in this SDG.

Completeness

A total of 22 wells, along with the required QC samples, were sampled and analyzed during the January event in Landfill Cells 3&4 according to the FSP (Amec Foster Wheeler, 2017). Each of the 22 well locations reported in this SDG were sampled and analyzed as scoped. However, well GWA-36 was scoped but was not sampled because the turbidity was high and the well could not be successfully re-developed. Additionally, surface water sample SS-1 was scoped but could not be sampled because of insufficient volume of water.

Therefore, field completeness is 94% (planned verses actual samples collected) and analytical completeness calculated for this SDG was 100%.

References

Amec Foster Wheeler, 2017. *Field Sampling Plan – Plant Bowen*, Georgia Power Company, Earth Science and Environmental Engineering Technical Services, Southern Company Services, Inc. (SCS), Revision 1, Update 3, October 16, 2017.

USEPA, 2020. *EPA National Functional Guidelines for Inorganic Superfund Methods Data Review*, EPA-542-R-20-006, November 2020.

Prepared by/Date: JPM 02/21/22

Checked By/Date: JAH 03/09/22

**TABLE 1
SUMMARY OF DATA QUALIFIERS**

TABLE 1
SUMMARY OF DATA QUALIFIERS
SAMPLE DELIVERY GROUP 92585058
SAMPLING DATES: January 25 through 28, 2022
Plant Bowen Landfill Cells 3 & 4: Event 18

Field Sample ID	Location ID	Type	SDG	Method	Parameter Name	Lab Result	Lab Qual	Val Qual	Reason Codes	Units
GWA-36RA	GWA-36RA	N	92585058	6020B	boron	0.012	J	J	--	mg/L
FB-1	Field Blank	FB	92585058	6020B	arsenic	0.0013	J	J	--	mg/L
FB-2	Field Blank	FB	92585058	6020B	arsenic	0.0013	J	J	--	mg/L
GWA-37	GWA-37	N	92585058	300.0	chloride	0.88	J	J	--	mg/L
GWA-37	GWA-37	N	92585058	6010D	calcium	0.7	J	J	--	mg/L
GWA-37	GWA-37	N	92585058	6020B	arsenic	0.0019	J	U*	BF	mg/L
GWA-37	GWA-37	N	92585058	6020B	barium	0.0046	J	J	--	mg/L
GWA-38	GWA-38	N	92585058	300.0	sulfate	0.58	J	J	--	mg/L
GWA-38	GWA-38	N	92585058	SM2320B	alkalinity biocarbonate	4.9	J	J	--	mg/L
GWA-38	GWA-38	N	92585058	SM2320B	alkalinity, total	4.9	J	J	--	mg/L
GWA-38	GWA-38	N	92585058	6020B	chromium	0.0014	J	J	--	mg/L
GWA-38	GWA-38	N	92585058	6020B	cobalt	0.0011	J	J	--	mg/L
GWA-38	GWA-38	N	92585058	6020B	nickel	0.00093	J	J	--	mg/L
GWA-51RZ	GWA-51RZ	N	92585058	6020B	arsenic	0.0047	J	U*	BF	mg/L
GWA-51RZ	GWA-51RZ	N	92585058	6020B	boron	0.0088	J	J	--	mg/L
GWA-52	GWA-52	N	92585058	6020B	arsenic	0.003	J	U*	BF	mg/L
GWA-52	GWA-52	N	92585058	6020B	chromium	0.0012	J	J	--	mg/L
GWA-53	GWA-53	N	92585058	6020B	beryllium	0.00007	J	J	--	mg/L
GWA-54	GWA-54	N	92585058	300.0	chloride	0.81	J	J	--	mg/L
GWA-54	GWA-54	N	92585058	6020B	chromium	0.0013	J	J	--	mg/L
GWA-55	GWA-55	N	92585058	6010D	sodium	0.97	J	J	--	mg/L
GWA-55	GWA-55	N	92585058	6020B	cobalt	0.0035	J	J	--	mg/L
GWA-55	GWA-55	N	92585058	6020B	selenium	0.0025	J	J	--	mg/L
DUP-1	GWA-55	FD	92585058	6020B	arsenic	0.002	J	U*	BF	mg/L
DUP-1	GWA-55	FD	92585058	6020B	cobalt	0.0039	J	J	--	mg/L
DUP-1	GWA-55	FD	92585058	6020B	selenium	0.0025	J	J	--	mg/L
GWA-55R	GWA-55R	N	92585058	6020B	arsenic	0.0019	J	J	--	mg/L
GWA-55R	GWA-55R	N	92585058	6020B	selenium	0.0016	J	J	--	mg/L
GWA-56	GWA-56	N	92585058	300.0	fluoride	0.076	J	J	--	mg/L
GWA-56	GWA-56	N	92585058	6020B	arsenic	0.0015	J	U*	BF	mg/L
GWA-56	GWA-56	N	92585058	6020B	boron	0.014	J	J	--	mg/L
GWC-16R	GWC-16R	N	92585058	6020B	boron	0.021	J	J	--	mg/L
GWC-16R	GWC-16R	N	92585058	6020B	chromium	0.0011	J	J	--	mg/L
GWC-16R	GWC-16R	N	92585058	6020B	copper	0.00088	J	J	--	mg/L
GWC-18	GWC-18	N	92585058	6020B	chromium	0.00014	J	J	--	mg/L
GWC-18R	GWC-18R	N	92585058	6020B	beryllium	0.000055	J	J	--	mg/L
GWC-18R	GWC-18R	N	92585058	6020B	cobalt	0.0015	J	J	--	mg/L
DUP-2	GWC-18R	FD	92585058	6020B	antimony	0.0009	J	U*	BL	mg/L
DUP-2	GWC-18R	FD	92585058	6020B	beryllium	0.000056	J	J	--	mg/L

TABLE 1
SUMMARY OF DATA QUALIFIERS
SAMPLE DELIVERY GROUP 92585058
SAMPLING DATES: January 25 through 28, 2022
Plant Bowen Landfill Cells 3 & 4: Event 18

Field Sample ID	Location ID	Type	SDG	Method	Parameter Name	Lab Result	Lab Qual	Val Qual	Reason Codes	Units
GWC-21R	GWC-21R	N	92585058	6020B	antimony	0.0061	B	U*	BL	mg/L
GWC-21R	GWC-21R	N	92585058	6020B	arsenic	0.0031	J	J	--	mg/L
GWC-21R	GWC-21R	N	92585058	6020B	boron	0.011	J	J	--	mg/L
GWC-21R	GWC-21R	N	92585058	6020B	nickel	0.0014	J	J	--	mg/L
GWC-21R	GWC-21R	N	92585058	6020B	thallium	0.00021	J	J	--	mg/L
GWC-22R	GWC-22R	N	92585058	6020B	arsenic	0.0045	J	J	--	mg/L
GWC-22R	GWC-22R	N	92585058	6020B	cobalt	0.0011	J	J	--	mg/L
GWC-22R	GWC-22R	N	92585058	6020B	nickel	0.00076	J	J	--	mg/L
GWC-23R	GWC-23R	N	92585058	6010D	zinc	0.0099	J	J	--	mg/L
GWC-23R	GWC-23R	N	92585058	6020B	arsenic	0.0026	J	J	--	mg/L
GWC-23R	GWC-23R	N	92585058	6020B	cooper	0.00068	J	J	--	mg/L
GWC-24R	GWC-24R	N	92585058	6020B	arsenic	0.0021	J	J	--	mg/L
DUP-3	GWC-24R	FD	92585058	6020B	arsenic	0.0015	J	J	--	mg/L
DUP-3	GWC-24R	FD	92585058	6020B	copper	0.00054	J	J	--	mg/L

Laboratory Qualifiers:

B = Analyte detected in the associated method blank.

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

Reason Codes:

BF = Field blank contamination. The result should be considered "not-detected".

BL = Laboratory blank contamination. The result should be considered "not-detected".

-- = No Reason Code assigned for values detected between the method detection limit (MDL) and the reporting limit (RL);estimated quantitation.

Validation Qualifiers:

J = The compound was positively identified; however, the associated numerical value is an estimated concentration only. The associated numerical value is the approximate concentration of the analyte in the sample.

U* = This analyte should be considered "not-detected" because it was detected in an associated blank at a similar level.

Prepared by/Date: JPM 03/07/22

Checked by/Date: JAH 03/09/22

DQE CHECKLISTS

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen CCR Event 18 – Semiannual State D&O Permit Event

Project No: 6122160287.2103.****

Method: Metals and Mercury by SW6010D/SW6020B/SW7470

Laboratory and Lot: Pace SDG: 92585058

Reviewer/Date: J. McIntyre 02/18/22 **Senior Reviewer/Date:** J. Hartness 03/09/22

YES NO NA COMMENTS

<input checked="" type="checkbox"/>	<p>Case Narrative and COC Completeness Review OK</p>										
<input checked="" type="checkbox"/>	<p>Sample Preservation and cooler temperature met (HNO₃ to pH<2) OK, 5.1°C, 4.9°C</p>										
<input checked="" type="checkbox"/>	<p>Holding times met (180 days; Hg = 28 days) Coll: 01/25/22-01/28/22 Prep: metals – 02/05/22, 02/10/22, Hg – 02/08/22, 02/09/22 Anal: metals – 02/07/22, 02/10/22, 02/11/22, 02/14/22 Hg – 02/08/22, 02/09/22</p>										
<input checked="" type="checkbox"/>	<p>QC Blanks Review</p> <p><u>Method Blanks:</u></p> <table border="0" style="width: 100%;"> <tr> <td style="width: 50%;">p. 71 MB 3539086 (6010) = ND</td> <td style="width: 50%;">p. 72 MB 3543806 (6010) = ND</td> </tr> <tr> <td>p. 73 MB 3543812 (6020) = ND</td> <td>p. 75 MB 3546468 Sb=0.00078Jx10=0.0078</td> </tr> <tr> <td></td> <td><i>Results <5x blank flagged U*: GWC-21R, DUP-2</i></td> </tr> <tr> <td>p. 77 MB 3541084 (7470) Hg = ND</td> <td>p. 78 MB 3541855 (7470) Hg = ND</td> </tr> <tr> <td>p. 79 MB 3543214 (7470) Hg = ND</td> <td></td> </tr> </table> <p><u>Equipment blank:</u> EB-1 = All ND</p> <p><u>Field blanks:</u> <i>Results < 10x blank flagged U*</i> FB-1 As = 0.0013J x 10 = 0.013 mg/L Flag U*: GWA-52 FB-2 As = 0.0013J x 10 = 0.013 mg/L Flag U*: GWA-37, GWA-51RZ, DUP-1, GWA-56</p> <p>FB-3 = All ND FB-4 = All ND</p>	p. 71 MB 3539086 (6010) = ND	p. 72 MB 3543806 (6010) = ND	p. 73 MB 3543812 (6020) = ND	p. 75 MB 3546468 Sb=0.00078Jx10=0.0078		<i>Results <5x blank flagged U*: GWC-21R, DUP-2</i>	p. 77 MB 3541084 (7470) Hg = ND	p. 78 MB 3541855 (7470) Hg = ND	p. 79 MB 3543214 (7470) Hg = ND	
p. 71 MB 3539086 (6010) = ND	p. 72 MB 3543806 (6010) = ND										
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	<i>Results <5x blank flagged U*: GWC-21R, DUP-2</i>										
p. 77 MB 3541084 (7470) Hg = ND	p. 78 MB 3541855 (7470) Hg = ND										
p. 79 MB 3543214 (7470) Hg = ND											

Metals and Mercury by 6020B/7470A (cont.)

YES NO NA COMMENTS



**Laboratory Control Sample (LCS) recovery within limits
(Metals 70-130%, Hg = 80-120%)**

p. 71 LCS 3539087 (6010) = All OK	p. 72 LCS 3543807 (6010) = All OK
p. 73 LCS 3543813 (6020) = All OK	p. 75 LCS 3546469 (6020) = All OK
p. 77 LCS 3541085 (7470) Hg = 94%	p. 78 LCS 3541856 (7470) Hg = 89%
p. 79 LCS 3543215 (7470) Hg = 101%	



Lab Duplicate - Field Duplicate precision goals met (20%)

In mg/L. For results <RL, diff must be <RL

	<u>GWA-55</u>	<u>Dup-1</u>	<u>RPD or Diff</u>	<u>RL</u>
As	0.0011 U	0.002 U*	NC	0.005
Ba	0.026	0.029	10.9%	
Co	0.0035 J	0.0039 J	0.0004	0.005
Ca	53.2	53.7	0.94%	
Mg	27.9	28.3	1.4%	
K	1.4	1.5	6.9%	
Na	0.97 J	1.0	0.03	1.0
Se	0.0025 J	0.0025 J	0	0.005

	<u>GWC-18R</u>	<u>Dup-2</u>	<u>RPD or Diff</u>	<u>RL</u>
Ca	29.3	30.8	5.0%	
Sb	0.00078 U	0.0009 JB	0.00022	0.003
Ba	0.014	0.015	6.9%	
Be	0.000055 J	0.000056 J	0.000001	0.0005
Cr	0.0015 J	0.0011 U	0.0004	0.005
K	0.63	0.72	13%	
Na	1.4	1.4	0%	
Mg	16.4	16.8	2.4%	

	<u>GWC-24R</u>	<u>Dup-3</u>	<u>RPD or Diff</u>	<u>RL</u>
As	0.0021 J	0.0015 J	0.0006	0.005
Ba	0.024	0.023	8.3%	
Ca	34.4	33.5	2.7%	
Cu	0.0005 U	0.00054 J	0.00004	0.005
Mg	18.9	18.5	2.1%	
K	0.87	0.83	4.7%	
Na	1.5	1.6	6.5%	

Metals and Mercury by 6020B/7470A (cont.)

YES	NO	NA	COMMENTS
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Matrix Spike recoveries and RPDs within limits (75-125%, RPD 20)

6010

p. 71 GWA-38 = %Recs and RPDs OK

p. 72 GWC-18R Ca = **174, 218%** RPD = 1 *No flag; sample >4x spike*

Mg = **172, 172%** RPD = 0 *No flag; sample >4x spike*

p. 74 GWA-52 (6020) All %rec and RPDs OK

p. 76 GWC-16R (6020) All %rec and RPDs OK

p. 77 (7470) - Not a sample from this SDG

p. 78 GWA-55 Hg = 92, 94% RPD = 2 p. 79 (7470) - Not a sample from this SDG

Total metals vs dissolved metals within limits (RPD < 20% or diff. < RL)

No dissolved metals in this SDG

EDD Data Verification vs. Hardcopy (10% samples for each SDG)

100% of the results in this SDG were checked

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen CCR Event 18 – Semiannual State D&O Permit Event

Project No: 6122160287.2103.****

Method: Anions (chloride, fluoride, sulfate) by EPA 300.0

Laboratory and Lot: Pace SDG: 92585058

Reviewer/Date: J. McIntyre 02/21/22 **Senior Reviewer/Date:** J. Hartness 03/09/22

YES NO NA COMMENTS

 Case Narrative and COC Completeness Review

 Sample Preservation and cooler temperature met (Cool to 6°C)
OK, 5.1°C, 4.9°C

 Holding times met (Cl, SO₄, F – 28 days)
Coll: 01/25/22-01/28/22
Anal: 02/01/22, 02/02/22, 02/04/22, 02/06/22

 QC Blanks Review
Method Blanks:
p. 88 MB 3533812 = ND p. 89 MB 3533818 = ND
p. 90 MB 3535178 = ND p. 91 MB 3539901 = ND
p. 92 MB 3540061 = ND

Equipment blank: EB-1= All ND
Field blanks: Results < 10x blank flagged U*
FB-1 through FB-4 = All ND

 Laboratory Control Sample (LCS) recovery within limits (90-110%)
p. 88 LCS 3533813 - all ok p. 89 LCS 3533819 – all ok
p. 90 LCS 3535179 – all ok p. 91 LCS 3539902 – all ok
p. 92 LCS 3540062 – all ok

 Lab Duplicate - Field Duplicate precision goals met (20%)

	<u>GWA-55</u>	<u>Dup-1</u>	<u>RPD or Diff</u>	<u>RL</u>
Cl ⁻	5.8	5.8	0%	
SO ₄	32.5	32.7	0.613%	
	<u>GWC-18R</u>	<u>Dup-2</u>	<u>RPD or Diff</u>	<u>RL</u>
Cl ⁻	2.3	2.3	0%	
SO ₄	2.1	2.1	0%	
	<u>GWC-24R</u>	<u>Dup-3</u>	<u>RPD or Diff</u>	<u>RL</u>
Cl ⁻	2.2	2.2	0%	
SO ₄	2.3	2.3	0%	

Anions (chloride, fluoride, sulfate) by EPA 300.0 (cont.)

<u>YES</u>	<u>NO</u>	<u>NA</u>	<u>COMMENTS</u>
	<input checked="" type="checkbox"/>		<p>Matrix Spike recoveries and RPDs within limits (lab %Rec limits, RPD = 20) p. 88 not samples from this SDG p. 89 GWA-53R F = 101, 96% RPD = 5 Cl = 108, 103% RPD = 4 SO₄= 107, 106% RPD = 2 p. 90 not samples from this SDG p. 91 not samples from this SDG p. 92 FB-4 - %Recs and RPDs OK</p>
	<input checked="" type="checkbox"/>		<p>EDD Data Verification vs. Hardcopy (10% samples for each SDG) <i>100% of the results in this SDG were checked</i></p>

Data Evaluation Narrative

**Project: Plant Bowen CCR Event # 18 Groundwater Detection Monitoring/
Semiannual State Design and Operation Permit Monitoring**

Wood Project Number: 6122160287.2103.****

Site: Landfill Cells 9 & 10 - Plant Bowen, Georgia

Matrix: Groundwater

Pace SDG No: 92585555

Introduction

A data quality evaluation (DQE) was performed on the laboratory data reported for the CCR Event # 18 Groundwater Detection Monitoring Sampling Event and the Semiannual State Design and Operation (D&O) Permit sampling event conducted at Landfill Cells 9 & 10 at Plant Bowen, located in Cartersville, Georgia in January-February 2022. The samples were collected and analyzed per the protocols presented in the Plant Bowen *Field Sampling Plan* (FSP), Revision 1, Update 3 (Amec Foster Wheeler, 2017). The following sections provide summary discussions of the required data qualifications for the methods for samples collected. A Level II DQE validation was performed on the samples analyzed by the fixed-based laboratory within these sample delivery groups (SDGs). A Level II DQE consists of review of the following criteria: sample integrity, holding times, method blanks, laboratory control samples (LCSs), matrix spikes/matrix spike duplicate (MS/MSD) recoveries and relative percent differences (RPDs), post digestion spikes (PDS), where applicable, laboratory and field duplicate RPDs, field and/or equipment blanks, and reporting limits. Additionally, the data summary tables generated from the electronic data deliverable (EDD) were compared to the laboratory hardcopy data report to verify that the EDD and laboratory data report agree.

The data were reviewed using the laboratory’s precision and accuracy limits, the method requirements, and any requirements listed in the FSP. It should be noted that at the time of this review, a finalized QAPP was not provided. DQE data qualifications were applied, if necessary, using the procedures in USEPA National Functional Guidelines for Inorganic Data Review (USEPA, 2020), as guidance, and professional judgment using the following qualifiers:

<u>Qualifier</u>	<u>Usable Data</u>
J	The analyte was positively identified but the result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample. <i>SCS Definition: Value J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce as reliable of a value. Therefore, the value displayed (value J) is qualified by the laboratory as estimated.</i>
UJ	The analyte was analyzed for but was not detected above the level of the reported sample reporting/method detection limit. The reported method detection limit (MDL) is approximate and may be inaccurate or imprecise.
U	Analyte was analyzed for but was not detected above the level of the reported sample reporting/method detection limit. <i>Note: SCS does not use the “U” flag except when reporting results for radium that are detected below the Minimum Detection Concentration (MDC).</i>
U*	This analyte should be considered “not-detected” because it was detected in an associated blank at a similar level.

<u>Qualifier</u>	<u>Unusable Data</u>
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be confirmed.
UR	The analyte was analyzed for but was not detected above the level of the reported sample reporting or method detection; however, the data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.

The analytical results for the samples reported in this SDG are usable with the qualifications discussed in this narrative. A summary of the data with associated qualifiers is presented in **Table 1**.

Deliverables

The revised data package as submitted to Wood Environment & Infrastructure Solutions, Inc. (Wood, formerly Amec Foster Wheeler) is complete to perform a Level II DQE for United States Environmental Protection Agency (USEPA) Methods SW6010D, SW6020B, SW7470A, EPA 300.0, SM 2320B and SM 2540C.

Sample Integrity

The groundwater samples were submitted to Pace Analytical Services, Inc. (Pace) in Peachtree Corners, Georgia and analyzed for CCR Appendix III metals and State D&O Permit metals by Method 6010D and 6020B, mercury by Method SW7470A, anions (chloride, fluoride, and sulfate) by Method 300.0, alkalinity by Method SW 2320B and total dissolved solids (TDS) by Method SM 2540C.

Based on the information provided on the Chain-of-Custody (COC) forms, the field samples arrived at the laboratory intact and within the temperature range and preservation requirements. Completed COC documents are included in the data package.

Sample Identification

This SDG contains the following groundwater and quality control (QC) samples:

Sample ID	Sample Date	DQE Level	Sample ID	Sample Date	DQE Level
GWA-39RZ	02/02/22	II	GWC-47	02/01/22	II
GWA-39Z	01/31/22	II	GWC-47R	02/01/22	II
GWA-40	01/31/22	II	GWC-48	01/31/22	II
GWA-41	01/31/22	II	GWC-49R	02/01/22	II
GWA-41R	01/31/22	II	GWC-49Z	02/01/22	II
GWA-42	01/31/22	II	<u>QA/QC Samples:</u>		
GWA-43	01/31/22	II	EB-1	02/02/22	II
GWA-43R	01/31/22	II	FB-1	01/31/22	II
GWC-44	01/31/22	II	FB-2	02/01/22	II
GWC-45	02/01/22	II	FB-3	02/02/22	II
GWC-45R	02/01/22	II	DUP-1	01/31/22	II
GWC-46R	01/31/22	II	DUP-2	02/01/22	II

The samples reported in this SDG were collected from Landfill Cells 9&10 between January 31 through February 2, 2022. Sample DUP-1 is the field duplicate sample of GWA-41R and sample Dup-2 is the field

duplicate sample of GWC-45R. The equipment blank was collected on the equipment used to sample the locations at Landfill Cells 9&10, and one field blank was collected per day of sampling.

The analytical results for the metals, anions, alkalinity, and TDS data are usable with the qualifications discussed in this narrative. A summary of the data quality is presented below.

Metals (SW6010D/SW6020B/SW7470A)

The samples were submitted to Pace for CCR Appendix III and State D&O Permit metals by Method SW6010D, SW6020B, and/or mercury by SW7470A. The CCR Appendix III metals are: boron (B) and calcium (Ca). The State D&O Permit metals are: antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), selenium (Se), silver (Ag), thallium (Tl), vanadium (V), and zinc (Zn). Each of the Level II components were within QC limits except for method and field blank contamination and MS/MSD recoveries.

Holding Times

The sample analyses were performed within the 6 month and 28-day (for mercury) analysis holding times.

Method Blanks

One of the method blanks associated with the samples analyzed within this SDG reported a detection of As between the method detection limit (MDL) and the reporting limit (RL). Results less than ten times the field blank are considered "not detected" as a possible laboratory artifact: **Reason Code: BL**.

Action: The As results for sample DUP-1 were qualified as not detected due to possible method blank contamination and flagged "U".*

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

MS/MSD analyses were performed for metals on samples GWA-40, GWA-39Z, and DUP-1 from this SDG, and the recoveries and RPDs were within QC limits with the exception of the MS and MSD recoveries of magnesium and calcium in sample GWA-40. **Reason Code: M-**

Action: No qualification was required because the parent sample results of calcium and magnesium were greater than 4x the spike amount of the MS/MSD analysis.

Field Duplicate Precision

Two field duplicate pairs were submitted with this SDG and the RPDs were within QC limits.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

Field accuracy was measured through the collection of equipment/rinsate blanks and field blanks. Equipment rinsate blanks are collected to monitor the decontamination process and field blanks are collected to assess the water used to decontaminate the equipment and the containers into which samples are placed. The equipment blank sample did not contain metals, and no results were considered possible field artifacts. One of the field blanks, FB-1, contained Sb between the MDL and the RL. FB-3 contained Cr between the MDL and RL. Results less than ten times the field blank are considered "not detected" as a possible field artifact: **Reason Code: BF**.

Action: The Cr results for sample GWA-39RZ and the Sb results for samples GWA-40 and GWA-41R were qualified as not detected due to possible field blank contamination and flagged "U".*

Reporting Limits

The laboratory RLs were below the screening values for samples submitted for the analysis of metals by USEPA Method SW6010D, SW6020B and 7470A. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory. The "J" qualifier was retained by the data validator.

Total and Dissolved Metals Comparison

If total and dissolved metals samples were collected, comparison of the total and dissolved results can aid in the representativeness of the total metals value versus the metals that may be associated with suspended solids and metals actually dissolved within the water column. The dissolved metals results should be less than or equal to the total metals concentration for positive results greater than 5 times the RL. No dissolved samples were collected and reported in this SDG.

Anions (EPA 300)

The samples were submitted to Pace for anions (chloride, fluoride, and sulfate) by Method 300.0, and each of the Level II components were within QC limits except for MS/MSD recoveries.

Holding Times

The sample analyses were performed within the 28-day analysis holding times.

Method Blanks

The method blank associated with the samples analyzed within this SDG did not contain anions indicating the analytical system was contaminant free during analysis.

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

MS/MSD analyses were performed for anions on samples GWC-48 and GWC-45R, and the recoveries and RPDs were within QC limits with the exception of MS and MSD recoveries of chloride, fluoride, and sulfate in sample GWC-45R: **Reason Code: M+**.

Action: The chloride and sulfate results in sample GWC 45R and its field duplicate, DUP-2, were qualified as estimated and flagged "J". The fluoride results were not qualified because the exceedances were biased high, and the fluoride was not detected in the sample. High bias only affects positive results.

Field Duplicate Precision

Two field duplicate pairs were submitted with this SDG and the RPDs were within QC limits.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

The equipment blank and field blanks associated with the samples of this SDG did not contain anions.

Reporting Limits

The laboratory RLs were below the screening values for samples submitted for the analysis of anions by USEPA Method 300. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory. The "J" qualifier was retained by the data validator.

Alkalinity (SM 2320B)

The samples were submitted to Pace for alkalinity (total alkalinity, bicarbonate alkalinity, and carbonate alkalinity) by Method SM 2320B. Each of the Level II components were within QC limits.

Holding Times

The sample analyses were performed within the analysis holding times.

Method Blanks

The method blank associated with the samples analyzed within this SDG did not contain alkalinity.

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

An MS/MSD analysis was performed on samples GWA-40, GWC-48, and GWC-47R and recoveries and RPDs were within QC limits.

Field Duplicate Precision

Three field duplicate pairs were submitted with this SDG and the RPDs were within QC limits.

Laboratory Duplicate Precision

Laboratory duplicates were not analyzed for any project samples in this SDG.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

The equipment blank and field blanks associated with the samples in this SDG did not contain alkalinity.

Reporting Limits

The laboratory RL was below the screening value of 500 mg/L for samples submitted for the analysis of alkalinity by Method SM 2320B and no samples required dilutions; therefore, RLs were met for this project. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory. The "J" qualifier was retained by the data validator.

TDS (SM 2540C)

The samples were submitted to Pace for TDS by Method SM 2540C. Each of the Level II components were within QC limits.

Holding Times

The sample analyses were performed within the 7-day analysis holding times.

Method Blanks

The method blank associated with the samples analyzed within this SDG did not contain TDS.

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Field Duplicate Precision

Two field duplicate pairs were submitted with this SDG and the RPDs were within QC limits.

Laboratory Duplicate Precision

Laboratory duplicates were analyzed for TDS on samples GWC-44 and DUP-2, and the RPDs were within QC limits.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

The equipment blank and two of the field blanks associated with the samples in this SDG reported TDS; however, no qualification is applied for TDS in the field and equipment blanks.

Reporting Limits

The laboratory RL was below the screening value of 500 mg/L for samples submitted for the analysis of TDS by Method SM 2540C and no samples required dilutions; therefore, RLs were met for this project. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory, however no TDS results were reported between the MDL and RL.

Overall Site Evaluation and Professional Judgment Flagging Changes

The chemical data included in this SDG was validated in general accordance with the guidelines contained in the project work plan and validation SOPs. Professional judgment was not used to modify flags for results reported in samples presented in this SDG.

Completeness

A total of 17 wells, along with the required QC samples, were sampled and analyzed during the August event in Landfill Cells 9&10 according to the FSP (Amec Foster Wheeler, 2017). Each of the 17 well locations were reported in this SDG and were sampled and analyzed as scoped.

Therefore, both field and analytical completeness calculated for this SDG was 100%.

References

Amec Foster Wheeler, 2017. *Field Sampling Plan – Plant Bowen*, Georgia Power Company, Earth Science and Environmental Engineering Technical Services, Southern Company Services, Inc. (SCS), Revision 1, Update 3, October 16, 2017.

USEPA, 2020. *EPA National Functional Guidelines for Inorganic Superfund Methods Data Review*, EPA-542-R-20-006, November 2020.

Prepared by/Date: JPM 03/07/22

Checked By/Date: JAH 03/17/22

Revised By/Date: JAH 04/11/22

TABLE 1
SUMMARY OF DATA QUALIFIERS

TABLE 1
SUMMARY OF DATA QUALIFIERS
SAMPLE DELIVERY GROUP 92585555
SAMPLING DATES: January 31, 2022 and February 1-2,2022
Plant Bowen Landfill Cells 9 & 10: Event # 18

Field Sample ID	Location ID	Type	SDG	Method	Parameter Name	Lab Result	Lab Qual	Val Qual	Reason Codes	Units
FB-1	Field Blank	FB	92585555	SW6020B	antimony	0.0014	J	J	--	mg/L
FB-3	Field Blank	FB	92585555	SW6020B	chromium	0.0011	J	J	--	mg/L
GWA-39RZ	GWA-39RZ	N	92585555	SW6020B	chromium	0.0012	J	U*	BF	mg/L
GWA-39Z	GWA-39Z	N	92585555	SW6020B	arsenic	0.0021	J	J	--	mg/L
GWA-40	GWA-40	N	92585555	SW6020B	antimony	0.0014	J	J	--	mg/L
GWA-40	GWA-40	N	92585555	E300.0	chloride	0.71	J	J	--	mg/L
GWA-41	GWA-41	N	92585555	SW6010D	sodium	0.9	J	J	--	mg/L
GWA-41R	GWA-41R	N	92585555	SW6020B	antimony	0.0011	J	U*	BF	mg/L
GWA-41R	GWA-41R	N	92585555	SW6020B	boron	0.016	J	J	--	mg/L
GWA-41R	GWA-41R	N	92585555	SW6020B	copper	0.0028	J	J	--	mg/L
GWA-41R	GWA-41R	N	92585555	SW6020B	nickel	0.00091	J	J	--	mg/L
DUP-1	GWA-41R	FD	92585555	SW6020B	arsenic	0.0012	J B	J	BL	mg/L
DUP-1	GWA-41R	FD	92585555	SW6020B	boron	0.02	J	J	--	mg/L
DUP-1	GWA-41R	FD	92585555	SW6020B	copper	0.0028	J	J	--	mg/L
DUP-1	GWA-41R	FD	92585555	SW6020B	nickel	0.00095	J	J	--	mg/L
GWA-42	GWA-42	N	92585555	SW6020B	beryllium	0.00014	J	J	--	mg/L
GWA-42	GWA-42	N	92585555	SW6020B	cadmium	0.00018	J	J	--	mg/L
GWA-42	GWA-42	N	92585555	SW6020B	nickel	0.0011	J	J	--	mg/L
GWA-43	GWA-43	N	92585555	SW6020B	arsenic	0.0013	J	J	--	mg/L
GWA-43	GWA-43	N	92585555	SW6020B	copper	0.0014	J	J	--	mg/L
GWA-43	GWA-43	N	92585555	SW6020B	nickel	0.00077	J	J	--	mg/L
GWA-43R	GWA-43R	N	92585555	SW6020B	boron	0.011	J	J	--	mg/L
GWA-43R	GWA-43R	N	92585555	SW6020B	chromium	0.0011	J	J	--	mg/L
GWC-44	GWC-44	N	92585555	SW6020B	beryllium	0.000065	J	J	--	mg/L
GWC-44	GWC-44	N	92585555	SW6020B	boron	0.015	J	J	--	mg/L
GWC-44	GWC-44	N	92585555	SW6020B	cobalt	0.0017	J	J	--	mg/L
GWC-44	GWC-44	N	92585555	SW6020B	copper	0.00053	J	J	--	mg/L
GWC-44	GWC-44	N	92585555	SW6020B	selenium	0.0018	J	J	--	mg/L
GWC-45	GWC-45	N	92585555	SW6020B	antimony	0.002	J	J	--	mg/L
GWC-45	GWC-45	N	92585555	SW6020B	boron	0.019	J	J	--	mg/L
GWC-45	GWC-45	N	92585555	SW6020B	cobalt	0.0013	J	J	--	mg/L
GWC-45	GWC-45	N	92585555	SW6020B	nickel	0.0011	J	J	--	mg/L
GWC-45	GWC-45	N	92585555	SM2320B	alkalinity	2.7	J	J	--	mg/L
GWC-45	GWC-45	N	92585555	SM2320B	alkalinity, bicarbonate	2.7	J	J	--	mg/L
GWC-45	GWC-45	N	92585555	E300.0	chloride	0.79	J	J	--	mg/L
GWC-45R	GWC-45R	N	92585555	E300.0	chloride	4.3	M1	J	M+	mg/L
GWC-45R	GWC-45R	N	92585555	E300.0	sulfate	6.1	M1	J	M+	mg/L
GWC-45R	GWC-45R	N	92585555	SW6020B	boron	0.022	J	J	--	mg/L
DUP-2	GWC-45R	FD	92585555	E300.0	chloride	4.2		J	M+	mg/L
DUP-2	GWC-45R	FD	92585555	E300.0	sulfate	6.1		J	M+	mg/L
DUP-2	GWC-45R	FD	92585555	SW6020B	boron	0.013	J	J	--	mg/L
GWC-47	GWC-47	N	92585555	SW6020B	boron	0.011	J	J	--	mg/L
GWC-47	GWC-47	N	92585555	SW6020B	cadmium	0.00014	J	J	--	mg/L
GWC-47	GWC-47	N	92585555	SW6020B	chromium	0.0015	J	J	--	mg/L
GWC-47R	GWC-47R	N	92585555	SW6020B	antimony	0.0024	J	J	--	mg/L
GWC-47R	GWC-47R	N	92585555	SW6020B	boron	0.01	J	J	--	mg/L
GWC-47R	GWC-47R	N	92585555	SW6020B	chromium	0.0022	J	J	--	mg/L

TABLE 1
SUMMARY OF DATA QUALIFIERS
SAMPLE DELIVERY GROUP 92585555
SAMPLING DATES: January 31, 2022 and February 1-2,2022
Plant Bowen Landfill Cells 9 & 10: Event # 18

Field Sample ID	Location ID	Type	SDG	Method	Parameter Name	Lab Result	Lab Qual	Val Qual	Reason Codes	Units
GWC-48	GWC-48	N	92585555	SW6020B	beryllium	0.00036	J	J	--	mg/L
GWC-48	GWC-48	N	92585555	SW6020B	cadmium	0.0002	J	J	--	mg/L
GWC-48	GWC-48	N	92585555	SW6020B	chromium	0.002	J	J	--	mg/L
GWC-48	GWC-48	N	92585555	SW6020B	cobalt	0.0021	J	J	--	mg/L
GWC-49Z	GWC-49Z	N	92585555	SW6010D	calcium	0.62	J	J	--	mg/L
GWC-49Z	GWC-49Z	N	92585555	SW6020B	antimony	0.00097	J	J	--	mg/L
GWC-49Z	GWC-49Z	N	92585555	SW6020B	barium	0.003	J	J	--	mg/L
GWC-49Z	GWC-49Z	N	92585555	SW6020B	boron	0.0087	J	J	--	mg/L
GWC-49Z	GWC-49Z	N	92585555	SW6020B	cobalt	0.00066	J	J	--	mg/L
GWC-49Z	GWC-49Z	N	92585555	SW6020B	nickel	0.0014	J	J	--	mg/L
GWC-49Z	GWC-49Z	N	92585555	SM2320B	alkalinity	3.4	J	J	--	mg/L
GWC-49Z	GWC-49Z	N	92585555	SM2320B	alkalinity, bicarbonate	3.4	J	J	--	mg/L
GWC-49Z	GWC-49Z	N	92585555	E300.0	chloride	0.93	J	J	--	mg/L
GWC-49Z	GWC-49Z	N	92585555	E300.0	sulfate	0.93	J	J	--	mg/L

Notes:

Laboratory Qualifiers:

B = Analyte was detected in the associated method blank.
 J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
 M1 = Matrix spike recovery exceeded QC limits. Batch accepted based on laboratory control sample (LCS) recovery.

Reason Codes:

BF = Field blank contamination. The result should be considered "not-detected".
 BL = Laboratory blank contamination. The result should be considered "not-detected".
 M+ = MS and MSD recoveries outside acceptance limits. The result may be biased high.
 -- = No Reason Code assigned for values detected between the method detection limit (MDL) and the reporting limit (RL);estimated quantitation.

Validation Qualifiers:

J = The compound was positively identified; however, the associated numerical value is an estimated concentration only. The associated numerical value is the approximate concentration of the analyte in the sample.
 U* = This analyte should be considered "not-detected" because it was detected in an associated blank at a similar level.

Prepared by/Date: JPM 03/16/22

Checked by/Date: JAH 04/11/22

DQE CHECKLISTS

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen CCR Event 18 – Semiannual State D&O Permit Event

Project No: 6122160287.2103.****

Method: Metals and Mercury by SW6010D/SW6020B/SW7470A

Laboratory and Lot: Pace SDG: 92585555

Reviewer/Date: J. McIntyre 03/02/22 **Senior Reviewer/Date:** J. Hartness 03/16/22

<u>YES</u>	<u>NO</u>	<u>NA</u>	<u>COMMENTS</u>
<input checked="" type="checkbox"/>			Case Narrative and COC Completeness Review OK
<input checked="" type="checkbox"/>			Sample Preservation and cooler temperature met (HNO₃ to pH<2) OK, 5.0°C
<input checked="" type="checkbox"/>			Holding times met (180 days; Hg = 28 days) Coll: 01/31/22-02/02/22 Prep: metals – 02/12/22, 02/14/22 Hg – 02/09/22 Anal: metals – 02/12/22, 02/14/22 Hg – 02/09/22
	<input checked="" type="checkbox"/>		QC Blanks Review <u>Method Blanks:</u> p. 56 MB 3548482 (6010) = ND p. 58 MB 3547662 (6020) - All ND p. 62 MB 3543220 (7470) Hg = ND p. 57 MB 3548893 (6010) = All ND p. 60 MB 3548415 (6020) – As 0.0018 J x 0 = 0.018 mg/L DUP-1 flagged U* p. 63 MB 3543231 (7470) Hg = ND <u>Field blanks</u> FB-1 As = 0.0014 J x10 = 0.014 mg/L Assoc. results < 10x flagged U* GWA-40, GWA-41R FB-2 = All ND FB-3 = Cr = 0.0011 J x10 = 0.011 mg/L Assoc. results < 10x flagged U* GWA-39RZ <u>Equipment blank:</u> EB-1 = All ND
<input checked="" type="checkbox"/>			Laboratory Control Sample (LCS) recovery within limits (Metals 70-130%, Hg = 80-120%) p. 56 LCS 3548483 (6010) – All %Rec OK p. 58 LCS 3547663 (6020) – All %Rec OK p. 62 LCS 3543221 (7470) Hg = 92% p. 57 LCS 3548894 (6010) – All %rec OK p. 60 LCS 3548416 (6020) – All %rec OK p. 63 LCS 3543232 (7470) Hg = 87%

Metals and Mercury by 6020B/7470A (cont.)

YES NO NA COMMENTS



Lab Duplicate - Field Duplicate precision goals met (20%)

**for results <RL, diff must be <RL*

	<u>GWC-41R</u>	<u>Dup-1</u>	<u>*Diff or RPD</u>	<u>RL</u>
Sb	0.0011 J	<0.00078 U	0.00032	0.003
As	<0.0011 U	0.0012 J B	0.0012	0.005
Ba	0.031	0.029	6.7%	
B	0.016 J	0.02 J	0.014	0.04
Cu	0.0028 J	0.0028 J	0	0.0050
Ni	0.00091 J	0.00095 J	0.00004	0.005
Ca	39.3	42.7	8.3%	
Mg	20.1	21.6	7.2%	
K	2.5	2.7	7.7%	

	<u>GWC-45R</u>	<u>Dup-2</u>	<u>*Diff or RPD</u>	<u>RL</u>
Ca	43.9	38.8	12.3%	NA
Mg	23.8	21.2	11.6%	
K	0.82	0.73	11.6%	
Na	1.5	1.3	14.3%	
Ba	0.026	0.026	0%	NA
B	0.022 J	0.013 J	0.009	0.04



Matrix Spike recoveries and RPDs within limits (75-125%, RPD 20)

p. 56 GWA-40 (6010) – Ca 1, -16% RPD = 1
Mg = 62, 52% RPD = 1 No flags; sample >4x
p. 57 Non-project sample of this SDG
p. 59 GWA-39Z – All %Recs and RPDs OK
p. 61 DUP-1 – All %Recs and RPDs OK
p. 62 GWA-39Z – 96, 95% RPD = 1
p. 63 Non-project sample of this SDG



Total metals vs dissolved metals within limits (RPD < 20% or diff. < RL)

No dissolved metals in this SDG



EDD Data Verification vs. Hardcopy (10% samples for each SDG)

100% of the results in this SDG were verified

Anions (chloride, fluoride, sulfate) by EPA 300.0 (cont.)

YES	NO	NA	COMMENTS
<input checked="" type="checkbox"/>			<p>Matrix Spike recoveries and RPDs within limits (lab %Rec limits, RPD = 20) p. 71 GWC-48 All %rec and RPDs OK p. 72 not samples from this SDG p. 73 GWC-45R Cl = 112, 112% RPD = 0, F = 110, 111% RPD = 1, SO₄ = 113, 113% RPD = 0 Sample results flagged J for Cl and SO₄, no flags for F because sample was ND. Also flagged field dup sample DUP-2.</p>
<input checked="" type="checkbox"/>			<p>EDD Data Verification vs. Hardcopy (10% samples for each SDG) 100% of the results in this SDG were verified</p>

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen CCR Event 18 – Semiannual State D&O Permit Event

Project No: 6122160287.2103.****

Method: TDS by SM 2540C

Laboratory and Lot: Pace SDG: 92585555

Reviewer/Date: J. McIntyre 03/7/22 **Senior Reviewer/Date:** J. Hartness 03/17/22

YES NO NA COMMENTS

 Case Narrative and COC Completeness Review
OK

 Sample Preservation and cooler temperature met (Cool to 6°C)
OK, 5.0°C

 Holding times met (7 days)
Coll: 01/31/22-02/02/22
Anal: 02/03/22, 02/07/22, 02/08/22

 QC Blanks Review
Method Blanks:
p. 64 MB 3537021 TDS = ND p. 65 MB 3540515 TDS = ND
p. 66 MB 3540519 TDS = ND p. 67 MB 3541419 TDS = ND

Equipment blanks: Field blanks
EB-1 = ND FB-1 through FB-3 = All ND

 Laboratory Control Sample (LCS) recovery within lab limits
p. 64 LCS 3537022 TDS = 94% p. 65 LCS 3540516 TDS = 94%
p. 66 LCS 3540520 TDS = 94% p. 67 LCS 3541420 TDS = 98%

 Lab Duplicate - Field Duplicate precision goals met (20%)

	<u>GWC-41R</u>	<u>Dup-1</u>	<u>*Diff or RPD</u>	<u>RL</u>
TDS	184	180	2.2%	

	<u>GWC-45R</u>	<u>Dup-2</u>	<u>*Diff or RPD</u>	<u>RL</u>
TDS	201	180	1.1%	

p. 64 Lab Dup: GWC-44 RPD = 2 p. 66 Lab dup: DUP-2 RPD = 1

 Matrix Spike recoveries and RPDs within limits (if applicable)
None for TDS

 EDD Data Verification vs. Hardcopy (10% samples for each SDG)
100% of the results in this SDG were verified

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen CCR Event 18 – Semiannual State D&O Permit Event

Project No: 6122160287.2303.****

Method: Alkalinity by SM 2320B

Laboratory and Lot: Pace SDG: 92585555

Reviewer/Date: J. McIntyre 03/07/22 **Senior Reviewer/Date:** J. Hartness 03/17/22

YES NO NA COMMENTS

- Case Narrative and COC Completeness Review**
 OK
- Sample Preservation and cooler temperature met (Cool to 6°C)**
 OK, 5.0°C
- Holding times met (7 days)**
 Coll: 01/31/22-02/02/22
 Anal: 02/08/22, 02/09/22
- QC Blanks Review**
Method Blanks:
 p. 68 MB 4239372 Alk = ND
 p. 69 MB 4240244 Alk = ND
 p. 70 MB 4240572 Alk = ND

<u>Equipment blanks:</u>	<u>Field blanks</u>
EB-1 = ND	FB-1 through FB-3 = All ND
- Laboratory Control Sample (LCS) recovery within lab limits**
 p. 68 LCS/LCSD 4239373/ 4239374 Alk = 104, 103% RPD = 1
 p. 69 LCS/LCSD 4240245/ 4240246 Alk = 105, 105% RPD = 0
 p. 70 LCS/LCSD 4240573/ 4240574 Alk = 105, 105% RPD = 0
- Lab Duplicate - Field Duplicate precision goals met (20%)**

	<u>GWC-41R</u>	<u>Dup-1</u>	<u>*Diff or RPD</u>	<u>RL</u>
Alkalinity	185	188	1.6%	

	<u>GWC-45R</u>	<u>Dup-2</u>	<u>*Diff or RPD</u>	<u>RL</u>
Alkalinity	188	190	11.0%	
- Matrix Spike recoveries and RPDs within limits (if applicable)**
 p. 68 GWA-40 All %rec and RPDs OK
 p. 69 GWC-48 All %rec and RPDs OK
 p. 70 GWC-47R All %rec and RPDs OK
- EDD Data Verification vs. Hardcopy (10% samples for each SDG)**
100% of the results in this SDG were checked

Data Evaluation Narrative

Project: Plant Bowen CCR Event # 18 Groundwater Detection Monitoring/

Semiannual State Design and Operation Permit Monitoring

Wood Project Number: 6122160287.2103.****

Site: Landfill Cells 1&2 - Plant Bowen, Georgia

Matrix: Groundwater

Pace SDG Nos: 92586436

Introduction

A data quality evaluation (DQE) was performed on the laboratory data reported for the CCR Event # 18 Groundwater Detection Monitoring Sampling and the Semiannual State Design and Operation (D&O) Permit sampling event conducted at Landfill Cells 1 & 2 at Plant Bowen, located in Cartersville, Georgia in February 2022 for Southern Company Services (SCS). The samples were collected and analyzed per the protocols presented in the Plant Bowen *Field Sampling Plan* (FSP), Revision 1, Update 3 (Amec Foster Wheeler, 2017). The following sections provide summary discussions of the required data qualifications for the analytical methods for samples collected. A Level II DQE validation was performed on the samples analyzed by the fixed-based laboratory within these sample delivery groups (SDGs). A Level II DQE consists of review of the following criteria: sample integrity, holding times, method blanks, laboratory control samples (LCSs), matrix spikes/matrix spike duplicate (MS/MSD) recoveries and relative percent differences (RPDs), post digestion spikes (PDS), where applicable, laboratory and field duplicate RPDs, field and/or equipment blanks, and reporting limits. Additionally, the data summary tables generated from the electronic data deliverable (EDD) were compared to the laboratory hardcopy data report to verify that the EDD and laboratory data report agree.

The data were reviewed using the laboratory’s precision and accuracy limits, the method requirements, and any requirements listed in the FSP. It should be noted that at the time of this review, a finalized QAPP was not provided. DQE data qualifications were applied, if necessary, using the procedures in USEPA National Functional Guidelines for Inorganic Data Review (USEPA, 2020), as guidance, and professional judgment using the following qualifiers:

<u>Qualifier</u>	<u>Usable Data</u>
J	The analyte was positively identified but the result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample. <i>SCS Definition: Value J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce as reliable of a value. Therefore, the value displayed (value J) is qualified by the laboratory as estimated.</i>
UJ	The analyte was analyzed for but was not detected above the level of the reported sample reporting/method detection limit. The reported method detection limit is approximate and may be inaccurate or imprecise.
U	Analyte was analyzed for but was not detected above the level of the reported sample reporting/method detection limit. <i>Note: SCS does not use the “U” flag except when reporting results for radium that are detected below the Minimum Detection Concentration (MDC).</i>
U*	This analyte should be considered “not-detected” because it was detected in an associated blank at a similar level.

<u>Qualifier</u>	<u>Unusable Data</u>
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be confirmed.
UR	The analyte was analyzed for but was not detected above the level of the reported sample reporting or method detection; however, the data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.

The analytical results for the samples reported in this SDG are usable with the qualifications discussed in this narrative. A summary of the data with associated qualifiers is presented in **Table 1**.

Deliverables

The data package as submitted to Wood Environment & Infrastructure Solutions, Inc. (Wood) is complete to perform a Level II DQE for United States Environmental Protection Agency (USEPA) Methods SW6010D, SW6020B, SW7470A, EPA 300.0, SM 2320B, and SM 2540C.

Sample Integrity

The groundwater samples were submitted to Pace Analytical Services, Inc. (Pace) in Peachtree Corners, Georgia and analyzed for CCR Appendix III metals and State D&O Permit metals by Methods SW6010D, SW6020B, and mercury by Method SW7470A, anions (chloride, fluoride, and sulfate) by Method 300.0, alkalinity by SM2320B, and total dissolved solids (TDS) by Method SM 2540C.

Based on the information provided on the Chain-of-Custody (COC) forms, the field samples arrived at the laboratory intact and within the temperature range and preservation requirements. Completed COC documents are included in the data package.

Sample Identification

This SDG contains the following groundwater and/or quality control (QC) samples:

Sample ID	Sample Date	DQE Level	Sample ID	Sample Date	DQE Level
GWA-1	02/01/22	II	GWC-11R	02/04/22	II
GWA-2	02/01/22	II	GWC-12	02/02/22	II
GWA-2R	02/01/22	II	GWC-13	02/17/22	II
GWA-3A	02/02/22	II	GWC-13RZ	02/04/22	II
GWA-4RZ	02/03/22	II	GWC-14Z	02/04/22	II
GWA-50	02/01/22	II	GWC-15R	02/04/22	II
GWA-50R	02/02/22	II	GWC-15Z	02/07/22	II
GWC-5	02/02/22	II	<u>QC Samples</u>		
GWC-6	02/02/22	II	FB-1	02/01/22	II
GWC-6RZ	02/02/22	II	FB-2	02/02/22	II
GWC-7Z	02/02/22	II	FB-3	02/03/22	II
GWC-8RR	02/02/22	II	FB-4	02/04/22	II
GWC-8Z	02/02/22	II	FB-5	02/07/22	II
GWC-9	02/02/22	II	FB-6	02/17/22	II
GWC-10	02/04/22	II	DUP-1	02/01/22	II
GWC-10R	02/04/22	II	DUP-2	02/02/22	II
GWC-11	02/04/22	II	DUP-3	02/04/22	II

These samples were collected from Landfill Cells 1&2 between February 1-4, 7 and 17, 2022. Sample DUP-1 is a field duplicate of sample GWA-2R, DUP-2 is a field duplicate of sample GWC-9, and DUP-3 is a field duplicate of sample GWC-11R. Samples FB-1 through FB-6 are field blanks. No equipment blanks are required for Landfill Cells 1&2 because each of the wells sampled have dedicated systems.

The analytical results for the metals, anions, and TDS data are usable with the qualifications discussed in this narrative. A summary of the data quality is presented below.

Metals (SW6010D/6020B/SW7470A)

The samples were submitted to Pace for CCR Appendix III and State D&O Permit metals by Method SW6010D, SW6020B and/or mercury by SW7470A. The CCR Appendix III metals are: boron (B) and calcium (Ca). The State D&O Permit metals are: antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), selenium (Se), silver (Ag), thallium (Tl), vanadium (V), and zinc (Zn). Each of the Level II components were within QC limits except for method and field blank contamination, and MS/MSD recoveries.

Holding Times

The sample analyses were performed within the 6-month and 28-day (for mercury) analysis holding times.

Method Blanks

One of the method blanks associated with the samples analyzed in this SDG contained a reportable concentration of arsenic between the method detection and reporting limits. Results less than ten times the field blank are considered “not detected” as a possible laboratory artifact. **Reason Code: BL:**

Action: The arsenic results for samples FB-4, FB-5, GWC-10, GWC-10R, GWC-11, GWC-11R, DUP-3, GWC-13RZ, GWC-14Z, GWC-15R, and GWC-15Z were qualified as not detected and flagged “U”.*

Laboratory Control Sample (LCS)

Percent recoveries for target analytes were within quality control limits in the LCS.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

Batch MS/MSD analyses for metals were performed on samples GWA-2, GWA-4RZ, GWA-2R, GWC-10, and FB-5. The recoveries and RPDs were within QC limits except for calcium in samples GWA-2 and calcium and magnesium in sample GWA-4RZ. **Reason Code: M+**

Action: No qualification was necessary for calcium and magnesium because the parent sample results were greater than 4 times the spike amount.

Post Digestion Spike (PDS)

A PDS analysis was not available for review.

Field Duplicate Precision

Three field duplicate sample pairs were collected with this SDG, and the RPDs were within QC limits.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

Field accuracy was measured through the collection of field blanks. Field blanks are collected to assess the water used to decontaminate the equipment and the containers into which samples are placed. No equipment blanks are required for LF Cells 1&2 because each of the wells sampled have dedicated systems. Two of the field blanks (FB-4 and FB-5) reported arsenic between the MDL and the RL. Results less than ten times the field blank are considered "not detected" as a possible field artifact. **Reason Code: BF:**

Action: No qualification was applied because the field blanks were qualified due to method blank contamination.

Reporting Limits

The laboratory RLs were below the screening values for samples submitted for the analysis of metals by USEPA Methods SW6010D, SW6020B and SW7470A.

Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory. The "J" qualifier is maintained by the data validator.

Total and Dissolved Metals Comparison

If total and dissolved metals samples were collected, comparison of the total and dissolved results can aid in the representativeness of the total metals value versus the metals that may be associated with suspended solids and metals actually dissolved within the water column. The dissolved metals results should be less than or equal to the total metals concentration for positive results greater than 5 times the RL. No dissolved samples were collected and reported in this SDG.

Anions (EPA 300.0)

The samples were submitted to Pace for anions (chloride, fluoride, and sulfate) by Method 300.0. Each of the Level II components were within the QC limits except for MS/MSD recoveries.

Holding Times

The sample analyses were performed within the 28-day analysis holding time.

Method Blanks

The method blank associated with the samples analyzed in this SDG contained no reportable detections of anions.

Laboratory Control Sample (LCS)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Matrix Spike/Matrix Spike Duplicate (MS/MSD)

The batch MS/MSD for anions was performed on samples GWA-1, GWC-7Z, and GWC-11. The recoveries and RPDs were within QC limits except for low recoveries for chloride, fluoride, and sulfate in samples GWA-1 and GWC-7Z. **Reason Code: M+**

Action: The chloride and sulfate results for sample GWA-1 and GWC-7Z were qualified as estimated with an approximate reporting limit and flagged "J". No qualification was required for fluoride because fluoride was not detected in the sample; high bias only affects positive results.

Field Duplicate Precision

Three field duplicate sample pairs were collected with this SDG, and the RPDs were within QC limits.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

Field accuracy was measured through the collection of field blanks. The field blanks did not contain positive results for anions.

Reporting Limits

The laboratory RLs were below the screening values for samples submitted for the analysis of anions by USEPA Method 300. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory. The "J" qualifier is maintained by the data validator.

Alkalinity (SM 2320B)

The samples were submitted to Pace for alkalinity (total alkalinity, bicarbonate alkalinity, and carbonate alkalinity) by Method SM 2320B. Each of the Level II components were within QC limits.

Holding Times

The sample analyses were performed within the analysis holding times.

Method Blanks

The method blank associated with the samples analyzed within this SDG did not contain alkalinity.

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

An MS/MSD analysis was performed on samples GWC-8Z and recoveries and RPDs were within QC limits.

Field Duplicate Precision

Three field duplicate pairs were submitted with this SDG and the RPDs were within QC limits.

Laboratory Duplicate Precision

Laboratory duplicates were not analyzed for any project samples in this SDG.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

The field blanks associated with the samples in this SDG did not contain alkalinity.

Reporting Limits

The laboratory RL was met for samples submitted for the analysis of alkalinity by Method SM 2320B and no samples required dilutions; therefore, RLs were met for this project. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory. The "J" qualifier was retained by the data validator.

TDS (SM 2540C)

The samples were submitted to Pace for TDS by Method SM 2540C. Each of the Level II components were within the QC limits except for field duplicate precision.

Holding Times

The sample analyses were performed within the 7-day analysis holding times.

Method Blanks

The analytical method does not require the analysis of a method blank.

Laboratory Control Sample (LCS)

Percent recoveries for target analytes were within quality control limits in the LCS.

Field Duplicate Precision

Three field duplicate pairs were submitted with this SDG and one duplicate pair (GWC-9/DUP-2) was outside of the QC limits for TDS.

Action: The field duplicate pair (GWC-9/DUP-2) was qualified and flagged "J".

Laboratory Duplicate Precision

Laboratory duplicates were analyzed on project samples GWC-8RR and GWC-15R and the RPDs were within QC limits.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

Field accuracy was measured through the collection of field blanks. One of the field blanks (FB-3) reported TDS above the RL. Results less than five times the field blank are considered “not detected” as a possible field artifact. **Reason Code: BF:**

Action: No qualification was applied because the associated samples were greater than five times the blank result.

Reporting Limits

The laboratory RL was below the screening value of 500 mg/L for samples submitted for the analysis of TDS by Method SM 2540C. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates, however no TDS results were reported between the MDL and RL.

Overall Site Evaluation and Professional Judgment Flagging Changes

The chemical data included in this SDG was validated in general accordance with the guidelines contained in the project work plan and validation SOPs. No professional judgment was used to modify flags for results reported in samples presented in this SDG.

Completeness

A total of 24 wells, along with the required QC samples, were sampled and analyzed during the February 2022 event in Landfill Cells 1&2 according to the FSP (Amec Foster Wheeler, 2017). The 24 well locations along with field blank samples were reported in this SDG and were sampled and analyzed as scoped.

The field and analytical completeness were 100%. Therefore, the overall completeness was acceptable.

References

Amec Foster Wheeler, 2017. *Field Sampling Plan – Plant Bowen*, Georgia Power Company, Earth Science and Environmental Engineering Technical Services, Southern Company Services, Inc. (SCS), Revision 1, Update 3, October 16, 2017.

USEPA, 2020. *National Functional Guidelines for Inorganic Superfund Methods Data Review*, EPA-542-R-20-006, November 2020.

Prepared by/Date: JPM 3/22/22
Checked by/Date: JAH 03/23/22

TABLE 1
SUMMARY OF DATA QUALIFIERS

TABLE 1
SUMMARY OF DATA QUALIFIERS
SAMPLE DELIVERY GROUP 92586436
SAMPLING DATES: February 1-4, 7, and 17, 2022
Plant Bowen Landfill Cells 1 & 2: Event 18

Field Sample ID	Location ID	Type	SDG	Method	Parameter Name	Lab Result	Lab Qual	Val Qual	Reason Codes	Units
FB-3	Field Blank	Field Blank	FB	SM2540C	total dissolved solids	12				mg/L
FB-4	Field Blank	Field Blank	FB	6020B	arsenic	0.0019	J	U*	BL	mg/L
FB-5	Field Blank	Field Blank	FB	6020B	arsenic	0.0018	J	U*	BL	mg/L
DUP-1	GWA-2R	FD	92586436	300.0	chloride	0.77	J	J	--	mg/L
DUP-1	GWA-2R	FD	92586436	6020B	arsenic	0.0037	J	J	--	mg/L
DUP-1	GWA-2R	FD	92586436	6020B	cobalt	0.0009	J	J	--	mg/L
DUP-1	GWA-2R	FD	92586436	6020B	copper	0.00078	J	J	--	mg/L
DUP-2	GWC-9	FD	92586436	2320B	alkalinity (bicarbonate)	2.6	J	J	--	mg/L
DUP-2	GWC-9	FD	92586436	2320B	alkalinity (total)	2.6	J	J	--	mg/L
DUP-2	GWC-9	FD	92586436	2540C	total dissolved solids	27		J	FD	mg/L
DUP-2	GWC-9	FD	92586436	6020B	beryllium	0.0002	J	J	--	mg/L
DUP-2	GWC-9	FD	92586436	6020B	cobalt	0.00042	J	J	--	mg/L
DUP-2	GWC-9	FD	92586436	6020B	nickel	0.0011	J	J	--	mg/L
DUP-3	GWC-11R	FD	92586436	6010D	sodium	0.95	J	J	--	mg/L
DUP-3	GWC-11R	FD	92586436	6020B	antimony	0.00094	J	J	--	mg/L
DUP-3	GWC-11R	FD	92586436	6020B	arsenic	0.0035	J B	U*	BL	mg/L
DUP-3	GWC-11R	FD	92586436	7470A	chromium	0.0041	J	J	--	mg/L
GWA-1	GWA-1	N	92586436	300.0	chloride	1.2	M1	J	M+	mg/L
GWA-1	GWA-1	N	92586436	300.0	sulfate	0.93	J M1	J	M+	mg/L
GWA-1	GWA-1	N	92586436	6020B	antimony	0.0028	J	J	--	mg/L
GWA-2	GWA-2R	N	92586436	6020B	arsenic	0.0019	J	J	--	mg/L
GWA-2R	GWA-2R	N	92586436	300.0	chloride	0.77	J	J	--	mg/L
GWA-2R	GWA-2R	N	92586436	6020B	antimony	0.0029	J	J	--	mg/L
GWA-2R	GWA-2R	N	92586436	6020B	cobalt	0.00093	J	J	--	mg/L
GWA-2R	GWA-2R	N	92586436	6020B	copper	0.00096	J	J	--	mg/L
GWA-4RZ	GWA-4RZ	N	92586436	6020B	arsenic	0.0034	J	J	--	mg/L
GWA-50	GWA-50	N	92586436	300.0	chloride	0.91	J	J	--	mg/L
GWA-50	GWA-50	N	92586436	2320B	alkalinity (bicarbonate)	4.7	J	J	--	mg/L
GWA-50	GWA-50	N	92586436	2320B	alkalinity (total)	4.7	J	J	--	mg/L
GWA-50	GWA-50	N	92586436	6020B	antimony	0.0015	J	J	--	mg/L
GWA-50	GWA-50	N	92586436	6020B	copper	0.0017	J	J	--	mg/L
GWA-50	GWA-50	N	92586436	6020B	nickel	0.0008	J	J	--	mg/L
GWA-50R	GWA-50R	N	92586436	300.0	chloride	0.7	J	J	--	mg/L
GWA-50R	GWA-50R	N	92586436	300.0	sulfate	0.53	J	J	--	mg/L
GWA-50R	GWA-50R	N	92586436	2320B	alkalinity (bicarbonate)	2.9	J	J	--	mg/L
GWA-50R	GWA-50R	N	92586436	2320B	alkalinity (total)	2.9	J	J	--	mg/L
GWA-50R	GWA-50R	N	92586436	6010D	calcium	0.93	J	J	--	mg/L
GWA-50R	GWA-50R	N	92586436	6010D	sodium	0.94	J	J	--	mg/L
GWA-50R	GWA-50R	N	92586436	6020B	beryllium	0.000055	J	J	--	mg/L
GWA-50R	GWA-50R	N	92586436	6020B	copper	0.0033	J	J	--	mg/L
GWA-50R	GWA-50R	N	92586436	6020B	nickel	0.00089	J	J	--	mg/L
GWA-50R	GWA-50R	N	92586436	6020B	silver	0.0012	J	J	--	mg/L

TABLE 1
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Plant Bowen Landfill Cells 1 & 2: Event 18

Field Sample ID	Location ID	Type	SDG	Method	Parameter Name	Lab Result	Lab Qual	Val Qual	Reason Codes	Units
GWC-10	GWC-10	N	92586436	6020B	arsenic	0.0023	J B	U*	BL	mg/L
GWC-10	GWC-10	N	92586436	6020B	beryllium	0.00021	J	J	--	mg/L
GWC-10	GWC-10	N	92586436	6020B	cobalt	0.0018	J	J	--	mg/L
GWC-10	GWC-10	N	92586436	6020B	nickel	0.0014	J	J	--	mg/L
GWC-10R	GWC-10R	N	92586436	6020B	antimony	0.0016	J	J	--	mg/L
GWC-10R	GWC-10R	N	92586436	6020B	arsenic	0.0019	J B	U*	BL	mg/L
GWC-11	GWC-11	N	92586436	6020B	arsenic	0.0023	J B	U*	BL	mg/L
GWC-11R	GWC-11R	N	92586436	6010D	sodium	0.96	J	J	--	mg/L
GWC-11R	GWC-11R	N	92586436	6020B	arsenic	0.0035	J B	U*	BL	mg/L
GWC-11R	GWC-11R	N	92586436	6020B	chromium	0.0042	J	J	--	mg/L
GWC-12	GWC-12	N	92586436	300.0	chloride	0.79	J	J	--	mg/L
GWC-12	GWC-12	N	92586436	6010D	zinc	0.019	J	J	--	mg/L
GWC-12	GWC-12	N	92586436	6020B	arsenic	0.0027	J	J	--	mg/L
GWC-12	GWC-12	N	92586436	6020B	cobalt	0.0034	J	J	--	mg/L
GWC-12	GWC-12	N	92586436	6020B	nickel	0.0025	J	J	--	mg/L
GWC-13	GWC-13	N	92586436	6020B	beryllium	0.000089	J	J	--	mg/L
GWC-13	GWC-13	N	92586436	6020B	boron	0.015	J	J	--	mg/L
GWC-13RZ	GWC-13RZ	N	92586436	6020B	arsenic	0.0035	J B	U*	BL	mg/L
GWC-13RZ	GWC-13RZ	N	92586436	6020B	boron	0.017	J	J	--	mg/L
GWC-14Z	GWC-14Z	N	92586436	6020B	arsenic	0.0019	J B	U*	BL	mg/L
GWC-14Z	GWC-14Z	N	92586436	6020B	beryllium	0.00011	J	J	--	mg/L
GWC-15R	GWC-15R	N	92586436	6020B	arsenic	0.0026	J B	U*	BL	mg/L
GWC-15R	GWC-15R	N	92586436	6020B	nickel	0.00093	J	J	--	mg/L
GWC-15Z	GWC-15Z	N	92586436	300.0	chloride	0.6	J	J	--	mg/L
GWC-15Z	GWC-15Z	N	92586436	300.0	sulfate	0.64	J	J	--	mg/L
GWC-15Z	GWC-15Z	N	92586436	6020B	arsenic	0.0025	J B	U*	BL	mg/L
GWC-15Z	GWC-15Z	N	92586436	6020B	cadmium	0.0011	J	J	--	mg/L
GWC-5	GWC-5	N	92586436	300.0	chloride	0.66	J	J	--	mg/L
GWC-6	GWC-6	N	92586436	6020B	chromium	0.0026	J	J	--	mg/L
GWC-6RZ	GWC-6RZ	N	92586436	6020B	antimony	0.0012	J	J	--	mg/L
GWC-6RZ	GWC-6RZ	N	92586436	6020B	beryllium	0.00007	J	J	--	mg/L
GWC-6RZ	GWC-6RZ	N	92586436	6020B	chromium	0.0024	J	J	--	mg/L
GWC-7Z	GWC-7Z	N	92586436	300.0	chloride	0.76	J M1	J	M+	mg/L
GWC-7Z	GWC-7Z	N	92586436	300.00000	sulfate	1.3	M1	J	M+	mg/L
GWC-7Z	GWC-7Z	N	92586436	6020B	antimony	0.00093	J	J	--	mg/L
GWC-7Z	GWC-7Z	N	92586436	6020B	arsenic	0.002	J	J	--	mg/L
GWC-7Z	GWC-7Z	N	92586436	6020B	cobalt	0.00042	J	J	--	mg/L
GWC-8RR	GWC-8RR	N	92586436	300.0	chloride	0.77	J	J	--	mg/L
GWC-8RR	GWC-8RR	N	92586436	300.0	sulfate	0.72	J	J	--	mg/L
GWC-8RR	GWC-8RR	N	92586436	6010D	sodium	0.81	J	J	--	mg/L
GWC-8RR	GWC-8RR	N	92586436	6020b	antimony	0.0015	J	J	--	mg/L
GWC-8RR	GWC-8RR	N	92586436	6020B	arsenic	0.0013	J	J	--	mg/L

TABLE 1
SUMMARY OF DATA QUALIFIERS
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SAMPLING DATES: February 1-4, 7, and 17, 2022
Plant Bowen Landfill Cells 1 & 2: Event 18

Field Sample ID	Location ID	Type	SDG	Method	Parameter Name	Lab Result	Lab Qual	Val Qual	Reason Codes	Units
GWC-8RR	GWC-8RR	N	92586436	6020B	chromium	0.0015	J	J	--	mg/L
GWC-8Z	GWC-8Z	N	92586436	300.0	sulfate	0.72	J	J	--	mg/L
GWC-8Z	GWC-8Z	N	92586436	6020B	arsenic	0.0011	J	J	--	mg/L
GWC-8Z	GWC-8Z	N	92586436	6020B	beryllium	0.000064	J	J	--	mg/L
GWC-8Z	GWC-8Z	N	92586436	6020B	chromium	0.0021	J	J	--	mg/L
GWC-9	GWC-9	N	92586436	2320B	alkalinity (bicarbonate)	2.5	J	J	--	mg/L
GWC-9	GWC-9	N	92586436	2320B	alkalinity (total)	2.5	J	J	--	mg/L
GWC-9	GWC-9	N	92586436	2540C	total dissolved solids	21		J	FD	mg/L
GWC-9	GWC-9	N	92586436	6020B	arsenic	0.0013	J	J	--	mg/L
GWC-9	GWC-9	N	92586436	6020B	beryllium	0.00018	J	J	--	mg/L
GWC-9	GWC-9	N	92586436	6020B	cobalt	0.00043	J	J	--	mg/L
GWC-9	GWC-9	N	92586436	6020B	nickel	0.0011	J	J	--	mg/L

Laboratory Qualifiers:

B = Analyte detected in the associated method blank.
 J = Estimated concentration above the adjusted method detection limit and below the adjusted reporting limit.
 M1 = Matrix spike recovery exceeded QC limits. Batch accepted based on LCS recovery

Reason Codes:

BL = Laboratory blank contamination. The result should be considered "not-detected".
 FD = Field duplicate precision.
 M+ = MS and MSD recoveries outside acceptance limits. The result may be biased high.
 -- = No Reason Code assigned for values detected between the method detection limit (MDL) and the reporting limit (RL);estimated quantitation.

Validation Qualifiers:

J = The compound was positively identified; however, the associated numerical value is an estimated concentration only. The associated numerical value is the approximate concentration of
 U* = This analyte should be considered "not-detected" because it was detected in an associated blank at a similar level.

Prepared by/Date: JPM 03/22/22

Checked by/Date: JAH 03/23/22

DQE CHECKLISTS

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen CCR Event 18 – Semiannual State D&O Permit Event

Project No: 6122160287.2103 ****

Method: Metals and Mercury by SW6010D/SW6020B/SW7470

Laboratory and Lot: Pace SDG: 92586436

Reviewer/Date: J. McIntyre 03/16/22 **Senior Reviewer/Date:** J. Hartness 03/23/22

YES	NO	NA	COMMENTS
<input checked="" type="checkbox"/>			<p>Case Narrative and COC Completeness Review OK</p>
<input checked="" type="checkbox"/>			<p>Sample Preservation and cooler temperature met (HNO₃ to pH<2) OK, 5.7, 1.3, 3.3°C</p>
<input checked="" type="checkbox"/>			<p>Holding times met (180 days; Hg = 28 days) Coll: 02/2/22-02/04/22, 02/07/22, 02/17/22 Prep: metals 6010 – 02/18/22, 02/25/22 6020 – 02/18/22, 02/25/22 Hg – 02/15/22, 02/16/22, 02/28/22 Anal: metals: 6010 – 02/18/22, 03/01/22 6020 – 02/18/22, 02/25/22 Hg – 02/16/22, 02/28/22</p>
<input checked="" type="checkbox"/>			<p>QC Blanks Review <u>Method Blanks:</u> p. 78 MB 3553757 6010 = ND p. 79 MB 3553950 6010 = ND p. 80 MB 3562225 6010 = ND p. 81 MB 3553776 6020 = ND p. 83 MB 3553959 6020 As = 0.0019 J x10 = 0.019 mg/L Assoc. results flagged U*: Reason Code: BL: FB-4, FB-5, GWC-10, GWC-10R, GWC-11, GWC-11R, DUP-3, GWC-13RZ, GWC-14Z, GWC-15R, and GWC-15Z p. 85 MB 3562117 6020 = ND p. 87 MB 3550157 Hg = ND p. 88 MB 3550166 Hg = ND p. 89 MB 3550196 Hg = ND p. 90 MB 3564035 Hg = ND</p> <p><u>Field Blanks:</u> FB-1 through FB-3, FB-6 = All ND FB-4 As= 0.0019 J x10 = 0.019 mg/L Assoc. results flagged U*: Reason Code: BF Samples not flagged due to MB contamination. FB-5 As= 0.0018 J x10 = 0.018 mg/L Assoc. results flagged U*: Samples not flagged due to MB contamination.</p>

Metals and Mercury by SW6020B/SW7470 (cont.)

YES NO NA

COMMENTS

Laboratory Control Sample (LCS) recovery within limits

(Metals 70-130%, Hg = 80-120%)

p. 78 LCS 3553758 6010 – all ok
 p. 79 LCS 3553951 6010 – all ok
 p. 80 LCS 3562226 6010 – all ok
 p. 81 LCS 3553777 6020 – all ok
 p. 83 LCS 3553960 6020 – all ok
 p. 85 LCS 3562118 6020 – all ok
 p. 87 LCS 3550158 Hg = 92% p. 88 LCS 3550167 Hg = 93%
 p. 89 LCS 3550197 Hg = 86% p. 90 LCS 3564036 Hg = 100%

Lab Duplicate - Field Duplicate precision goals met (20%)

(Results in mg/L)

	RL	GWA-2R	DUP-1	*Diff/RPD	GWC-9	DUP-2	*Diff/RPD	GWC-11R	DUP-3	*Diff/RPD
Sb	0.003	0.0029J	0.0033	0.0004	ND	ND	-	ND	0.00094 J	-
As	0.005	0.0053	0.0037 J	0.0016	0.0013 J	ND	-	0.0035 JB	0.0035 JB	0
Ba	0.005	0.024	0.024	0%	0.044	0.045	2.4%	0.021	0.02	4.9%
Be	0.0005	ND	ND	-	0.00018J	0.00018J	0	ND	ND	-
B	0.04	ND	ND	-	ND	ND	-	ND	ND	-
Ca	1.0	34.1	33.8	0.9%	2.2	2.3	4.4%	34.8	33.7	3.2%
Cd	0.0005	ND	ND	-	ND	ND	-	ND	ND	-
Cr	0.005	ND	ND	-	ND	ND	-	0.0042 J	0.0041 J	0.0001
Co	0.005	0.00093 J	0.0009 J	0.00003	0.00043 J	0.00042 J	0.00001	ND	ND	0.0
Cu	0.005	0.00096 J	0.00078 J	0.00018	ND	ND	-	ND	ND	-
Pb	0.001	ND	ND	-	ND	ND	-	ND	ND	-
Mg	0.05	11.1	11	0.9%	1.2	1.2	0%	18.7	17.8	4.93
Ni	0.005	ND	ND	-	0.0011	0.0011	0	0.0019J	0.0019J	0.0
K	1.0	0.67	0.71	5.8%	0.92	0.97	5.3%	1.1	1.0	9.5
Se	0.005	ND	ND	-	ND	ND	-	ND	ND	-
Ag	0.005	ND	ND	-	ND	ND	-	ND	ND	-
Na	1.0	1.1	1.1	0%	1.2	1.2	0%	0.96 J	0.95 J	
Tl	0.001	ND	ND		ND	ND	-	ND	ND	-
V	0.01	ND	ND		ND	ND	-	ND	ND	-
Zn	0.02	ND	ND	-	ND	ND	-	ND	ND	-
Hg	0.002	ND	ND	-	ND	ND	-	ND	ND	-

**for results <RL, diff is <RL; OK*

Metals and Mercury by SW6020B/SW7470 (cont.)

YES

NO

NA

COMMENTS

Matrix Spike recoveries and RPDs within limits (75-125%, RPD 20)

p. 78 GWA-2 Ca = 137, 89% RPD = 1 *No flag, result > 4x spike and MSD and RPD OK*

p. 79 GWA-4RZ Ca = 179, 272% RPD = 2 *No flag, result > 4x spike*
Mg = 117, 185% RPD = 3% No flag, result > 4x spike

p. 80 not a sample from this SDG

p. 82 GWA-2R (6020B) %recs and RPDs ok

p. 84 GWC-10 (6020) %recs and RPDs ok

p. 86 not a sample from this SDG

p. 87 Hg not a sample from this SDG

p. 88 Hg not a sample from this SDG

p. 89 FB-5 Hg = 78, 93% RPD = 18

p. 90 Hg not a sample from this SDG

Total metals vs dissolved metals within limits (RPD < 20% or diff. < RL)

No dissolved metals in this SDG

EDD Data Verification vs. Hardcopy (10% samples for each SDG)

10% of the results in this SDG were checked

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen CCR Event 18 – Semiannual State D&O Permit Event

Project No: 6122160287.2103.****

Method: Anions (chloride, fluoride, sulfate) by EPA 300.0

Laboratory and Lot: Pace SDG: 92586436

Reviewer/Date: J. McIntyre 03/16/22 **Senior Reviewer/Date:** J. Hartness 03/23/22

YES NO NA COMMENTS

Case Narrative and COC Completeness Review
OK

Sample Preservation and cooler temperature met (Cool to 6°C)
OK, 5.7, 1.3, 3.3°C

Holding times met (Cl, SO₄, F – 28 days)
Coll: 02/2/22-02/04/22, 02/07/22, 02/17/22
Anal: 02/12/22, 02/14/22, 02/25/22

QC Blanks Review
Method Blanks:
p. 102 MB 3547238 = ND p. 103 MB 3547262 = ND
p. 104 MB 3548358 = ND p. 105 MB 3548365 = ND
p. 106 MB 3561036 = ND
Field Blanks:
FB-1 through FB-6 all ND

Laboratory Control Sample (LCS) recovery within limits (90-110%)
p.102 LCS 3547239 %rec OK p. 103 LCS 3547263 %rec OK p. 104 LCS 3548359 %rec OK
p. 105 LCS 3548366 %rec OK p. 106 LCS 3561037 % rec OK

Lab Duplicate - Field Duplicate precision goals met (20%) (Results in mg/L)

	GWA-2R	DUP-1	*Diff/RPD	GWC-9	DUP-2	*Diff/RPD	GWC-11R	DUP-3	*Diff/RPD
Cl ⁻	0.77 J	0.77 J	0%	2.1	2.1	0%	1.4	1.3	7.5%
F ⁻	ND	ND	-	ND	ND	-	ND	ND	-
SO ₄	1.5	1.5	0%	2.5	2.5	0%	1.5	1.5	0%

Matrix Spike recoveries and RPDs within limits (lab %Rec limits, RPD = 20)
p. 102 MS/MSD GWA-1: Cl (112, 113% RPD = 0), Fl (110, 111% RPD = 1) and SO₄ (113, 114% RPD – 1) No flags on Fl; MS & RPD in limits, Cl and SO₄ *Flagged J*
Reason Code: M+
p. 103 GWC-7Z Cl (112, 113% RPD = 0), Fl (111, 111% RPD = 0) and SO₄ (113, 114% RPD – 0) No flags on F, assoc. results ND **Assoc. Cl and SO₄ result flagged "J": Reason Code: M+**
p. 104 not samples from this SDG p. 105 GWC-11 – %rec and RPD ok
p. 106 not samples of this SDG

EDD Data Verification vs. Hardcopy (10% samples for each SDG)
10% of the results in this SDG were checked

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen CCR Event 18 – Semiannual State D&O Permit Event

Project No: 6122160287.2103.****

Method: TDS by SM 2540C

Laboratory and Lot: Pace SDG: 92586436

Reviewer/Date: J. McIntyre 03/16/22 **Senior Reviewer/Date:** J. Hartness 03/23/22

YES NO NA COMMENTS

 Case Narrative and COC Completeness Review
OK

 Sample Preservation and cooler temperature met (Cool to 6°C)
OK, 5.7, 1.3, 3.3°C

 Holding times met (7 days)
Coll: 02/2/22-02/04/22, 02/07/22, 02/17/22
Anal: 02/07/22-02/09/22, 02/11/22, 02/23/22

 QC Blanks Review
Method Blanks:
p. 91 MB 3540519 TDS = ND p. 92 MB 3541419 TDS = ND
p. 93 MB 3542886 TDS = ND p. 94 MB 3544553 TDS = ND
p. 95 MB 3544560 TDS = ND p. 96 MB 3559080 TDS = ND
Field Blanks:
FB-1, FB-2, FB-4 through FB-6 all ND
FB-3 = TDS = 12 x 5 = 60 mg/L *No flags applied: assoc. samples >5x blank result.*

 Laboratory Control Sample (LCS) recovery within lab limits
p. 91 LCS 3540520 TDS = 94% p. 92 LCS 3541420 TDS = 98%
p. 92 LCS 3542887 TDS = 94% p. 93 LCS 3544554 TDS = 96%
p. 95 LCS 3544561 TDS = 95% p. 96 LCS 3559081 RDS = 88%

 Lab Duplicate - Field Duplicate precision goals met (20%)

	GWA-2R	DUP-1	*Diff/RPD	GWC-9	DUP-2	*Diff/RPD	GWC-11R	DUP-3	*Diff/RPD
TDS	114	118	3.4%	21	27	25%	157	162	3.1%

Duplicate GWC-9/Dup-2 **Flagged J**

Lab Dups:
p. 91 not project samples of this SDG p. 92 GWC-8RR RPD = 1%
p. 93 not project samples of this SDG p. 94 not project samples of this SDG
p. 95 GWC-15R RPD = 4% p. 96 not project samples of this SDG

 Matrix Spike recoveries and RPDs within limits (if applicable)
No MS/MSD for TDS

 EDD Data Verification vs. Hardcopy (10% samples for each SDG)
10% of the results in this SDG were checked

Data Evaluation Narrative

**Project: Plant Bowen Groundwater Detection Monitoring/
Semiannual State Design and Operation (D&O) Permit Monitoring**

Wood Project Number: 6122160287.2103.****

Site: Landfill Cells 3 & 4 - Plant Bowen, Georgia

Matrix: Groundwater

Pace SDG No: 92597519

Introduction

A data quality evaluation (DQE) was performed on the laboratory data reported for a new monitoring well installed at Landfill Cells 3 & 4 at Plant Bowen, located in Cartersville, Georgia in April 2022. The samples were collected and analyzed per the protocols presented in the Plant Bowen *Field Sampling Plan* (FSP), Revision 1, Update 3 (Amec Foster Wheeler, 2017). The following sections provide summary discussions of the required data qualifications for the methods for samples collected. A Level II DQE validation was performed on the samples analyzed by the fixed-based laboratory within these sample delivery groups (SDGs). A Level II DQE consists of review of the following criteria: sample integrity, holding times, method blanks, laboratory control samples (LCSs), matrix spikes/matrix spike duplicate (MS/MSD) recoveries and relative percent differences (RPDs), post digestion spikes (PDS), where applicable, laboratory and field duplicate RPDs, field and/or equipment blanks, and reporting limits. Additionally, the data summary tables generated from the electronic data deliverable (EDD) were compared to the laboratory hardcopy data report to verify that the EDD and laboratory data report agree.

The data were reviewed using the laboratory’s precision and accuracy limits, the method requirements, and any requirements listed in the FSP. It should be noted that at the time of this review, a finalized QAPP was not provided. DQE data qualifications were applied, if necessary, using the procedures in USEPA National Functional Guidelines for Inorganic Data Review (USEPA, 2020), as guidance, and professional judgment using the following qualifiers:

<u>Qualifier</u>	<u>Usable Data</u>
J	The analyte was positively identified but the result is an estimated quantity. The associated numerical value is the approximate concentration of the analyte in the sample. <i>SCS Definition: Value J indicates the substance was detected at such low levels that the precision of the laboratory instruments could not produce as reliable of a value. Therefore, the value displayed (value J) is qualified by the laboratory as estimated.</i>
UJ	The analyte was analyzed for but was not detected above the level of the reported sample reporting/method detection limit. The reported method detection limit is approximate and may be inaccurate or imprecise.
U	Analyte was analyzed for but was not detected above the level of the reported sample reporting/method detection limit. <i>Note: SCS does not use the “U” flag except when reporting results for radium that are detected below the Minimum Detection Concentration (MDC).</i>
U*	This analyte should be considered “not-detected” because it was detected in an associated blank at a similar level.

<u>Qualifier</u>	<u>Unusable Data</u>
R	The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet QC criteria. The presence or absence of the analyte cannot be confirmed.
UR	The analyte was analyzed for but was not detected above the level of the reported sample reporting or method detection; however, the data are unusable. The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The analyte may or may not be present in the sample.

The analytical results for the samples reported in this SDG are usable with the qualifications discussed in this narrative. A summary of the data with associated qualifiers is presented in **Table 1**.

Deliverables

The data package as submitted to Wood Environment & Infrastructure Solutions, Inc. (Wood, formerly Amec Foster Wheeler) is complete to perform a Level II DQE for United States Environmental Protection Agency (USEPA) Methods SW6010D, SW6020B, SW7470A, EPA 300.0, SM 2320B and SM 2540C. No separate laboratory case narrative was included, however issues affecting the quality of the data were noted in the 'Analyte Qualifiers' section of the report.

Sample Integrity

The groundwater samples were submitted to Pace Analytical Services, Inc. (Pace) in Peachtree Corners, Georgia and analyzed for CCR Appendix III metals, State D&O Permit metals, and major ions by Method 6010D and 6020B, mercury by Method SW7470A, anions (chloride, fluoride, and sulfate) by Method 300.0, alkalinity by Method SW 2320B and total dissolved solids (TDS) by Method SM 2540C.

Based on the information provided on the Chain-of-Custody (COC) forms, the field samples arrived at the laboratory intact and within the temperature range and preservation requirements. Completed COC documents are included in the data package.

Sample Identification

This SDG contains the following groundwater and quality control (QC) samples:

Sample ID	Sample Date	DQE Level	QA/QC Samples	Sample Date	DQE Level
GWA-36A	04/06/22	II	FB-1	04/06/22	II

The samples reported in this SDG were collected from the new Landfill Cells 3&4 monitoring well on April 6, 2022. Sample FB-1 is the associated field blank. The analytical results for the metals, anions, alkalinity, and TDS data are usable with the qualifications discussed in this narrative. A summary of the data quality is presented below.

Metals (SW6010D/SW6020B/SW7470A)

The samples were submitted to Pace for CCR Appendix III, State D&O Permit metals, and major ions by Method SW6010D, SW6020B, and/or mercury by SW7470A. The CCR Appendix III metals are: boron (B) and calcium (Ca). The State D&O Permit metals are: antimony (Sb), arsenic (As), barium (Ba), beryllium (Be), cadmium (Cd), chromium (Cr), cobalt (Co), copper (Cu), lead (Pb), mercury (Hg), nickel (Ni), selenium (Se), silver (Ag), thallium (Tl), vanadium (V), and zinc (Zn). The major ions are: potassium (K), sodium (Na), and magnesium (Mg). Each of the Level II components were within QC limits except for MS/MSD recoveries and field blank contamination.

Holding Times

The sample analyses were performed within the 6 month and 28-day (for mercury) analysis holding times.

Method Blanks

The method blanks associated with samples in this SDG did not contain metals.

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

An MS/MSD analysis was performed for metals on sample GWA-36A and the recoveries of Ca and Mg were outside of QC limits.

Action: No qualification was necessary because the sample results were more than 4 times greater than the spike concentration.

Field Duplicate Precision

No field duplicate pairs were submitted with this SDG.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

Field accuracy was measured through the collection of equipment/rinsate blanks and field blanks. Equipment rinsate blanks are collected to monitor the decontamination process and field blanks are collected to assess the water used to decontaminate the equipment and the containers into which samples are placed. No equipment blank was collected. The field blank contained Sb and As between the method detection limit (MDL) and the reporting limit (RL). Results less than ten times the field blank are considered "not detected" as a possible field artifact: **Reason Code: BF**.

Action: The arsenic result for sample GWA-36A was qualified as not detected due to possible field blank contamination and flagged "U".*

Reporting Limits

The laboratory RLs were below the screening values for samples submitted for the analysis of metals by USEPA Method SW6010D, SW6020B and 7470A. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory. The "J" qualifier was retained by the data validator.

Total and Dissolved Metals Comparison

If total and dissolved metals samples were collected, comparison of the results can aid in the representativeness of the total metals value versus the metals that may be associated with suspended solids and metals actually dissolved within the water column. The dissolved metals results should be less than or equal to the total metals concentration for positive results greater than 5 times the RL. No dissolved samples were collected in this SDG.

Anions (EPA 300)

The samples were submitted to Pace for anions (chloride, fluoride, and sulfate) by Method 300.0, and each of the Level II components were within QC limits.

Holding Times

The sample analyses were performed within the 28-day analysis holding times.

Method Blanks

The method blank associated with the samples analyzed within this SDG did not contain anions indicating the analytical system was contaminant free during analysis.

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

An MS/MSD analysis was not performed on any sample from this SDG.

Field Duplicate Precision

No field duplicate pairs were submitted with this SDG.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

The equipment blank and field blank samples submitted in this SDG did not contain anions, and no results were considered possible field artifacts.

Reporting Limits

The laboratory RLs were below the screening values for samples submitted for the analysis of anions by USEPA Method 300. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory, however there were none in this SDG.

Alkalinity (SM 2320B)

The samples were submitted to Pace for alkalinity (total alkalinity, bicarbonate alkalinity, and carbonate alkalinity) by Method SM 2320B. Each of the Level II components were within QC limits.

Holding Times

The sample analyses were performed within the analysis holding times.

Method Blanks

The method blank associated with the samples analyzed within this SDG did not contain alkalinity.

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Matrix Spike/Matrix Spike Duplicates (MS/MSDs)

An MS/MSD analysis was not performed on any sample from this SDG.

Field Duplicate Precision

No field duplicate pairs were submitted with this SDG.

Laboratory Duplicate Precision

Laboratory duplicates were not analyzed for any project samples in this SDG.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

The field blank associated with the samples in this SDG did not contain alkalinity.

Reporting Limits

The laboratory RL was below the screening value of 500 mg/L for samples submitted for the analysis of alkalinity by Method SM 2320B and no samples required dilutions; therefore, RLs were met for this project. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory, however there were none in this SDG.

TDS (SM 2540C)

The samples were submitted to Pace for TDS by Method SM 2540C. Each of the Level II components were within QC limits.

Holding Times

The sample analyses were performed within the 7-day analysis holding times.

Method Blanks

The method blank associated with the samples analyzed within this SDG did not contain TDS.

Laboratory Control Samples (LCSs)

Percent recoveries for target analytes were within quality control limits in the LCSs.

Field Duplicate Precision

No field duplicate pairs were submitted with this SDG.

Laboratory Duplicate Precision

Laboratory duplicates were not analyzed for any project samples in this SDG.

Sampling Accuracy (Equipment Rinsate Blanks, Field Blanks)

The field blank associated with the samples in this SDG did not contain TDS.

Reporting Limits

The laboratory RL was below the screening value of 500 mg/L for samples submitted for the analysis of TDS by Method SM 2540C and no samples required dilutions; therefore, RLs were met for this project. Additionally, data are evaluated down to the MDL and results reported between the MDL and RL are considered quantitative estimates. Results reported between the MDL and RL were qualified as estimated and flagged "J" by the laboratory, however no TDS results were reported between the MDL and RL.

Overall Site Evaluation and Professional Judgment Flagging Changes

The chemical data included in this SDG was validated in general accordance with the guidelines contained in the project work plan and validation SOPs. Professional judgment was not used to modify flags for results reported in samples presented in this SDG.

Completeness

A total of one well, along with the required QC sample, was sampled and analyzed during the April event in Landfill Cells 3&4 according to the FSP (Amec Foster Wheeler, 2017). The newly installed well location reported in this SDG was sampled and analyzed as scoped. Therefore, field and analytical completeness is 100% (planned verses actual samples collected).

References

Amec Foster Wheeler, 2017. *Field Sampling Plan – Plant Bowen*, Georgia Power Company, Earth Science and Environmental Engineering Technical Services, Southern Company Services, Inc. (SCS), Revision 1, Update 3, October 16, 2017.

USEPA, 2020. *EPA National Functional Guidelines for Inorganic Superfund Methods Data Review*, EPA-542-R-20-006, November 2020.

Prepared by/Date: DWK 04/20/22

Checked By/Date: JAH 04/22/22

TABLE 1
SUMMARY OF DATA QUALIFIERS

TABLE 1
SUMMARY OF DATA QUALIFIERS
SAMPLE DELIVERY GROUP 92597519
SAMPLING DATE: April 6, 2022
Plant Bowen Landfill Cells 3 & 4: New Well

Field Sample ID	Location ID	Type	SDG	Method	Parameter Name	Lab Result	Lab Qual	Val Qual	Reason Codes	Units
GWA-36A	GWA-36A	N	92597519	6010D	zinc	0.012	J	J	--	mg/L
GWA-36A	GWA-36A	N	92597519	6020B	arsenic	0.0018	J	U*	BF	mg/L
GWA-36A	GWA-36A	N	92597519	6020B	beryllium	0.000061	J	J	--	mg/L
GWA-36A	GWA-36A	N	92597519	6020B	boron	0.032	J	J	--	mg/L
FB-1	Field Blank	FB	92597519	6020B	antimony	0.0013	J	J	--	mg/L
FB-1	Field Blank	FB	92597519	6020B	arsenic	0.0016	J	J	--	mg/L

Laboratory Qualifiers:

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

Reason Codes:

BF = Field blank contamination, the result should be considered "not-detected"

-- = No Reason Code assigned for values detected between the method detection limit (MDL) and the reporting limit (RL); estimated quantitation

Validation Qualifiers:

J = The compound was positively identified; however, the associated numerical value is an estimated concentration only. The associated numerical value is the approximate concentration of the analyte in the sample.

U* = This analyte should be considered "not-detected" because it was detected in an associated blank at a similar level.

Prepared by/Date: DWK 04/20/22

checked by/Date: JAH 04/22/22

DQE CHECKLISTS

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen– Semiannual State D&O Permit New Monitoring Well

Project No: 6122160287.2103.****

Method: Metals and Mercury by SW6010D/SW6020B/SW7470

Laboratory and Lot: Pace SDG: 92597519

Reviewer/Date: D. Knaub 04/20/22 **Senior Reviewer/Date:** J. Hartness 04/22/22

YES NO NA COMMENTS

 Case Narrative and COC Completeness Review
No separate 'case narrative' was included, QC issues noted in the 'analyte qualifiers' section of the report - OK

 Sample Preservation and cooler temperature met (HNO₃ to pH<2)
OK, 3.2°C

 Holding times met (180 days; Hg = 28 days)
Coll: 04/06/22
Prep: metals – 04/07/22 (6010D); 04/11/22 (6020B)
 Hg – 04/18/22
Anal: metals – 04/07/22 (6010D); 04/11/22 (6020B)
 Hg – 04/18/22

 QC Blanks Review
Method Blanks:
p. 10 MB 3605646 (6010) = ND
p. 11 MB 3609206 (6020) = ND
p. 13 MB 3615683 (7470) Hg = ND

Field blanks: *Results < 10x blank flagged U**
FB-1 Sb = 0.0013J x 10 = 0.013 mg/L
Flag U*: none
As = 0.0016J x 10 = 0.016 mg/L
Flag U*: GWA-36A

 Laboratory Control Sample (LCS) recovery within limits (Metals 70-130%, Hg = 80-120%)
p. 10 LCS 3605647 (6010) = All OK p. 11 LCS 3609207 (6020) = All OK
p. 13 LCS 3615684 (7470) Hg = 102%

 Lab Duplicate - Field Duplicate precision goals met (20%)
No field or lab dups in this SDG

 Matrix Spike recoveries and RPDs within limits (75-125%, RPD 20)
6010
p. 10 GWA-36A (6010) Ca = -27, 68% RPD = 2 *No flag; sample >4x spike*
 Mg = 30, 102% RPD = 3 *No flag; sample >4x spike*
p. 12 GWA-36A (6020) All %rec and RPDs OK
p. 13 (7470) - Not a sample from this SDG

Metals and Mercury by 6020B/7470A (cont.)

YES NO NA COMMENTS

Total metals vs dissolved metals within limits (RPD < 20% or diff. < RL)
No dissolved metals in this SDG

EDD Data Verification vs. Hardcopy (10% samples for each SDG)
100% of the results in this SDG were checked

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen– Semiannual State D&O Permit New Monitoring Well

Project No: 6122160287.2103.****

Method: Anions (chloride, fluoride, sulfate) by EPA 300.0

Laboratory and Lot: Pace SDG: 92597519

Reviewer/Date: D. Knaub 04/20/22 **Senior Reviewer/Date:** J. Hartness 04/22/22

<u>YES</u>	<u>NO</u>	<u>NA</u>	<u>COMMENTS</u>
<input checked="" type="checkbox"/>			<p>Case Narrative and COC Completeness Review Analyzed at Pace’s Ashville, NC location - No separate ‘case narrative’ was included, QC issues noted in the ‘analyte qualifiers’ section of the report - OK</p>
<input checked="" type="checkbox"/>			<p>Sample Preservation and cooler temperature met (Cool to 6°C) OK, 3.2°C</p>
<input checked="" type="checkbox"/>			<p>Holding times met (Cl, SO₄, F – 28 days) Coll: 04/06/22 Anal: 04/08/22</p>
<input checked="" type="checkbox"/>			<p>QC Blanks Review <u>Method Blanks:</u> p. 16 MB 3606393= ND</p> <p><u>Field blanks:</u> <i>Results < 10x blank flagged U*</i> FB-1 = ND</p>
<input checked="" type="checkbox"/>			<p>Laboratory Control Sample (LCS) recovery within limits (90-110%) p. 16 LCS 3606394 - all ok</p>
		<input checked="" type="checkbox"/>	<p>Lab Duplicate - Field Duplicate precision goals met (20%) <i>No field or lab dups in this SDG</i></p>
		<input checked="" type="checkbox"/>	<p>Matrix Spike recoveries and RPDs within limits (lab %Rec limits, RPD = 20) p. 16 not samples from this SDG</p>
<input checked="" type="checkbox"/>			<p>EDD Data Verification vs. Hardcopy (10% samples for each SDG) <i>100% of the results in this SDG were checked</i></p>

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen– Semiannual State D&O Permit New Monitoring Well

Project No: 6122160287.2303.****

Method: TDS by SM 2540C

Laboratory and Lot: Pace SDG: 92597519

Reviewer/Date: D. Knaub 04/20/22 **Senior Reviewer/Date:** J. Hartness 04/22/22

<u>YES</u>	<u>NO</u>	<u>NA</u>	<u>COMMENTS</u>
<input checked="" type="checkbox"/>			<p>Case Narrative and COC Completeness Review Analyzed at Pace’s Ashville, NC location - No separate ‘case narrative’ was included, QC issues noted in the ‘analyte qualifiers’ section of the report - OK</p>
<input checked="" type="checkbox"/>			<p>Sample Preservation and cooler temperature met (Cool to 6°C) OK, 3.2°C</p>
<input checked="" type="checkbox"/>			<p>Holding times met (7 days) Coll: 04/06/22 Anal: 04/07/22</p>
<input checked="" type="checkbox"/>			<p>QC Blanks Review <u>Method Blanks:</u> p. 15 MB 3605276 TDS = ND</p> <p><u>Field blank</u> FB-1 = ND</p>
<input checked="" type="checkbox"/>			<p>Laboratory Control Sample (LCS) recovery within lab limits p. 15 LCS 3605277 TDS = 105%</p>
	<input checked="" type="checkbox"/>		<p>Lab Duplicate - Field Duplicate precision goals met (20%) <i>No field duplicates in this SDG</i> Lab dups: p. 15 – not samples from this SDG</p>
	<input checked="" type="checkbox"/>		<p>Matrix Spike recoveries and RPDs within limits (if applicable) <i>None for TDS</i></p>
<input checked="" type="checkbox"/>			<p>EDD Data Verification vs. Hardcopy (10% samples for each SDG) <i>100% of the results in this SDG were checked</i></p>

LEVEL II DATA QUALITY VALIDATION RECORD

Project: Plant Bowen– Semiannual State D&O Permit New Monitoring Well

Project No: 6122160287.2303.****

Method: Alkalinity by SM 2320B

Laboratory and Lot: Pace SDG: 92597519

Reviewer/Date: D. Knaub 04/20/22 **Senior Reviewer/Date:** J. Hartness 04/22/22

<u>YES</u>	<u>NO</u>	<u>NA</u>	<u>COMMENTS</u>
<input checked="" type="checkbox"/>			<p>Case Narrative and COC Completeness Review Analyzed at Pace’s Minneapolis, MN location - No separate ‘case narrative’ was included, QC issues noted in the ‘analyte qualifiers’ section of the report - OK</p>
<input checked="" type="checkbox"/>			<p>Sample Preservation and cooler temperature met (Cool to 6°C) OK, 3.2°C</p>
<input checked="" type="checkbox"/>			<p>Holding times met (7 days) Coll: 04/06/22 Anal: 04/16/22</p>
<input checked="" type="checkbox"/>			<p>QC Blanks Review <u>Method Blanks:</u> p. 14 MB 4296151 Alk = ND</p> <p><u>Field blank</u> FB-1 = ND</p>
<input checked="" type="checkbox"/>			<p>Laboratory Control Sample (LCS) recovery within lab limits p. 14 LCS/LCSD 4296152, 4296153 Alk = 109, 108% RPD = 0</p>
	<input checked="" type="checkbox"/>		<p>Lab Duplicate - Field Duplicate precision goals met (20%) <i>No field or lab dups from this SDG</i></p>
	<input checked="" type="checkbox"/>		<p>Matrix Spike recoveries and RPDs within limits (if applicable) p. 14 non-project samples</p>
<input checked="" type="checkbox"/>			<p>EDD Data Verification vs. Hardcopy (10% samples for each SDG) <i>100% of the results in this SDG were checked</i></p>

DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed three data packages from Pace Analytical Services (Pace) for the analysis of water samples collected from August 5 to August 19, 2022 at the Georgia Power Bowen Plant site. Samples were collected according to the Field Sampling Plan – Plant Bowen (Amec Foster Wheeler, 2016).

Intended Use of Data: To delineate concentrations of constituents of concern in site groundwater.

Analyses requested included:

- SW-846 6020B – Metals by inductively coupled plasma - mass spectrometry (ICP/MS)
- SW-846 6010D – Zinc and Calcium by inductively coupled plasma-atomic emission spectrometry (ICP/AES)
- SW-846 7470A – Mercury by manual cold-vapor
- EPA 300 Rev 2.1 – Chloride, fluoride, and sulfate by ion chromatography
- SM 2540C - 2015 – Total dissolved solids (TDS)

Data were reviewed and validated as described in the field sampling plan and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020). The results of the review/validation are discussed in this Data Usability Summary (DUS) and the associated Laboratory Data Review Checklists.

DATA REVIEW/VALIDATION RESULTS

Introduction

Sixty four (64) groundwater samples, sixteen (16) field blanks, and eight (8) field duplicate samples were analyzed for one or more of the analyses listed above. Table 1 lists the field identifications cross-referenced to laboratory identifications. Table 2 is a summary of qualified data. Tables 3a through 3h summarize field duplicate results.

Analytical Results

The data packages contain a minimum of one quality control batch per analytical method analyzed. The quality control batch identifies the laboratory QC samples that correspond to the designated field samples. Not detected results are reported as less than the value of the method detection limit (MDL).

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers with the paperwork filled out properly. The laboratory sample condition upon receipt forms indicates all samples were received at temperatures ranging from 1.3°C to 3.9°C. All samples were analyzed within the technical holding time. No data were qualified.

Calibrations

Initial and continuing calibration verification data were not provided.

Blanks

Laboratory Method Blanks. No contamination was detected in any of the laboratory method blanks with the following exception:

SDG 92619171

- Antimony was detected in the method blank in batch 718385 at a concentration of 0.00097 J. All associated sample results were reported as either not detected or detected at concentrations greater than 10 times the blank and therefore no qualification was necessary.

Field Blanks. Field blanks were analyzed for the full suite of sample analyses and all analytes were not detected with the following exception:

SDG 92619171

- Calcium was detected in the field blank FB-1 (08/05/2022) at a concentration above the laboratory Reporting Limit (RL). No qualification was required for associated sample results reported as greater than 10X the blank concentration. One sample, GWA-38, had a reported value equal to the FB-1 concentration and has been qualified as estimated with a high bias (“J+”).
- TDS was detected in the equipment blank EB-1 (08/08/2022) at a concentration above the laboratory Reporting Limit (RL). Samples GWA-36RA, GWA-37, GWA-36A, GWA-53, GWA-53R, GWA-55, and GWA-55R had reported values less than 10x the EB-1 concentration and have been qualified as estimated with a high bias (“J+”).
- Antimony and boron were detected in the field blank FB-4 (08/10/2022) at concentrations below the RL but above the MDL. No qualification was required for associated sample results reported as not detected. One sample, GWC-21R, had a reported value less than 10x the FB-4 concentration for antimony and has been qualified as estimated with a high bias (“J+”).

SDG 92620047

- Field blanks were analyzed for the full suite of sample analyses and all analytes were reported as not detected.

SDG 92621399

- Calcium was detected in the field blank FB-1 (08/16/2022) at a concentration above the RL. Associated sample results reported as detected less than 10 times the blank concentration have been qualified as estimated with a high bias (“J+”).
- Zinc was detected in the field blank FB-1 (08/16/2022) at a concentration below the RL but above the MDL. No qualification was required for associated sample results reported as not detected.
- TDS was detected in the field blank FB-4 (08/19/2022) at a concentration above the RL. No qualification was required for associated sample results reported as not detected. Associated sample results reported as detected less than 10 times the blank concentration have been qualified as estimated with a high bias (“J+”).

Laboratory Control Samples

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries met the laboratory acceptance criteria for all analyses.

Matrix Spike/Matrix Spike Duplicates

Site-specific MS/MSD precision and accuracy results were within the laboratory acceptance criteria with

the following exceptions:

SDG 92619171

- Calcium had percent recoveries of less than 10% in both the MS and MSD for sample GWA-36A. However, the sample concentration was greater than four times the spike concentration and therefore not appropriate for evaluation.
- Aluminum, iron, and potassium had MS/MSD recoveries above the acceptance criteria in sample GWC-16R and have been qualified as estimated (“J”). Zinc had low MS/MSD recoveries and have been qualified as estimated. Phosphorous, reported as not detected, had MS/MSD percent recoveries less than 30% and have qualified as rejected (“R”). Calcium, magnesium, and sodium sample concentrations were greater than four times the spike concentration and therefore not appropriate for evaluation.
- Mercury had an MSD recovery below the acceptance criteria and a high MS/MSD RPD in sample GWA-38 and has been qualified as estimated (“J”).

SDG 92620047

All MS/MSD recoveries were within the laboratory acceptance criteria.

The laboratory they could not import MS/MSD data for calcium and zinc in one sample. However, the parent sample was from a different project and therefore no data has been qualified.

SDG 92621399

- Chloride and sulfate had high MS/MSD recoveries in sample GWC-10R and have been qualified as estimated (“J”). Calcium had percent recoveries of less than 10% in both the MS and MSD for sample GWC-10R. However, the sample concentration was greater than four times the spike concentration and therefore not appropriate for evaluation.
- Chloride and sulfate had high MS/MSD recoveries in sample GWC-15Z and have been qualified as estimated (“J”).

Laboratory Duplicates

Appropriate analytical duplicates were analyzed and RPDs were within the laboratory acceptance criteria.

Field Precision

Eight sets of field duplicate samples was collected for this sampling event (see Tables 3a – 3h for sample/duplicate identification and precision calculations). The calculated RPDs between sample and duplicate were within the QAPP acceptance criteria of 25% for all analytes, with the following exceptions:

- Calcium in the field duplicate pair GWA-38 / DUP-1 had a high RPD and has been qualified as estimated.
- TDS in the field duplicate pair GWC-15Z/ DUP-3 had a high RPD and has been qualified as estimated.
- Zinc, calcium, TDS, and sulfate in field duplicate pair GWC-47/ DUP-2 had high RPDs and has been qualified as estimated.

Summary

The groundwater analytical data are usable for the purpose of determining current concentrations of COCs in this medium at the affected property. A summary of qualified data is presented in Table 2 below.

References:

Wood, 2017. Bowen Field Sampling Plan. October.

United State Environmental Protection Agency (USEPA), 2020. National Functional Guidelines for Superfund Inorganic Methods Data Review. November.

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
GWA-38	92619171001	92619171	08/05/2022
GWA-52	92619171002	92619171	08/05/2022
GWA-54	92619171003	92619171	08/05/2022
GWA-56	92619171004	92619171	08/05/2022
DUP-1	92619171005	92619171	08/05/2022
FB-1	92619171006	92619171	08/05/2022
GWA-36A	92619171007	92619171	08/08/2022
GWA-36RA	92619171008	92619171	08/08/2022
GWA-37	92619171009	92619171	08/08/2022
GWA-53	92619171010	92619171	08/08/2022
GWA-53R	92619171011	92619171	08/08/2022
GWA-55	92619171012	92619171	08/08/2022
GWA-55R	92619171013	92619171	08/08/2022
FB-2	92619171014	92619171	08/08/2022
EB-1	92619171015	92619171	08/09/2022
GWA-51RZ	92619171016	92619171	08/09/2022
GWC-19R	92619171017	92619171	08/09/2022
GWC-20R	92619171018	92619171	08/09/2022
GWC-24R	92619171019	92619171	08/09/2022
GWC-25R	92619171020	92619171	08/09/2022
DUP-2	92619171021	92619171	08/09/2022
FB-3	92619171022	92619171	08/09/2022
GWC-18	92619171023	92619171	08/10/2022
GWC-18R	92619171024	92619171	08/10/2022
GWC-21R	92619171025	92619171	08/10/2022
GWC-22R	92619171026	92619171	08/10/2022
DUP-3	92619171027	92619171	08/10/2022
FB-4	92619171028	92619171	08/10/2022
GWC-16R	92619171029	92619171	08/11/2022
GWC-17R	92619171030	92619171	08/11/2022
GWC-23R	92619171031	92619171	08/11/2022
FB-5	92619171032	92619171	08/11/2022
GWA-39Z	92620047001	92620047	08/10/2022
GWA-42	92620047002	92620047	08/10/2022
GWA-43R	92620047003	92620047	08/10/2022
FB-1	92620047004	92620047	08/10/2022
GWA-41	92620047005	92620047	08/11/2022
GWA-41R	92620047006	92620047	08/11/2022
GWA-43	92620047007	92620047	08/11/2022
DUP-1	92620047008	92620047	08/11/2022
FB-2	92620047009	92620047	08/11/2022
GWA-40	92620047010	92620047	08/12/2022

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
GWC-45	92620047011	92620047	08/12/2022
GWC-45R	92620047012	92620047	08/12/2022
FB-3	92620047013	92620047	08/12/2022
GWC-44	92620047014	92620047	08/15/2022
GWC-46R	92620047015	92620047	08/15/2022
GWC-47	92620047016	92620047	08/15/2022
GWC-47R	92620047017	92620047	08/15/2022
GWC-48	92620047018	92620047	08/15/2022
GWC-49R	92620047019	92620047	08/15/2022
GWC-49Z	92620047020	92620047	08/15/2022
DUP-2	92620047021	92620047	08/15/2022
FB-4	92620047022	92620047	08/16/2022
GWA-39RZ	92620047023	92620047	08/16/2022
FB-5	92620047024	92620047	08/16/2022
EB-1	92620047025	92620047	08/16/2022
GWA-4RZ	92621399001	92621399	08/17/2022
GWA-50R	92621399002	92621399	08/17/2022
GWC-6	92621399003	92621399	08/17/2022
GWC-6RZ	92621399004	92621399	08/17/2022
GWC-7Z	92621399005	92621399	08/17/2022
GWC-8Z	92621399006	92621399	08/17/2022
GWC-8RR	92621399007	92621399	08/17/2022
GWC-9	92621399008	92621399	08/17/2022
GWC-10	92621399009	92621399	08/17/2022
FB-2	92621399010	92621399	08/17/2022
GWA-1	92621399011	92621399	08/16/2022
GWA-2	92621399012	92621399	08/16/2022
GWA-2R	92621399013	92621399	08/16/2022
GWA-3A	92621399014	92621399	08/16/2022
GWA-50	92621399015	92621399	08/16/2022
GWC-5	92621399016	92621399	08/16/2022
DUP-1	92621399017	92621399	08/16/2022
FB-1	92621399018	92621399	08/16/2022
GWC-10R	92621399019	92621399	08/18/2022
GWC-11	92621399020	92621399	08/18/2022
GWC-11R	92621399021	92621399	08/18/2022
GWC-12	92621399022	92621399	08/18/2022
GWC-13	92621399023	92621399	08/18/2022
GWC-14Z	92621399024	92621399	08/18/2022
DUP-2	92621399025	92621399	08/18/2022
FB-3	92621399026	92621399	08/18/2022
GWC-13RZ	92621399027	92621399	08/19/2022

Stantec
Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
Analytical Report Nos. 92619171, 92620047, 92621399
September 2022

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
GWC-15R	92621399028	92621399	08/19/2022
GWC-15Z	92621399029	92621399	08/19/2022
DUP-3	92621399030	92621399	08/19/2022
FB-4	92621399031	92621399	08/19/2022

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
GWA-38	Calcium	J+	Field blank contamination
GWA-38	Mercury	J	Low MSD recovery, high RPD
GWA-38 / DUP-1	Calcium	J	High field duplicate RPD
GWA-36RA	TDS	J+	Field blank contamination
GWA-37	TDS	J+	Field blank contamination
GWA-36A	TDS	J+	Field blank contamination
GWA-53	TDS	J+	Field blank contamination
GWA-53R	TDS	J+	Field blank contamination
GWA-55	TDS	J+	Field blank contamination
GWA-55R	TDS	J+	Field blank contamination
GWC-21R	Antimony	J+	Field blank contamination
GWA-2	Calcium	J+	Field blank contamination
GWA-2R	Calcium	J+	Field blank contamination
GWA-3A	Calcium	J+	Field blank contamination
GWA-50	Calcium	J+	Field blank contamination
GWC-5	Calcium	J+	Field blank contamination
DUP-1	Calcium	J+	Field blank contamination
GWC-13RZ	TDS	J+	Field blank contamination
GWC-15R	TDS	J+	Field blank contamination
GWC-15Z	TDS	J+	Field blank contamination
GWC-15Z/ DUP-3	TDS	J	High field duplicate RPD
GWC-16R	Aluminum	J	High MS/MSD recoveries
GWC-16R	Iron	J	High MS/MSD recoveries
GWC-16R	Potassium	J	High MS/MSD recoveries
GWC-16R	Zinc	J	Low MS/MSD recoveries

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
GWC-16R	Phosphorous	R	MS/MSD recoveries <30%, ND result
GWC-10R	Chloride	J	High MS/MSD recoveries
GWC-10R	Sulfate	J	High MS/MSD recoveries
GWC-15Z	Chloride	J	High MS/MSD recoveries
GWC-15Z	Sulfate	J	High MS/MSD recoveries
GWC-47/ DUP-2	Zinc	J	High field duplicate RPD
GWC-47/ DUP-2	Calcium	J	High field duplicate RPD
GWC-47/ DUP-2	TDS	J	High field duplicate RPD
GWC-47/ DUP-2	Sulfate	J	High field duplicate RPD

J – Estimated data; the reported quantitation limit or sample concentration is approximated due to exceedance of one or more QC requirements.

J+ – The analyte was detected in an associated blank; estimated data with a high bias.

R – Rejected data due to one or more QC requirements.

UJ – The analyte was analyzed for but was detected at a level below the associated blank contamination. The associated value is an estimate and may be inaccurate or imprecise.

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 3a – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
GWA-38 / DUP-1 (080522, 92619171)	Calcium	1.3	<0.12	NC	X - J
	Barium	0.012	0.012	0.0%	A
	Boron	0.00090 J	<0.0086	NC	A*
	Cobalt	0.00095 J	0.00098 J	NC	A*
	Nickel	0.00085 J	0.00083 J	NC	A*
	TDS	27	20	29.8%	A*
	Chloride	3.1	3.4	9.2%	A*
	Sulfate	<0.50	0.69 J	NC	A*

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NC – Not calculated.

<"MDL" – Not detected.

X – J - Not acceptable, both results qualified estimated.

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 3b – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
GWC-25R / DUP-2 (080922, 92619171)	Calcium	33.8	38.7	13.5%	A
	Barium	0.015	0.015	0.0%	A
	TDS	164	160	2.5%	A
	Chloride	2.2	2.6	16.7%	A*
	Fluoride	0.068 J	<0.050	NC	A*
	Sulfate	1.9	2.1	10.0%	A*

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NC – Not calculated.

U – Not detected.

X – J - Not acceptable, both results qualified estimated.

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 3c – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
GWC-18R / DUP-3 (081022, 92619171)	Calcium	33.6	32.0	4.9%	A
	Barium	0.014	0.015	6.9%	A*
	Beryllium	0.000056 J	0.000082 J	NC	A*
	Boron	<0.0086	0.019 J	NC	A*
	TDS	147	140	4.9%	A
	Chloride	2.6	2.6	0.0%	A*
	Sulfate	2.3	2.3	0.0%	A*

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NC – Not calculated.

U – Not detected.

X – J - Not acceptable, both results qualified estimated.

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 3d – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
GWA-41R / DUP-1 (081122, 92620047)	Calcium	39.7	39.8	0.3%	A
	Barium	0.019	0.019	0.0%	A
	TDS	170	165	3.0%	A
	Chloride	1.4	0.92 J	NC	A*
	Fluoride	<0.050	0.070 J	NC	A*
	Sulfate	4.7	4.6	2.2%	A*

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NC – Not calculated.

U – Not detected.

X – J - Not acceptable, both results qualified estimated.

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 3e – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
GWC-47/ DUP-2 (081522, 92620047)	Zinc	0.027	0.041	41.2%	X - J
	Calcium	33.7	22.1	41.6%	X - J
	Antimony	0.0022 J	<0.00078	NC	A*
	Barium	0.0074	0.0076	2.7%	A*
	Chromium	0.0015 J	0.0013 J	NC	A*
	TDS	141	95	39.0%	X - J
	Chloride	2.4	2.2	8.7%	A*
	Fluoride	0.058 J	0.065 J	NC	A*
	Sulfate	8.4	4.3	64.6%	X - J

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NC – Not calculated.

U – Not detected.

X – J - Not acceptable, both results qualified estimated.

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 3f – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
GWA-2R / DUP-1 (081622, 92621399)	Calcium	37.9	37.7	0.5%	A
	Antimony	0.0020 J	0.0021 J	NC	A*
	Arsenic	0.0033 J	0.0030 J	NC	A*
	Barium	0.027	0.028	3.6%	A
	Cobalt	0.00040 J	0.00042 J	NC	A*
	TDS	123	137	10.8%	A
	Chloride	0.82 J	1.3	NC	A*
	Fluoride	0.090 J	0.087 J	NC	A*
	Sulfate	7.8	8.5	8.6%	A

^a RPD = ((SR - DR) * 200) / (SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NC – Not calculated.

U – Not detected.

X – J - Not acceptable, both results qualified estimated.

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 3g – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
GWC-11/ DUP-2 (081822, 92621399)	Calcium	10.2	10.7	4.8%	A
	Barium	0.0078	0.0082	5.0%	A*
	Boron	<0.0086	0.0097 J	NC	A*
	Chromium	<0.0011	0.0012 J	NC	A*
	TDS	59	64	8.1%	A
	Chloride	1.2	1.2	0.0%	A*
	Sulfate	1.6	1.7	6.1%	A*

^a RPD = ((SR - DR) * 200) / (SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NC – Not calculated.

U – Not detected.

X – J - Not acceptable, both results qualified estimated.

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92619171, 92620047, 92621399
 September 2022

Table 3h – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
GWC-15Z/ DUP-3 (081922, 92621399)	Calcium	28.1	27.9	0.7%	A
	Barium	0.011	0.011	0.0%	A
	TDS	112	<10.0	NC	X - J
	Chloride	0.88 J	0.93 J	NC	A*
	Fluoride	0.053 J	0.054 J	NC	A*
	Sulfate	0.87 J	0.87 J	NC	A*

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NC – Not calculated.

U – Not detected.

X – J - Not acceptable, both results qualified estimated.

DATA USABILITY SUMMARY

Steven Elliott (Stantec) reviewed three data packages from Pace Analytical Services (Pace) for the analysis of water samples collected from October 11 and 21 and November 3, 2022 at the Georgia Power Bowen Plant site. Samples were collected according to the Field Sampling Plan – Plant Bowen (Amec Foster Wheeler, 2016).

Intended Use of Data: To delineate concentrations of constituents of concern in site groundwater.

Analyses requested included:

- EPA 300 Rev 2.1 – Chloride by ion chromatography
- SM 2540 C – Total Dissolved Solids (TDS)

Data were reviewed and validated as described in the field sampling plan and the *National Functional Guidelines for Inorganic Superfund Methods Data Review* (November 2020). The results of the review/validation are discussed in this Data Usability Summary (DUS) and the associated Laboratory Data Review Checklists.

DATA REVIEW/VALIDATION RESULTS

Introduction

For each SDG, one (1) groundwater sample, one (1) field blank, and one (1) field duplicate sample were analyzed for one or more of the analyses listed above. Table 1 lists the field identifications cross-referenced to laboratory identifications. Table 2 is a summary of qualified data. Tables 3a through 3h summarize field duplicate results.

Analytical Results

The data packages contain a minimum of one quality control batch per analytical method analyzed. The quality control batch identifies the laboratory QC samples that correspond to the designated field samples. Not detected results are reported as less than the value of the method detection limit (MDL).

Preservation and Holding Times

The samples were evaluated for agreement with the chain-of-custody forms. The samples were received in the appropriate containers with the paperwork filled out properly. The laboratory sample condition upon receipt forms indicates all samples were received at temperatures of 2.4°C – 6.8°C.

SDG 92634569

- Samples received above 6°C have been qualified as estimated.

All samples were analyzed within the technical holding time. No data were qualified.

Calibrations

Initial and continuing calibration verification data were not provided.

Blanks

Laboratory Method Blanks. No contamination was detected in any of the laboratory method blanks.

Field Blanks. Field blanks were analyzed for the full suite of sample analyses and all analytes were not detected with the following exception.

SDG 92634569

- TDS was detected in the field blank FB-1 (72 mg/L). Sample results reported with values less than ten times the blank concentration have been qualified as estimated.

Laboratory Control Samples

Laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) recoveries met the laboratory acceptance criteria for all analyses.

Matrix Spike/Matrix Spike Duplicates

Site-specific MS/MSD precision and accuracy results were within the laboratory acceptance criteria.

Laboratory Duplicates

Appropriate analytical duplicates were analyzed and RPDs were within the laboratory acceptance criteria.

Field Precision

One set of field duplicate samples was collected for this sampling event (see Tables 3a and 3b for sample/duplicate identification and precision calculations). The calculated RPDs between sample and duplicate were within the QAPP acceptance criteria of 25% for all analytes, with the following exceptions:

Summary

The groundwater analytical data are usable for the purpose of determining current concentrations of COCs in this medium at the affected property. A summary of qualified data is presented in Table 2 below.

References:

Wood, 2017. Bowen Field Sampling Plan. October.

United State Environmental Protection Agency (USEPA), 2020. National Functional Guidelines for Superfund Inorganic Methods Data Review. November.

Stantec
Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
Analytical Report Nos. 92630528, 92632481, 92634569
October/November 2022

Table 1 – Cross-Reference between Laboratory and Field Identifications

Field Identification	Laboratory Identification	SDG	Sample Date
GWA-44	92630528001	92630528	10/11/2022
FB-01	92630528003	92630528	10/11/2022
DUP-01	92630528002	92630528	10/11/2022
GWC-48	92632481001	92632481	10/21/2022
DUP-1	92632481002	92632481	10/21/2022
FB-1	92632481003	92632481	10/21/2022
GWC-23R	92634569001	92634569	11/03/2022
DUP-1	92634569002	92634569	11/03/2022
FB-1	92634569003	92634569	11/03/2022

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92630528, 92632481, 92634569
 October/November 2022

Table 2 – Qualified Analytical Data

Field Identification	Analyte	Qualification	Reason for Qualification
GWC-23R	TDS	J	Cooler temp; Detected in Method Blank
DUP-1	TDS	J	Cooler temp; Detected in Method Blank
FB-1	TDS	J	Cooler temp
GWC-23R	Sulfate	J	Cooler temp
DUP-1	Sulfate	J	Cooler temp
FB-1	Sulfate	J	Cooler temp

J – Estimated data; the reported quantitation limit or sample concentration is approximated due to exceedance of one or more QC requirements.

J+ – The analyte was detected in an associated blank; estimated data with a high bias.

R – Rejected data due to one or more QC requirements.

UJ – The analyte was analyzed for but was detected at a level below the associated blank contamination. The associated value is an estimate and may be inaccurate or imprecise.

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92630528, 92632481, 92634569
 October/November 2022

Table 3a – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
GWA-44 / DUP-1	Chloride	2.9	2.8	1.3%	A*

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NC – Not calculated.

<"MDL" – Not detected.

X – J - Not acceptable, both results qualified estimated.

Table 3b – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
GWC-48 / DUP-1	Chloride	5.9	6.0	1.1%	A

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NC – Not calculated.

<"MDL" – Not detected.

X – J - Not acceptable, both results qualified estimated.

Stantec
 Georgia Power – Bowen LF (Cells 1,2,3,4,9,10)
 Analytical Report Nos. 92630528, 92632481, 92634569
 October/November 2022

Table 3c – Field Precision

Field Identification	Analyte	Sample Result (mg/L)	Duplicate Result (mg/L)	RPD ^a	Qualified
GWC-23R / DUP-1	Sulfate	137	135	1.5%	A
	TDS	573	547	4.6%	A

^a RPD = ((SR - DR)*200)/(SR + DR)

A - Acceptable Data.

A* - Acceptable data where results were less than 5X the RDL and the difference between sample and duplicate was less than 2X the RDL.

J – Estimated detected.

NC – Not calculated.

<"MDL" – Not detected.

X – J - Not acceptable, both results qualified estimated.

Low-Flow Test Report:

Test Date / Time: 2/1/2022 12:54:55 PM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWA-50 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 86.73 ft Total Depth: 96.73 ft Initial Depth to Water: 60.37 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 91.73 ft Estimated Total Volume Pumped: 18560 ml Flow Cell Volume: 90 ml Final Flow Rate: 116 ml/min Final Draw Down: 12.13 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
2/1/2022 12:54 PM	00:00	7.84 pH	16.32 °C	20.08 µS/cm	9.11 mg/L	1.69 NTU	18.2 mV	61.30 ft	116.00 ml/min
2/1/2022 12:58 PM	04:00	7.02 pH	16.67 °C	20.53 µS/cm	7.63 mg/L	1.52 NTU	18.5 mV	61.67 ft	116.00 ml/min
2/1/2022 1:02 PM	08:00	6.44 pH	17.09 °C	20.85 µS/cm	7.05 mg/L	1.48 NTU	18.6 mV	62.21 ft	116.00 ml/min
2/1/2022 1:06 PM	12:00	6.02 pH	17.30 °C	20.31 µS/cm	6.94 mg/L	1.60 NTU	17.4 mV	62.73 ft	116.00 ml/min
2/1/2022 1:10 PM	16:00	5.79 pH	17.48 °C	19.55 µS/cm	7.08 mg/L	1.48 NTU	17.0 mV	63.14 ft	116.00 ml/min
2/1/2022 1:14 PM	20:00	5.65 pH	17.66 °C	18.54 µS/cm	7.26 mg/L	1.43 NTU	18.2 mV	63.53 ft	116.00 ml/min
2/1/2022 1:18 PM	24:00	5.58 pH	17.79 °C	17.93 µS/cm	7.31 mg/L	1.50 NTU	18.3 mV	63.97 ft	116.00 ml/min
2/1/2022 1:22 PM	28:00	5.54 pH	17.71 °C	17.62 µS/cm	7.44 mg/L	1.52 NTU	19.3 mV	64.38 ft	116.00 ml/min
2/1/2022 1:26 PM	32:00	5.51 pH	17.80 °C	17.49 µS/cm	7.43 mg/L	1.80 NTU	20.4 mV	64.75 ft	116.00 ml/min
2/1/2022 1:30 PM	36:00	5.51 pH	17.86 °C	17.53 µS/cm	7.44 mg/L	1.53 NTU	20.8 mV	65.10 ft	116.00 ml/min
2/1/2022 1:34 PM	40:00	5.49 pH	17.85 °C	17.60 µS/cm	7.48 mg/L	1.60 NTU	22.3 mV	65.53 ft	116.00 ml/min
2/1/2022 1:38 PM	44:00	5.51 pH	17.81 °C	17.69 µS/cm	7.45 mg/L	1.73 NTU	22.1 mV	65.85 ft	116.00 ml/min
2/1/2022 1:42 PM	48:00	5.53 pH	17.93 °C	17.85 µS/cm	7.44 mg/L	1.79 NTU	21.9 mV	64.04 ft	116.00 ml/min
2/1/2022 1:46 PM	52:00	5.53 pH	18.10 °C	17.91 µS/cm	7.35 mg/L	1.67 NTU	22.6 mV	66.39 ft	116.00 ml/min
2/1/2022 1:50 PM	56:00	5.53 pH	18.15 °C	18.10 µS/cm	7.32 mg/L	1.75 NTU	23.5 mV	66.62 ft	116.00 ml/min

2/1/2022 1:54 PM	01:00:00	5.55 pH	18.24 °C	18.18 µS/cm	7.24 mg/L	1.71 NTU	23.5 mV	66.88 ft	116.00 ml/min
2/1/2022 1:58 PM	01:04:00	5.54 pH	18.20 °C	18.26 µS/cm	7.21 mg/L	1.73 NTU	24.5 mV	67.11 ft	116.00 ml/min
2/1/2022 2:02 PM	01:08:00	5.55 pH	18.36 °C	18.39 µS/cm	7.12 mg/L	1.70 NTU	24.5 mV	67.32 ft	116.00 ml/min
2/1/2022 2:06 PM	01:12:00	5.55 pH	18.44 °C	18.52 µS/cm	7.08 mg/L	1.80 NTU	26.0 mV	67.54 ft	116.00 ml/min
2/1/2022 2:10 PM	01:16:00	5.56 pH	18.43 °C	18.64 µS/cm	7.19 mg/L	1.72 NTU	25.7 mV	67.78 ft	116.00 ml/min
2/1/2022 2:14 PM	01:20:00	5.58 pH	18.51 °C	18.73 µS/cm	7.21 mg/L	1.73 NTU	25.6 mV	67.96 ft	116.00 ml/min
2/1/2022 2:18 PM	01:24:00	5.57 pH	18.37 °C	18.86 µS/cm	7.20 mg/L	1.78 NTU	26.9 mV	68.13 ft	116.00 ml/min
2/1/2022 2:22 PM	01:28:00	5.59 pH	18.17 °C	18.96 µS/cm	7.15 mg/L	1.71 NTU	26.9 mV	68.33 ft	116.00 ml/min
2/1/2022 2:26 PM	01:32:00	5.58 pH	18.18 °C	19.01 µS/cm	7.14 mg/L	1.73 NTU	27.6 mV	68.52 ft	116.00 ml/min
2/1/2022 2:30 PM	01:36:00	5.59 pH	17.97 °C	19.06 µS/cm	7.14 mg/L	1.69 NTU	27.8 mV	68.71 ft	116.00 ml/min
2/1/2022 2:34 PM	01:40:00	5.61 pH	17.99 °C	19.13 µS/cm	7.10 mg/L	1.73 NTU	27.8 mV	68.89 ft	116.00 ml/min
2/1/2022 2:38 PM	01:44:00	5.60 pH	17.09 °C	19.33 µS/cm	7.17 mg/L	1.68 NTU	29.4 mV	69.08 ft	116.00 ml/min
2/1/2022 2:42 PM	01:48:00	5.60 pH	16.62 °C	19.47 µS/cm	7.22 mg/L	1.72 NTU	30.0 mV	69.28 ft	116.00 ml/min
2/1/2022 2:46 PM	01:52:00	5.63 pH	16.34 °C	19.56 µS/cm	7.27 mg/L	1.68 NTU	29.5 mV	69.53 ft	116.00 ml/min
2/1/2022 2:50 PM	01:56:00	5.60 pH	16.14 °C	19.63 µS/cm	7.27 mg/L	1.70 NTU	31.5 mV	69.84 ft	116.00 ml/min
2/1/2022 2:54 PM	02:00:00	5.62 pH	16.05 °C	19.61 µS/cm	7.26 mg/L	1.65 NTU	31.2 mV	70.09 ft	116.00 ml/min
2/1/2022 2:58 PM	02:04:00	5.62 pH	16.00 °C	19.54 µS/cm	7.25 mg/L	1.68 NTU	31.0 mV	70.39 ft	116.00 ml/min
2/1/2022 3:02 PM	02:08:00	5.60 pH	16.03 °C	19.37 µS/cm	7.26 mg/L	1.63 NTU	32.5 mV	70.68 ft	116.00 ml/min
2/1/2022 3:06 PM	02:12:00	5.61 pH	15.91 °C	19.37 µS/cm	7.29 mg/L	1.64 NTU	32.0 mV	70.91 ft	116.00 ml/min
2/1/2022 3:10 PM	02:16:00	5.59 pH	15.88 °C	19.36 µS/cm	7.29 mg/L	1.59 NTU	33.9 mV	71.23 ft	116.00 ml/min
2/1/2022 3:14 PM	02:20:00	5.60 pH	15.87 °C	19.37 µS/cm	7.23 mg/L	1.62 NTU	33.7 mV	71.54 ft	116.00 ml/min
2/1/2022 3:18 PM	02:24:00	5.61 pH	15.82 °C	19.41 µS/cm	7.21 mg/L	1.60 NTU	33.5 mV	71.83 ft	116.00 ml/min
2/1/2022 3:22 PM	02:28:00	5.59 pH	15.74 °C	19.38 µS/cm	7.18 mg/L	1.57 NTU	35.3 mV	72.08 ft	116.00 ml/min
2/1/2022 3:26 PM	02:32:00	5.60 pH	15.64 °C	19.39 µS/cm	7.17 mg/L	1.52 NTU	34.9 mV	72.21 ft	116.00 ml/min
2/1/2022 3:30 PM	02:36:00	5.63 pH	15.62 °C	19.39 µS/cm	7.18 mg/L	1.64 NTU	34.4 mV	72.36 ft	116.00 ml/min
2/1/2022 3:34 PM	02:40:00	5.61 pH	15.60 °C	19.55 µS/cm	7.17 mg/L	1.75 NTU	35.5 mV	72.50 ft	116.00 ml/min

Samples

Sample ID:	Description:
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GWA-50	Metals, inorganics, TDS, Alkalinity
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Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 2/1/2022 1:49:42 PM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWA-2 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 144.25 ft Total Depth: 154.25 ft Initial Depth to Water: 79.8 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 149.25 ft Estimated Total Volume Pumped: 10400 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 8 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/1/2022 1:49 PM	00:00	5.60 pH	15.66 °C	93.70 µS/cm	6.03 mg/L	0.56 NTU	97.3 mV	79.90 ft	0.04 PSU	200.00 ml/min
2/1/2022 1:53 PM	04:00	5.70 pH	15.66 °C	126.94 µS/cm	6.04 mg/L	0.56 NTU	91.8 mV	79.90 ft	0.06 PSU	200.00 ml/min
2/1/2022 1:57 PM	08:00	5.80 pH	15.71 °C	160.90 µS/cm	6.02 mg/L	0.57 NTU	88.5 mV	79.90 ft	0.08 PSU	200.00 ml/min
2/1/2022 2:01 PM	12:00	5.89 pH	15.70 °C	195.21 µS/cm	6.04 mg/L	0.63 NTU	86.0 mV	79.90 ft	0.09 PSU	200.00 ml/min
2/1/2022 2:05 PM	16:00	5.97 pH	15.75 °C	226.85 µS/cm	6.06 mg/L	0.71 NTU	84.2 mV	79.90 ft	0.11 PSU	200.00 ml/min
2/1/2022 2:09 PM	20:00	6.04 pH	15.80 °C	256.01 µS/cm	6.07 mg/L	0.78 NTU	82.9 mV	79.90 ft	0.12 PSU	200.00 ml/min
2/1/2022 2:13 PM	24:00	6.10 pH	15.80 °C	280.72 µS/cm	6.07 mg/L	0.85 NTU	82.1 mV	79.90 ft	0.13 PSU	200.00 ml/min
2/1/2022 2:17 PM	28:00	6.15 pH	15.84 °C	298.56 µS/cm	6.09 mg/L	0.83 NTU	81.3 mV	79.90 ft	0.14 PSU	200.00 ml/min
2/1/2022 2:21 PM	32:00	6.18 pH	15.93 °C	312.18 µS/cm	6.10 mg/L	0.71 NTU	80.9 mV	79.90 ft	0.15 PSU	200.00 ml/min
2/1/2022 2:25 PM	36:00	6.21 pH	15.95 °C	325.65 µS/cm	6.13 mg/L	0.72 NTU	80.7 mV	79.90 ft	0.16 PSU	200.00 ml/min
2/1/2022 2:29 PM	40:00	6.25 pH	15.87 °C	333.34 µS/cm	6.17 mg/L	0.69 NTU	80.3 mV	79.90 ft	0.16 PSU	200.00 ml/min
2/1/2022 2:33 PM	44:00	6.27 pH	15.85 °C	340.72 µS/cm	6.21 mg/L	0.92 NTU	80.2 mV	79.90 ft	0.16 PSU	200.00 ml/min
2/1/2022 2:37 PM	48:00	6.28 pH	15.87 °C	347.47 µS/cm	6.25 mg/L	0.77 NTU	80.1 mV	79.90 ft	0.17 PSU	200.00 ml/min
2/1/2022 2:41 PM	52:00	6.30 pH	15.89 °C	352.04 µS/cm	6.28 mg/L	0.66 NTU	80.0 mV	79.90 ft	0.17 PSU	200.00 ml/min

Samples

Sample ID:	Description:
GWA-2	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/1/2022 2:28:15 PM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWA-1 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 141.8 ft Total Depth: 151.8 ft Initial Depth to Water: 94.83 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 146.8 ft Estimated Total Volume Pumped: 2080 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.37 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 11L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/1/2022 2:28 PM	00:00	7.51 pH	15.37 °C	3.64 µS/cm	1.37 mg/L	2.01 NTU	75.2 mV	94.83 ft	0.00 PSU	130.00 ml/min
2/1/2022 2:32 PM	04:00	7.50 pH	15.37 °C	3.66 µS/cm	1.20 mg/L	3.77 NTU	71.8 mV	94.90 ft	0.00 PSU	130.00 ml/min
2/1/2022 2:36 PM	08:00	7.50 pH	15.33 °C	3.68 µS/cm	0.88 mg/L	3.75 NTU	68.9 mV	95.02 ft	0.00 PSU	130.00 ml/min
2/1/2022 2:40 PM	12:00	7.52 pH	15.33 °C	3.69 µS/cm	0.77 mg/L	3.84 NTU	65.0 mV	95.10 ft	0.00 PSU	130.00 ml/min
2/1/2022 2:44 PM	16:00	7.52 pH	15.32 °C	3.69 µS/cm	0.74 mg/L	3.95 NTU	61.3 mV	95.20 ft	0.00 PSU	130.00 ml/min

Samples

Sample ID:	Description:
GWA-1	Metals, Inorganic, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/1/2022 3:26:24 PM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWA-2R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 97.4 ft Total Depth: 107.4 ft Initial Depth to Water: 80.02 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 102.4 ft Estimated Total Volume Pumped: 2240 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 1.53 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 2 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/1/2022 3:26 PM	00:00	6.54 pH	15.66 °C	251.72 µS/cm	0.19 mg/L	1.49 NTU	21.8 mV	81.37 ft	0.12 PSU	140.00 ml/min
2/1/2022 3:30 PM	04:00	6.57 pH	15.66 °C	252.51 µS/cm	0.16 mg/L	0.80 NTU	13.3 mV	81.44 ft	0.12 PSU	140.00 ml/min
2/1/2022 3:34 PM	08:00	6.59 pH	15.70 °C	253.71 µS/cm	0.15 mg/L	0.53 NTU	4.4 mV	81.50 ft	0.12 PSU	140.00 ml/min
2/1/2022 3:38 PM	12:00	6.61 pH	15.67 °C	254.59 µS/cm	0.16 mg/L	0.67 NTU	-3.3 mV	81.54 ft	0.12 PSU	140.00 ml/min
2/1/2022 3:42 PM	16:00	6.62 pH	15.71 °C	255.56 µS/cm	0.18 mg/L	0.46 NTU	-9.8 mV	81.55 ft	0.12 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWA-2R	Metals, Inorganics, TDS, Alkalinity
DUP-1	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/2/2022 9:39:51 AM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWA-50R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 135.53 ft Total Depth: 145.53 ft Initial Depth to Water: 74.24 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 140.53 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/2/2022 9:39 AM	00:00	6.22 pH	13.74 °C	0.41 µS/cm	8.00 mg/L	0.37 NTU	175.7 mV	74.24 ft	0.00 PSU	120.00 ml/min
2/2/2022 9:43 AM	04:00	5.80 pH	14.11 °C	0.30 µS/cm	8.66 mg/L	0.29 NTU	158.0 mV	74.24 ft	0.00 PSU	120.00 ml/min
2/2/2022 9:47 AM	08:00	5.45 pH	14.20 °C	0.22 µS/cm	9.58 mg/L	0.10 NTU	149.9 mV	74.24 ft	0.00 PSU	120.00 ml/min
2/2/2022 9:51 AM	12:00	5.26 pH	14.27 °C	0.20 µS/cm	9.88 mg/L	0.07 NTU	145.1 mV	74.24 ft	0.00 PSU	120.00 ml/min
2/2/2022 9:55 AM	16:00	5.22 pH	14.38 °C	0.20 µS/cm	9.91 mg/L	0.11 NTU	141.7 mV	74.24 ft	0.00 PSU	120.00 ml/min
2/2/2022 9:59 AM	20:00	5.19 pH	14.42 °C	0.19 µS/cm	9.96 mg/L	0.08 NTU	142.9 mV	74.25 ft	0.00 PSU	120.00 ml/min
2/2/2022 10:03 AM	24:00	5.17 pH	14.46 °C	0.19 µS/cm	9.93 mg/L	0.01 NTU	142.8 mV	74.25 ft	0.00 PSU	120.00 ml/min
2/2/2022 10:07 AM	28:00	5.17 pH	14.49 °C	0.19 µS/cm	9.89 mg/L	0.05 NTU	144.1 mV	74.25 ft	0.00 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWA-50R	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/2/2022 9:52:16 AM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-5 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 103.75 ft Total Depth: 113.75 ft Initial Depth to Water: 77.83 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 108.75 ft Estimated Total Volume Pumped: 12096 ml Flow Cell Volume: 90 ml Final Flow Rate: 116 ml/min Final Draw Down: 5.38 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
2/2/2022 9:52 AM	00:00	7.19 pH	12.75 °C	37.29 µS/cm	9.84 mg/L	1.89 NTU	84.7 mV	78.62 ft	132.00 ml/min
2/2/2022 9:56 AM	04:00	6.66 pH	14.20 °C	46.64 µS/cm	7.95 mg/L	2.09 NTU	78.6 mV	78.98 ft	132.00 ml/min
2/2/2022 10:00 AM	08:00	6.50 pH	14.43 °C	59.42 µS/cm	7.54 mg/L	2.64 NTU	79.3 mV	79.42 ft	132.00 ml/min
2/2/2022 10:04 AM	12:00	6.48 pH	14.48 °C	63.92 µS/cm	7.52 mg/L	4.91 NTU	76.4 mV	79.84 ft	132.00 ml/min
2/2/2022 10:08 AM	16:00	6.49 pH	14.52 °C	64.83 µS/cm	7.54 mg/L	5.43 NTU	74.6 mV	80.18 ft	132.00 ml/min
2/2/2022 10:12 AM	20:00	6.46 pH	14.60 °C	65.05 µS/cm	7.58 mg/L	5.53 NTU	75.5 mV	80.48 ft	132.00 ml/min
2/2/2022 10:16 AM	24:00	6.46 pH	14.61 °C	63.55 µS/cm	7.68 mg/L	4.49 NTU	74.4 mV	80.81 ft	132.00 ml/min
2/2/2022 10:20 AM	28:00	6.41 pH	14.72 °C	61.91 µS/cm	7.80 mg/L	4.52 NTU	75.4 mV	81.08 ft	132.00 ml/min
2/2/2022 10:24 AM	32:00	6.39 pH	14.75 °C	60.40 µS/cm	7.91 mg/L	4.23 NTU	74.9 mV	81.33 ft	132.00 ml/min
2/2/2022 10:28 AM	36:00	6.37 pH	14.67 °C	58.85 µS/cm	8.04 mg/L	4.24 NTU	74.7 mV	81.61 ft	132.00 ml/min
2/2/2022 10:32 AM	40:00	6.31 pH	14.65 °C	56.19 µS/cm	8.25 mg/L	4.05 NTU	76.5 mV	81.84 ft	132.00 ml/min
2/2/2022 10:36 AM	44:00	6.28 pH	14.65 °C	53.48 µS/cm	8.40 mg/L	4.03 NTU	76.3 mV	82.06 ft	132.00 ml/min
2/2/2022 10:40 AM	48:00	6.23 pH	14.74 °C	51.96 µS/cm	8.54 mg/L	4.37 NTU	77.8 mV	82.32 ft	132.00 ml/min
2/2/2022 10:44 AM	52:00	6.20 pH	14.88 °C	50.32 µS/cm	8.58 mg/L	4.17 NTU	78.8 mV	82.50 ft	132.00 ml/min
2/2/2022 10:48 AM	56:00	6.18 pH	14.90 °C	48.26 µS/cm	8.71 mg/L	4.52 NTU	78.8 mV	82.71 ft	132.00 ml/min

2/2/2022 10:52 AM	01:00:00	6.13 pH	14.70 °C	46.31 µS/cm	8.78 mg/L	3.75 NTU	81.0 mV	82.87 ft	116.00 ml/min
2/2/2022 10:56 AM	01:04:00	6.12 pH	14.56 °C	45.62 µS/cm	8.88 mg/L	3.92 NTU	80.5 mV	82.85 ft	116.00 ml/min
2/2/2022 11:00 AM	01:08:00	6.09 pH	14.62 °C	44.19 µS/cm	8.91 mg/L	3.77 NTU	81.5 mV	82.86 ft	116.00 ml/min
2/2/2022 11:04 AM	01:12:00	6.04 pH	14.65 °C	41.32 µS/cm	9.02 mg/L	3.50 NTU	82.9 mV	82.90 ft	116.00 ml/min
2/2/2022 11:08 AM	01:16:00	6.01 pH	14.65 °C	39.25 µS/cm	9.10 mg/L	3.34 NTU	83.0 mV	82.94 ft	116.00 ml/min
2/2/2022 11:12 AM	01:20:00	5.96 pH	14.61 °C	37.37 µS/cm	9.19 mg/L	3.20 NTU	84.8 mV	83.00 ft	116.00 ml/min
2/2/2022 11:16 AM	01:24:00	5.92 pH	14.56 °C	36.39 µS/cm	9.24 mg/L	2.97 NTU	86.2 mV	83.04 ft	116.00 ml/min
2/2/2022 11:20 AM	01:28:00	5.93 pH	14.57 °C	36.34 µS/cm	9.28 mg/L	3.25 NTU	86.3 mV	83.10 ft	116.00 ml/min
2/2/2022 11:24 AM	01:32:00	5.89 pH	14.61 °C	36.21 µS/cm	9.26 mg/L	2.96 NTU	88.8 mV	83.16 ft	116.00 ml/min
2/2/2022 11:28 AM	01:36:00	5.90 pH	14.57 °C	35.61 µS/cm	9.29 mg/L	3.09 NTU	88.5 mV	83.21 ft	116.00 ml/min

Samples

Sample ID:	Description:
GWC-5	Metals, inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/2/2022 11:15:36 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWC-7Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 107 ft Total Depth: 117 ft Initial Depth to Water: 56.89 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 112 ft Estimated Total Volume Pumped: 8480 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.11 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

At 20:00 lowered pump rate to 130 mL/min.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/2/2022 11:15 AM	00:00	6.87 pH	14.69 °C	225.37 µS/cm	0.75 mg/L	0.63 NTU	0.7 mV	57.01 ft	0.11 PSU	190.00 ml/min
2/2/2022 11:19 AM	04:00	7.05 pH	14.85 °C	224.47 µS/cm	0.22 mg/L	0.86 NTU	-26.8 mV	57.02 ft	0.11 PSU	190.00 ml/min
2/2/2022 11:23 AM	08:00	7.17 pH	14.95 °C	225.69 µS/cm	0.32 mg/L	2.13 NTU	-36.3 mV	57.03 ft	0.11 PSU	190.00 ml/min
2/2/2022 11:27 AM	12:00	7.25 pH	14.94 °C	225.85 µS/cm	0.51 mg/L	2.72 NTU	-40.3 mV	57.04 ft	0.11 PSU	190.00 ml/min
2/2/2022 11:31 AM	16:00	7.32 pH	14.94 °C	226.45 µS/cm	0.76 mg/L	3.43 NTU	-41.8 mV	57.05 ft	0.11 PSU	190.00 ml/min
2/2/2022 11:35 AM	20:00	7.38 pH	14.62 °C	225.79 µS/cm	0.94 mg/L	3.27 NTU	-41.7 mV	57.01 ft	0.11 PSU	130.00 ml/min
2/2/2022 11:39 AM	24:00	7.41 pH	14.48 °C	226.11 µS/cm	1.14 mg/L	3.14 NTU	-41.3 mV	57.01 ft	0.11 PSU	130.00 ml/min
2/2/2022 11:43 AM	28:00	7.45 pH	14.43 °C	225.44 µS/cm	1.41 mg/L	3.08 NTU	-39.0 mV	57.00 ft	0.11 PSU	130.00 ml/min
2/2/2022 11:47 AM	32:00	7.47 pH	14.49 °C	225.40 µS/cm	1.59 mg/L	2.75 NTU	-38.7 mV	57.00 ft	0.11 PSU	130.00 ml/min
2/2/2022 11:51 AM	36:00	7.49 pH	14.54 °C	225.52 µS/cm	1.71 mg/L	2.48 NTU	-39.5 mV	57.00 ft	0.11 PSU	130.00 ml/min
2/2/2022 11:55 AM	40:00	7.50 pH	14.58 °C	225.37 µS/cm	1.82 mg/L	1.84 NTU	-40.0 mV	57.00 ft	0.11 PSU	130.00 ml/min
2/2/2022 11:59 AM	44:00	7.51 pH	14.59 °C	225.40 µS/cm	1.92 mg/L	1.65 NTU	-41.0 mV	57.00 ft	0.11 PSU	130.00 ml/min
2/2/2022 12:03 PM	48:00	7.52 pH	14.67 °C	224.70 µS/cm	2.01 mg/L	1.48 NTU	-41.0 mV	57.00 ft	0.11 PSU	130.00 ml/min
2/2/2022 12:07 PM	52:00	7.53 pH	14.68 °C	225.00 µS/cm	2.11 mg/L	1.50 NTU	-41.5 mV	57.00 ft	0.11 PSU	130.00 ml/min
2/2/2022 12:11 PM	56:00	7.54 pH	14.72 °C	224.90 µS/cm	2.22 mg/L	1.47 NTU	-41.3 mV	57.00 ft	0.11 PSU	130.00 ml/min

Samples

Sample ID:	Description:
GWC-7Z	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/2/2022 11:17:59 AM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWA-4RZ Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 110.74 ft Total Depth: 120.74 ft Initial Depth to Water: 88.1 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 115.74 ft Estimated Total Volume Pumped: 25925 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 26.494 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 2L

Water level fell below screen, so full Evacuation Disregard trial at 36.39 and 40.39 into LF also disregard trial at 3:20:39 into LF

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/2/2022 11:17 AM	00:00	7.16 pH	14.74 °C	5.83 µS/cm	0.82 mg/L	0.47 NTU	15.9 mV	88.10 ft	0.00 PSU	125.00 ml/min
2/2/2022 11:21 AM	04:00	7.24 pH	14.78 °C	5.62 µS/cm	0.36 mg/L	0.56 NTU	0.8 mV	88.89 ft	0.00 PSU	125.00 ml/min
2/2/2022 11:25 AM	08:00	7.30 pH	14.83 °C	5.47 µS/cm	0.25 mg/L	0.18 NTU	-19.1 mV	89.51 ft	0.00 PSU	125.00 ml/min
2/2/2022 11:29 AM	12:00	7.33 pH	14.82 °C	5.43 µS/cm	0.21 mg/L	0.42 NTU	-35.4 mV	90.15 ft	0.00 PSU	125.00 ml/min
2/2/2022 11:33 AM	16:00	7.34 pH	14.74 °C	5.40 µS/cm	0.20 mg/L	0.27 NTU	-52.6 mV	90.88 ft	0.00 PSU	125.00 ml/min
2/2/2022 11:37 AM	20:00	7.35 pH	14.47 °C	5.38 µS/cm	0.20 mg/L	0.20 NTU	-63.5 mV	91.31 ft	0.00 PSU	100.00 ml/min
2/2/2022 11:41 AM	24:00	7.36 pH	14.38 °C	5.38 µS/cm	0.21 mg/L	0.22 NTU	-70.3 mV	91.61 ft	0.00 PSU	100.00 ml/min
2/2/2022 11:45 AM	28:00	7.36 pH	14.36 °C	5.37 µS/cm	0.21 mg/L	0.23 NTU	-74.6 mV	91.90 ft	0.00 PSU	100.00 ml/min
2/2/2022 11:54 AM	36:39	7.37 pH	14.15 °C	5.34 µS/cm	0.23 mg/L		-75.0 mV		0.00 PSU	100.00 ml/min
2/2/2022 11:58 AM	40:39	7.38 pH	14.00 °C	5.33 µS/cm	0.23 mg/L		-74.3 mV		0.00 PSU	100.00 ml/min
2/2/2022 12:02 PM	44:39	7.38 pH	13.87 °C	5.32 µS/cm	0.25 mg/L	0.48 NTU	-75.0 mV	92.88 ft	0.00 PSU	100.00 ml/min
2/2/2022 12:06 PM	48:39	7.35 pH	13.61 °C	5.37 µS/cm	0.34 mg/L	0.45 NTU	-74.1 mV	93.21 ft	0.00 PSU	100.00 ml/min
2/2/2022 12:10 PM	52:39	7.32 pH	14.47 °C	5.26 µS/cm	0.30 mg/L	0.45 NTU	-66.4 mV	93.87 ft	0.00 PSU	120.00 ml/min
2/2/2022 12:14 PM	56:39	7.28 pH	14.65 °C	5.18 µS/cm	0.35 mg/L	0.40 NTU	-57.6 mV	94.50 ft	0.00 PSU	120.00 ml/min
2/2/2022 12:18 PM	01:00:39	7.25 pH	14.83 °C	5.12 µS/cm	0.34 mg/L	0.36 NTU	-50.3 mV	95.10 ft	0.00 PSU	120.00 ml/min

2/2/2022 12:22 PM	01:04:39	7.22 pH	15.01 °C	5.07 µS/cm	0.37 mg/L	0.30 NTU	-42.1 mV	96.03 ft	0.00 PSU	120.00 ml/min
2/2/2022 12:26 PM	01:08:39	7.21 pH	15.04 °C	5.04 µS/cm	0.44 mg/L	0.28 NTU	-35.0 mV	96.91 ft	0.00 PSU	120.00 ml/min
2/2/2022 12:30 PM	01:12:39	7.19 pH	15.09 °C	5.01 µS/cm	0.48 mg/L	0.32 NTU	-29.8 mV	97.89 ft	0.00 PSU	120.00 ml/min
2/2/2022 12:34 PM	01:16:39	7.18 pH	15.10 °C	5.00 µS/cm	0.52 mg/L	0.21 NTU	-25.8 mV	98.69 ft	0.00 PSU	120.00 ml/min
2/2/2022 12:38 PM	01:20:39	7.18 pH	15.06 °C	4.99 µS/cm	0.57 mg/L	0.26 NTU	-22.8 mV	99.55 ft	0.00 PSU	120.00 ml/min
2/2/2022 12:42 PM	01:24:39	7.18 pH	15.06 °C	4.99 µS/cm	0.60 mg/L	0.43 NTU	-21.2 mV	100.34 ft	0.00 PSU	120.00 ml/min
2/2/2022 12:46 PM	01:28:39	7.18 pH	15.10 °C	5.00 µS/cm	0.64 mg/L	0.25 NTU	-19.8 mV	101.11 ft	0.00 PSU	120.00 ml/min
2/2/2022 12:50 PM	01:32:39	7.18 pH	15.10 °C	4.99 µS/cm	0.68 mg/L	0.21 NTU	-18.4 mV	101.95 ft	0.00 PSU	120.00 ml/min
2/2/2022 12:54 PM	01:36:39	7.18 pH	15.06 °C	4.99 µS/cm	0.74 mg/L	0.24 NTU	-17.2 mV	102.69 ft	0.00 PSU	120.00 ml/min
2/2/2022 12:58 PM	01:40:39	7.18 pH	15.06 °C	5.00 µS/cm	0.80 mg/L	0.17 NTU	-16.1 mV	103.54 ft	0.00 PSU	120.00 ml/min
2/2/2022 1:02 PM	01:44:39	7.18 pH	15.06 °C	5.00 µS/cm	0.87 mg/L	0.06 NTU	-15.0 mV	104.46 ft	0.00 PSU	120.00 ml/min
2/2/2022 1:06 PM	01:48:39	7.18 pH	15.20 °C	5.01 µS/cm	0.93 mg/L	0.24 NTU	-14.0 mV	105.50 ft	0.00 PSU	130.00 ml/min
2/2/2022 1:10 PM	01:52:39	7.18 pH	15.25 °C	5.00 µS/cm	1.01 mg/L	0.16 NTU	-13.1 mV	106.09 ft	0.00 PSU	130.00 ml/min
2/2/2022 1:14 PM	01:56:39	7.18 pH	15.25 °C	5.01 µS/cm	1.07 mg/L	0.23 NTU	-12.2 mV	107.07 ft	0.00 PSU	130.00 ml/min
2/2/2022 1:18 PM	02:00:39	7.18 pH	15.33 °C	5.00 µS/cm	1.13 mg/L	0.26 NTU	-10.9 mV	108.11 ft	0.00 PSU	130.00 ml/min
2/2/2022 1:22 PM	02:04:39	7.18 pH	15.37 °C	5.00 µS/cm	1.17 mg/L	0.24 NTU	-9.4 mV	108.90 ft	0.00 PSU	130.00 ml/min
2/2/2022 1:26 PM	02:08:39	7.18 pH	15.37 °C	5.01 µS/cm	1.19 mg/L	0.17 NTU	-8.5 mV	109.85 ft	0.00 PSU	130.00 ml/min
2/2/2022 1:30 PM	02:12:39	7.19 pH	15.31 °C	5.00 µS/cm	1.19 mg/L	0.18 NTU	-7.8 mV	110.31 ft	0.00 PSU	130.00 ml/min
2/2/2022 1:34 PM	02:16:39	7.19 pH	15.03 °C	5.00 µS/cm	1.20 mg/L	0.22 NTU	-6.8 mV	110.43 ft	0.00 PSU	130.00 ml/min
2/2/2022 1:38 PM	02:20:39	7.19 pH	15.15 °C	5.01 µS/cm	1.20 mg/L	0.26 NTU	-6.4 mV	110.50 ft	0.00 PSU	130.00 ml/min
2/2/2022 1:42 PM	02:24:39	7.19 pH	15.28 °C	5.01 µS/cm	1.18 mg/L	0.21 NTU	-5.6 mV	110.51 ft	0.00 PSU	130.00 ml/min
2/2/2022 1:46 PM	02:28:39	7.19 pH	15.33 °C	5.01 µS/cm	1.17 mg/L	0.17 NTU	-5.2 mV	110.53 ft	0.00 PSU	140.00 ml/min
2/2/2022 1:50 PM	02:32:39	7.20 pH	15.42 °C	5.04 µS/cm	1.11 mg/L	0.20 NTU	-6.5 mV	110.65 ft	0.00 PSU	160.00 ml/min
2/2/2022 1:54 PM	02:36:39	7.23 pH	15.47 °C	5.08 µS/cm	0.99 mg/L	0.28 NTU	-10.6 mV	110.93 ft	0.00 PSU	160.00 ml/min
2/2/2022 1:58 PM	02:40:39	7.26 pH	15.48 °C	5.12 µS/cm	0.88 mg/L	0.38 NTU	-16.0 mV	111.25 ft	0.00 PSU	160.00 ml/min
2/2/2022 2:02 PM	02:44:39	7.28 pH	15.46 °C	5.14 µS/cm	0.79 mg/L	0.38 NTU	-20.9 mV	111.67 ft	0.00 PSU	160.00 ml/min
2/2/2022 2:06 PM	02:48:39	7.30 pH	15.48 °C	5.16 µS/cm	0.72 mg/L	0.51 NTU	-26.0 mV	112.09 ft	0.00 PSU	160.00 ml/min
2/2/2022 2:10 PM	02:52:39	7.32 pH	15.51 °C	5.14 µS/cm	0.68 mg/L	0.31 NTU	-30.1 mV	112.55 ft	0.00 PSU	160.00 ml/min
2/2/2022 2:14 PM	02:56:39	7.35 pH	15.52 °C	5.15 µS/cm	0.61 mg/L	0.58 NTU	-37.2 mV	112.94 ft	0.00 PSU	160.00 ml/min

2/2/2022 2:18 PM	03:00:39	7.37 pH	15.51 °C	5.16 µS/cm	0.56 mg/L	0.48 NTU	-49.4 mV	113.38 ft	0.00 PSU	160.00 ml/min
2/2/2022 2:22 PM	03:04:39	7.39 pH	15.51 °C	5.18 µS/cm	0.52 mg/L	0.35 NTU	-62.8 mV	113.82 ft	0.00 PSU	160.00 ml/min
2/2/2022 2:26 PM	03:08:39	7.39 pH	15.57 °C	5.19 µS/cm	0.47 mg/L	0.30 NTU	-73.4 mV	114.15 ft	0.00 PSU	160.00 ml/min
2/2/2022 2:30 PM	03:12:39	7.40 pH	15.61 °C	5.21 µS/cm	0.43 mg/L	0.47 NTU	-79.1 mV	114.55 ft	0.00 PSU	160.00 ml/min
2/2/2022 2:34 PM	03:16:39	7.40 pH	15.60 °C	5.23 µS/cm	0.42 mg/L	0.31 NTU	-83.0 mV	114.59 ft	0.00 PSU	160.00 ml/min
2/2/2022 2:38 PM	03:20:39	7.40 pH	15.60 °C	5.22 µS/cm	0.41 mg/L	0.31 NTU	-84.9 mV	114.59 ft	0.00 PSU	160.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 2/2/2022 11:40:52 AM

Project: Plant Bowen LF January 2022

Operator Name: Kevin Stephenson

Location Name: GWA-3A Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 130.27 ft Total Depth: 140.27 ft Initial Depth to Water: 77.24 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 135.27 ft Estimated Total Volume Pumped: 2880 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 1 liter.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/2/2022 11:40 AM	00:00	7.70 pH	14.43 °C	208.34 µS/cm	7.09 mg/L	2.30 NTU	105.3 mV	77.25 ft	0.10 PSU	120.00 ml/min
2/2/2022 11:44 AM	04:00	7.79 pH	14.44 °C	203.80 µS/cm	7.05 mg/L	3.01 NTU	76.4 mV	77.25 ft	0.10 PSU	120.00 ml/min
2/2/2022 11:48 AM	08:00	7.85 pH	13.89 °C	202.42 µS/cm	7.06 mg/L	2.44 NTU	66.9 mV	77.25 ft	0.10 PSU	120.00 ml/min
2/2/2022 11:52 AM	12:00	7.87 pH	14.39 °C	206.09 µS/cm	7.21 mg/L	2.23 NTU	60.4 mV	77.25 ft	0.10 PSU	120.00 ml/min
2/2/2022 11:56 AM	16:00	7.90 pH	14.75 °C	204.15 µS/cm	7.10 mg/L	2.32 NTU	55.2 mV	77.25 ft	0.10 PSU	120.00 ml/min
2/2/2022 12:00 PM	20:00	7.93 pH	14.66 °C	204.15 µS/cm	7.09 mg/L	2.34 NTU	50.1 mV	77.25 ft	0.10 PSU	120.00 ml/min
2/2/2022 12:04 PM	24:00	7.94 pH	14.51 °C	203.70 µS/cm	7.06 mg/L	2.39 NTU	47.1 mV	77.25 ft	0.10 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWA-3A	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/2/2022 1:09:58 PM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWC-8Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 66.4 ft Total Depth: 76.4 ft Initial Depth to Water: 46.68 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 71.4 ft Estimated Total Volume Pumped: 7920 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.37 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/2/2022 1:09 PM	00:00	6.88 pH	14.44 °C	86.36 µS/cm	8.16 mg/L	1.56 NTU	33.1 mV	47.04 ft	0.04 PSU	110.00 ml/min
2/2/2022 1:13 PM	04:00	6.80 pH	14.50 °C	85.60 µS/cm	8.16 mg/L	1.45 NTU	33.2 mV	47.04 ft	0.04 PSU	110.00 ml/min
2/2/2022 1:17 PM	08:00	6.76 pH	14.55 °C	85.07 µS/cm	8.17 mg/L	1.45 NTU	34.0 mV	47.04 ft	0.04 PSU	110.00 ml/min
2/2/2022 1:21 PM	12:00	6.73 pH	14.62 °C	84.66 µS/cm	8.17 mg/L	1.06 NTU	34.6 mV	47.04 ft	0.04 PSU	110.00 ml/min
2/2/2022 1:25 PM	16:00	6.71 pH	14.67 °C	85.05 µS/cm	8.17 mg/L	1.13 NTU	35.1 mV	47.04 ft	0.04 PSU	110.00 ml/min
2/2/2022 1:29 PM	20:00	6.70 pH	14.68 °C	86.05 µS/cm	8.19 mg/L	1.32 NTU	35.7 mV	47.04 ft	0.04 PSU	110.00 ml/min
2/2/2022 1:33 PM	24:00	6.71 pH	14.71 °C	89.03 µS/cm	8.19 mg/L	1.44 NTU	36.0 mV	47.04 ft	0.04 PSU	110.00 ml/min
2/2/2022 1:37 PM	28:00	6.73 pH	14.72 °C	94.28 µS/cm	8.19 mg/L	1.37 NTU	36.3 mV	47.04 ft	0.04 PSU	110.00 ml/min
2/2/2022 1:41 PM	32:00	6.75 pH	14.79 °C	100.52 µS/cm	8.17 mg/L	1.49 NTU	36.0 mV	47.04 ft	0.05 PSU	110.00 ml/min
2/2/2022 1:45 PM	36:00	6.80 pH	14.81 °C	107.86 µS/cm	8.17 mg/L	1.52 NTU	35.8 mV	47.05 ft	0.05 PSU	110.00 ml/min
2/2/2022 1:49 PM	40:00	6.85 pH	14.82 °C	115.75 µS/cm	8.21 mg/L	1.49 NTU	36.0 mV	47.05 ft	0.05 PSU	110.00 ml/min
2/2/2022 1:53 PM	44:00	6.91 pH	14.85 °C	123.30 µS/cm	8.22 mg/L	1.32 NTU	34.8 mV	47.05 ft	0.06 PSU	110.00 ml/min
2/2/2022 1:57 PM	48:00	6.96 pH	14.85 °C	129.16 µS/cm	8.26 mg/L	1.22 NTU	34.5 mV	47.05 ft	0.06 PSU	110.00 ml/min
2/2/2022 2:01 PM	52:00	7.01 pH	14.86 °C	134.41 µS/cm	8.31 mg/L	1.14 NTU	34.1 mV	47.05 ft	0.06 PSU	110.00 ml/min
2/2/2022 2:05 PM	56:00	7.05 pH	14.85 °C	138.49 µS/cm	8.31 mg/L	1.28 NTU	33.8 mV	47.05 ft	0.07 PSU	110.00 ml/min

2/2/2022 2:09 PM	01:00:00	7.09 pH	14.86 °C	142.37 µS/cm	8.34 mg/L	1.23 NTU	33.4 mV	47.05 ft	0.07 PSU	110.00 ml/min
2/2/2022 2:13 PM	01:04:00	7.13 pH	14.85 °C	145.53 µS/cm	8.34 mg/L	0.99 NTU	33.1 mV	47.05 ft	0.07 PSU	110.00 ml/min
2/2/2022 2:17 PM	01:08:00	7.16 pH	14.89 °C	147.70 µS/cm	8.35 mg/L	1.16 NTU	32.8 mV	47.05 ft	0.07 PSU	110.00 ml/min
2/2/2022 2:21 PM	01:12:00	7.19 pH	14.90 °C	150.58 µS/cm	8.35 mg/L	0.82 NTU	32.6 mV	47.05 ft	0.07 PSU	110.00 ml/min

Samples

Sample ID:	Description:
GWC-8Z	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/2/2022 1:18:03 PM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-6RZ Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 102.8 ft Total Depth: 112.8 ft Initial Depth to Water: 75.64 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 107.8 ft Estimated Total Volume Pumped: 4104 ml Flow Cell Volume: 90 ml Final Flow Rate: 114 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
2/2/2022 1:18 PM	00:00	6.49 pH	12.92 °C	96.73 µS/cm	8.52 mg/L	2.63 NTU	66.3 mV	75.66 ft	114.00 ml/min
2/2/2022 1:22 PM	04:00	6.47 pH	14.48 °C	97.82 µS/cm	5.50 mg/L	1.66 NTU	63.9 mV	75.66 ft	114.00 ml/min
2/2/2022 1:26 PM	08:00	6.44 pH	14.78 °C	114.74 µS/cm	5.50 mg/L	1.64 NTU	54.0 mV	75.67 ft	114.00 ml/min
2/2/2022 1:30 PM	12:00	6.51 pH	14.79 °C	108.88 µS/cm	6.53 mg/L	4.52 NTU	51.6 mV	75.67 ft	114.00 ml/min
2/2/2022 1:34 PM	16:00	6.62 pH	14.87 °C	105.30 µS/cm	7.11 mg/L	2.99 NTU	48.0 mV	75.67 ft	114.00 ml/min
2/2/2022 1:38 PM	20:00	6.69 pH	14.92 °C	103.79 µS/cm	7.33 mg/L	3.09 NTU	45.6 mV	75.67 ft	114.00 ml/min
2/2/2022 1:42 PM	24:00	6.74 pH	14.99 °C	102.78 µS/cm	7.43 mg/L	2.38 NTU	44.0 mV	75.66 ft	114.00 ml/min
2/2/2022 1:46 PM	28:00	6.76 pH	15.02 °C	102.14 µS/cm	7.51 mg/L	2.22 NTU	43.3 mV	75.66 ft	114.00 ml/min
2/2/2022 1:50 PM	32:00	6.80 pH	15.06 °C	101.33 µS/cm	7.56 mg/L	2.49 NTU	42.0 mV	75.66 ft	114.00 ml/min
2/2/2022 1:54 PM	36:00	6.80 pH	15.05 °C	100.90 µS/cm	7.62 mg/L	2.00 NTU	42.0 mV	75.66 ft	114.00 ml/min

Samples

Sample ID:	Description:
GWC-6RZ	Metals, inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/2/2022 1:42:51 PM

Project: Plant Bowen LF January 2022

Operator Name: Kevin Stephenson

Location Name: GWC-9 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 67.16 ft Total Depth: 77.16 ft Initial Depth to Water: 40.99 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 72.16 ft Estimated Total Volume Pumped: 10640 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 1 liter. 1 hour from stabilization to allow pH to come into range. Did not happen.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/2/2022 1:42 PM	00:00	6.57 pH	15.16 °C	43.21 µS/cm	6.72 mg/L	3.53 NTU	77.3 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 1:46 PM	04:00	5.03 pH	15.02 °C	40.21 µS/cm	6.11 mg/L	3.84 NTU	83.0 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 1:50 PM	08:00	4.84 pH	15.02 °C	40.18 µS/cm	5.83 mg/L	2.94 NTU	82.3 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 1:54 PM	12:00	4.82 pH	15.02 °C	40.17 µS/cm	5.70 mg/L	2.21 NTU	80.8 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 1:58 PM	16:00	4.82 pH	15.02 °C	40.21 µS/cm	5.62 mg/L	1.83 NTU	78.9 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:02 PM	20:00	4.81 pH	15.06 °C	40.19 µS/cm	5.54 mg/L	1.73 NTU	78.7 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:06 PM	24:00	4.81 pH	15.11 °C	40.27 µS/cm	5.52 mg/L	1.65 NTU	78.5 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:10 PM	28:00	4.80 pH	15.06 °C	40.30 µS/cm	5.54 mg/L	1.46 NTU	78.0 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:14 PM	32:00	4.80 pH	15.07 °C	40.29 µS/cm	5.53 mg/L	1.49 NTU	76.5 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:18 PM	36:00	4.80 pH	15.08 °C	40.25 µS/cm	5.52 mg/L	2.83 NTU	77.2 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:22 PM	40:00	4.80 pH	15.11 °C	40.18 µS/cm	5.49 mg/L	1.34 NTU	76.4 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:26 PM	44:00	4.80 pH	15.24 °C	40.18 µS/cm	5.47 mg/L	1.42 NTU	75.1 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:30 PM	48:00	4.80 pH	15.25 °C	40.21 µS/cm	5.47 mg/L	1.27 NTU	76.0 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:34 PM	52:00	4.80 pH	15.25 °C	40.18 µS/cm	5.49 mg/L	1.35 NTU	75.5 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:38 PM	56:00	4.81 pH	15.25 °C	40.12 µS/cm	5.51 mg/L	1.17 NTU	74.1 mV	40.99 ft	0.02 PSU	140.00 ml/min

2/2/2022 2:42 PM	01:00:00	4.81 pH	15.31 °C	40.10 µS/cm	5.48 mg/L	1.29 NTU	75.1 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:46 PM	01:04:00	4.81 pH	15.32 °C	40.05 µS/cm	5.45 mg/L	1.01 NTU	74.7 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:50 PM	01:08:00	4.81 pH	15.32 °C	40.04 µS/cm	5.45 mg/L	0.97 NTU	74.1 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:54 PM	01:12:00	4.81 pH	15.34 °C	40.10 µS/cm	5.45 mg/L	1.11 NTU	73.6 mV	40.99 ft	0.02 PSU	140.00 ml/min
2/2/2022 2:58 PM	01:16:00	4.81 pH	15.29 °C	40.17 µS/cm	5.48 mg/L	0.89 NTU	73.8 mV	40.99 ft	0.02 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWC-9	Metals, Inorganics, TDS, Alkalinity
DUP-2	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/2/2022 2:40:42 PM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-6 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 101.37 ft Total Depth: 111.37 ft Initial Depth to Water: 71.93 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 106.37 ft Estimated Total Volume Pumped: 4176 ml Flow Cell Volume: 90 ml Final Flow Rate: 116 ml/min Final Draw Down: 0.25 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
2/2/2022 2:40 PM	00:00	7.01 pH	13.58 °C	134.84 µS/cm	9.08 mg/L	1.70 NTU	46.9 mV	72.07 ft	116.00 ml/min
2/2/2022 2:44 PM	04:00	6.91 pH	15.01 °C	137.90 µS/cm	6.83 mg/L	1.52 NTU	45.6 mV	72.09 ft	116.00 ml/min
2/2/2022 2:48 PM	08:00	7.04 pH	15.19 °C	137.19 µS/cm	7.30 mg/L	1.77 NTU	45.0 mV	72.11 ft	116.00 ml/min
2/2/2022 2:52 PM	12:00	7.15 pH	15.19 °C	132.76 µS/cm	7.53 mg/L	2.27 NTU	44.8 mV	72.14 ft	116.00 ml/min
2/2/2022 2:56 PM	16:00	7.20 pH	15.20 °C	133.95 µS/cm	7.58 mg/L	2.65 NTU	45.4 mV	72.15 ft	116.00 ml/min
2/2/2022 3:00 PM	20:00	7.26 pH	15.16 °C	135.29 µS/cm	7.61 mg/L	2.58 NTU	45.2 mV	72.16 ft	116.00 ml/min
2/2/2022 3:04 PM	24:00	7.31 pH	15.15 °C	136.11 µS/cm	7.63 mg/L	3.30 NTU	44.7 mV	72.17 ft	116.00 ml/min
2/2/2022 3:08 PM	28:00	7.35 pH	15.15 °C	136.70 µS/cm	7.65 mg/L	4.08 NTU	44.4 mV	72.17 ft	116.00 ml/min
2/2/2022 3:12 PM	32:00	7.38 pH	15.10 °C	135.89 µS/cm	7.64 mg/L	4.70 NTU	44.4 mV	72.18 ft	116.00 ml/min
2/2/2022 3:16 PM	36:00	7.40 pH	15.05 °C	136.47 µS/cm	7.65 mg/L	4.49 NTU	44.2 mV	72.18 ft	116.00 ml/min

Samples

Sample ID:	Description:
GWC-6	Metals, inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/2/2022 3:09:49 PM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWC-8RR Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 101.83 ft Total Depth: 111.83 ft Initial Depth to Water: 46.47 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 106.83 ft Estimated Total Volume Pumped: 7040 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

pH out of range. Pumped for an hour (additional 45 min. after stabilization) as pH continued to trend upward.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/2/2022 3:09 PM	00:00	7.58 pH	14.85 °C	190.71 µS/cm	6.44 mg/L	2.70 NTU	27.8 mV	46.52 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:13 PM	04:00	7.76 pH	14.87 °C	191.28 µS/cm	7.98 mg/L	3.07 NTU	26.3 mV	46.52 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:17 PM	08:00	7.89 pH	14.86 °C	191.87 µS/cm	8.40 mg/L	2.26 NTU	25.9 mV	46.52 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:21 PM	12:00	7.97 pH	14.85 °C	191.87 µS/cm	8.54 mg/L	2.20 NTU	25.3 mV	46.52 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:25 PM	16:00	8.01 pH	14.85 °C	191.89 µS/cm	8.57 mg/L	2.31 NTU	25.1 mV	46.53 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:29 PM	20:00	8.04 pH	14.83 °C	191.89 µS/cm	8.65 mg/L	1.68 NTU	25.0 mV	46.53 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:33 PM	24:00	8.06 pH	14.82 °C	191.95 µS/cm	8.73 mg/L	1.92 NTU	24.9 mV	46.53 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:37 PM	28:00	8.07 pH	14.82 °C	191.90 µS/cm	8.73 mg/L	1.68 NTU	25.2 mV	46.53 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:41 PM	32:00	8.09 pH	14.81 °C	192.05 µS/cm	8.74 mg/L	1.90 NTU	24.7 mV	46.54 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:45 PM	36:00	8.09 pH	14.81 °C	192.22 µS/cm	8.80 mg/L	0.99 NTU	24.6 mV	46.54 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:49 PM	40:00	8.10 pH	14.82 °C	192.05 µS/cm	8.81 mg/L	1.22 NTU	24.7 mV	46.54 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:53 PM	44:00	8.10 pH	14.81 °C	191.85 µS/cm	8.83 mg/L	1.44 NTU	24.7 mV	46.54 ft	0.09 PSU	110.00 ml/min
2/2/2022 3:57 PM	48:00	8.11 pH	14.79 °C	191.35 µS/cm	8.82 mg/L	1.21 NTU	24.5 mV	46.54 ft	0.09 PSU	110.00 ml/min
2/2/2022 4:01 PM	52:00	8.12 pH	14.76 °C	191.33 µS/cm	8.84 mg/L	1.13 NTU	24.5 mV	46.54 ft	0.09 PSU	110.00 ml/min
2/2/2022 4:05 PM	56:00	8.12 pH	14.76 °C	190.87 µS/cm	8.84 mg/L	0.95 NTU	24.7 mV	46.54 ft	0.09 PSU	110.00 ml/min

2/2/2022 4:09 PM	01:00:00	8.13 pH	14.72 °C	190.88 µS/cm	8.87 mg/L	0.88 NTU	24.7 mV	46.54 ft	0.09 PSU	110.00 ml/min
2/2/2022 4:13 PM	01:04:00	8.13 pH	14.71 °C	190.14 µS/cm	8.86 mg/L	0.61 NTU	24.4 mV	46.54 ft	0.09 PSU	110.00 ml/min

Samples

Sample ID:	Description:
GWC-8RR	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/2/2022 3:31:15 PM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWC-12 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 44.03 ft Total Depth: 54.03 ft Initial Depth to Water: 23.57 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 49.03 ft Estimated Total Volume Pumped: 2400 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: -0.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/2/2022 3:31 PM	00:00	6.37 pH	15.55 °C	1.29 µS/cm	0.31 mg/L	6.48 NTU	8.3 mV	23.57 ft	0.00 PSU	120.00 ml/min
2/2/2022 3:35 PM	04:00	6.36 pH	15.58 °C	1.30 µS/cm	0.17 mg/L	4.62 NTU	6.6 mV	23.50 ft	0.00 PSU	120.00 ml/min
2/2/2022 3:39 PM	08:00	6.35 pH	15.63 °C	1.29 µS/cm	0.16 mg/L	4.87 NTU	6.2 mV	23.50 ft	0.00 PSU	120.00 ml/min
2/2/2022 3:43 PM	12:00	6.35 pH	15.60 °C	1.30 µS/cm	0.15 mg/L	4.17 NTU	4.9 mV	23.49 ft	0.00 PSU	120.00 ml/min
2/2/2022 3:47 PM	16:00	6.35 pH	15.57 °C	1.30 µS/cm	0.15 mg/L	3.31 NTU	2.9 mV	23.50 ft	0.00 PSU	120.00 ml/min
2/2/2022 3:51 PM	20:00	6.35 pH	15.55 °C	1.31 µS/cm	0.14 mg/L	2.67 NTU	0.7 mV	23.50 ft	0.00 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWC-12	Metals, Inorganic, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/3/2022 10:39:36 AM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-13RZ Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 94.3 ft Total Depth: 104.3 ft Initial Depth to Water: 60.81 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 99.3 ft Estimated Total Volume Pumped: 19456 ml Flow Cell Volume: 90 ml Final Flow Rate: 152 ml/min Final Draw Down: 33.21 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Well historically is completely evacuated. Prepurged 3L

Water level dropped below top of screen and performing complete evacuation

Weather Conditions:

Raining

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
2/3/2022 10:39 AM	00:00	7.42 pH	14.86 °C	523.86 µS/cm	1.95 mg/L	2.58 NTU	26.5 mV	62.59 ft	152.00 ml/min
2/3/2022 10:43 AM	04:00	7.51 pH	14.97 °C	504.30 µS/cm	1.35 mg/L	4.46 NTU	25.4 mV	63.45 ft	152.00 ml/min
2/3/2022 10:47 AM	08:00	7.57 pH	15.02 °C	498.16 µS/cm	1.72 mg/L	5.04 NTU	26.4 mV	64.36 ft	152.00 ml/min
2/3/2022 10:51 AM	12:00	7.60 pH	15.06 °C	493.08 µS/cm	1.92 mg/L	2.53 NTU	26.2 mV	65.22 ft	152.00 ml/min
2/3/2022 10:55 AM	16:00	7.62 pH	15.10 °C	488.52 µS/cm	1.99 mg/L	2.14 NTU	26.3 mV	66.25 ft	152.00 ml/min
2/3/2022 10:59 AM	20:00	7.63 pH	15.10 °C	485.05 µS/cm	2.08 mg/L	1.85 NTU	26.1 mV	67.12 ft	152.00 ml/min
2/3/2022 11:03 AM	24:00	7.63 pH	15.16 °C	483.04 µS/cm	2.15 mg/L	1.79 NTU	26.6 mV	68.11 ft	152.00 ml/min
2/3/2022 11:07 AM	28:00	7.64 pH	15.11 °C	481.40 µS/cm	2.22 mg/L	2.03 NTU	26.6 mV	69.12 ft	152.00 ml/min
2/3/2022 11:11 AM	32:00	7.63 pH	15.20 °C	480.76 µS/cm	2.30 mg/L	2.57 NTU	26.7 mV	70.11 ft	152.00 ml/min
2/3/2022 11:15 AM	36:00	7.63 pH	15.23 °C	480.96 µS/cm	2.36 mg/L	2.90 NTU	26.8 mV	71.10 ft	152.00 ml/min
2/3/2022 11:19 AM	40:00	7.62 pH	15.24 °C	480.04 µS/cm	2.46 mg/L	2.69 NTU	26.9 mV	72.03 ft	152.00 ml/min
2/3/2022 11:23 AM	44:00	7.61 pH	15.22 °C	480.05 µS/cm	2.58 mg/L	3.85 NTU	27.3 mV	73.04 ft	152.00 ml/min

2/3/2022 11:27 AM	48:00	7.59 pH	15.24 °C	479.08 µS/cm	2.74 mg/L	3.40 NTU	27.4 mV	74.25 ft	152.00 ml/min
2/3/2022 11:31 AM	52:00	7.58 pH	15.24 °C	477.92 µS/cm	2.98 mg/L	3.17 NTU	27.4 mV	75.38 ft	152.00 ml/min
2/3/2022 11:35 AM	56:00	7.56 pH	15.25 °C	477.95 µS/cm	3.23 mg/L	3.31 NTU	27.8 mV	76.08 ft	152.00 ml/min
2/3/2022 11:39 AM	01:00:00	7.55 pH	15.29 °C	477.52 µS/cm	3.46 mg/L	2.96 NTU	27.7 mV	77.23 ft	152.00 ml/min
2/3/2022 11:43 AM	01:04:00	7.54 pH	15.24 °C	477.42 µS/cm	3.66 mg/L	3.05 NTU	28.4 mV	78.25 ft	152.00 ml/min
2/3/2022 11:47 AM	01:08:00	7.54 pH	15.11 °C	477.66 µS/cm	3.81 mg/L		28.4 mV		152.00 ml/min
2/3/2022 11:51 AM	01:12:00	7.54 pH	15.07 °C	478.17 µS/cm	3.93 mg/L		28.4 mV		152.00 ml/min
2/3/2022 11:55 AM	01:16:00	7.53 pH	15.15 °C	479.53 µS/cm	4.04 mg/L	3.04 NTU	29.0 mV	81.30 ft	152.00 ml/min
2/3/2022 11:59 AM	01:20:00	7.53 pH	15.33 °C	480.15 µS/cm	4.12 mg/L	3.01 NTU	28.7 mV	82.38 ft	152.00 ml/min
2/3/2022 12:03 PM	01:24:00	7.54 pH	15.37 °C	480.55 µS/cm	4.19 mg/L	2.91 NTU	28.6 mV	83.38 ft	152.00 ml/min
2/3/2022 12:07 PM	01:28:00	7.53 pH	15.37 °C	481.88 µS/cm	4.26 mg/L	2.64 NTU	29.2 mV	84.39 ft	152.00 ml/min
2/3/2022 12:11 PM	01:32:00	7.54 pH	15.39 °C	482.16 µS/cm	4.33 mg/L	2.44 NTU	28.9 mV	85.36 ft	152.00 ml/min
2/3/2022 12:15 PM	01:36:00	7.53 pH	15.40 °C	482.12 µS/cm	4.38 mg/L	2.42 NTU	29.6 mV	86.40 ft	152.00 ml/min
2/3/2022 12:19 PM	01:40:00	7.53 pH	15.42 °C	483.85 µS/cm	4.44 mg/L	2.04 NTU	29.4 mV	87.45 ft	152.00 ml/min
2/3/2022 12:23 PM	01:44:00	7.54 pH	15.46 °C	484.17 µS/cm	4.48 mg/L	1.90 NTU	29.3 mV	88.34 ft	152.00 ml/min
2/3/2022 12:27 PM	01:48:00	7.54 pH	15.42 °C	485.10 µS/cm	4.53 mg/L	2.00 NTU	29.9 mV	89.26 ft	152.00 ml/min
2/3/2022 12:31 PM	01:52:00	7.54 pH	15.42 °C	486.16 µS/cm	4.59 mg/L	1.76 NTU	29.6 mV	90.27 ft	152.00 ml/min
2/3/2022 12:35 PM	01:56:00	7.54 pH	15.43 °C	486.56 µS/cm	4.63 mg/L	1.84 NTU	30.0 mV	91.18 ft	152.00 ml/min
2/3/2022 12:39 PM	02:00:00	7.54 pH	15.46 °C	487.21 µS/cm	4.66 mg/L	1.93 NTU	29.9 mV	92.15 ft	152.00 ml/min
2/3/2022 12:43 PM	02:04:00	7.55 pH	15.47 °C	488.11 µS/cm	4.71 mg/L	1.44 NTU	29.9 mV	93.08 ft	152.00 ml/min
2/3/2022 12:47 PM	02:08:00	7.54 pH	15.47 °C	488.71 µS/cm	4.72 mg/L	1.65 NTU	30.4 mV	94.02 ft	152.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 2/4/2022 9:55:31 AM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWC-10 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 61.81 ft Total Depth: 71.81 ft Initial Depth to Water: 33.09 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 66.81 ft Estimated Total Volume Pumped: 12120 ml Flow Cell Volume: 90 ml Final Flow Rate: 190 ml/min Final Draw Down: -0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2.5L

At 10:27AM changed pump rate to 190ml/min to lower turbidity

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/4/2022 9:55 AM	00:00	5.92 pH	13.86 °C	70.52 µS/cm	6.80 mg/L	3.12 NTU	142.2 mV	33.10 ft	0.03 PSU	165.00 ml/min
2/4/2022 9:59 AM	04:00	5.85 pH	13.94 °C	60.76 µS/cm	6.85 mg/L	4.01 NTU	135.0 mV	33.09 ft	0.03 PSU	165.00 ml/min
2/4/2022 10:03 AM	08:00	5.81 pH	13.96 °C	57.45 µS/cm	6.86 mg/L	6.31 NTU	134.0 mV	33.09 ft	0.03 PSU	165.00 ml/min
2/4/2022 10:07 AM	12:00	5.80 pH	13.94 °C	55.36 µS/cm	6.89 mg/L	6.93 NTU	131.1 mV	33.10 ft	0.03 PSU	165.00 ml/min
2/4/2022 10:11 AM	16:00	5.79 pH	14.00 °C	54.79 µS/cm	6.88 mg/L	6.98 NTU	131.9 mV	33.09 ft	0.02 PSU	165.00 ml/min
2/4/2022 10:15 AM	20:00	5.80 pH	14.00 °C	55.29 µS/cm	6.90 mg/L	6.47 NTU	129.9 mV	33.08 ft	0.02 PSU	165.00 ml/min
2/4/2022 10:19 AM	24:00	5.83 pH	14.00 °C	58.05 µS/cm	6.88 mg/L	6.46 NTU	128.0 mV	33.08 ft	0.03 PSU	165.00 ml/min
2/4/2022 10:23 AM	28:00	5.92 pH	13.96 °C	67.18 µS/cm	6.86 mg/L	7.04 NTU	125.6 mV	33.08 ft	0.03 PSU	165.00 ml/min
2/4/2022 10:27 AM	32:00	6.06 pH	14.18 °C	85.50 µS/cm	6.83 mg/L	6.17 NTU	122.2 mV	33.09 ft	0.04 PSU	190.00 ml/min
2/4/2022 10:31 AM	36:00	6.21 pH	14.18 °C	109.69 µS/cm	6.77 mg/L	5.43 NTU	116.8 mV	33.08 ft	0.05 PSU	190.00 ml/min
2/4/2022 10:35 AM	40:00	6.30 pH	14.13 °C	128.86 µS/cm	6.73 mg/L	5.16 NTU	114.6 mV	33.08 ft	0.06 PSU	190.00 ml/min
2/4/2022 10:39 AM	44:00	6.37 pH	14.17 °C	142.18 µS/cm	6.74 mg/L	4.88 NTU	112.3 mV	33.08 ft	0.07 PSU	190.00 ml/min
2/4/2022 10:43 AM	48:00	6.42 pH	14.14 °C	151.47 µS/cm	6.76 mg/L	4.45 NTU	109.4 mV	33.08 ft	0.07 PSU	190.00 ml/min
2/4/2022 10:47 AM	52:00	6.45 pH	14.14 °C	157.43 µS/cm	6.79 mg/L	4.07 NTU	108.9 mV	33.06 ft	0.07 PSU	190.00 ml/min
2/4/2022 10:51 AM	56:00	6.47 pH	14.10 °C	161.56 µS/cm	6.82 mg/L	3.67 NTU	107.7 mV	33.05 ft	0.08 PSU	190.00 ml/min

2/4/2022 10:55 AM	01:00:00	6.50 pH	14.13 °C	165.28 µS/cm	6.86 mg/L	3.49 NTU	107.4 mV	33.05 ft	0.08 PSU	190.00 ml/min
2/4/2022 10:59 AM	01:04:00	6.52 pH	14.14 °C	167.26 µS/cm	6.90 mg/L	3.15 NTU	107.0 mV	33.04 ft	0.08 PSU	190.00 ml/min
2/4/2022 11:03 AM	01:08:00	6.53 pH	14.17 °C	169.23 µS/cm	6.91 mg/L	3.27 NTU	105.5 mV	33.04 ft	0.08 PSU	190.00 ml/min

Samples

Sample ID:	Description:
GWC-10	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/4/2022 10:25:48 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWC-11R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 73.2 ft Total Depth: 83.2 ft Initial Depth to Water: 22.98 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 78.2 ft Estimated Total Volume Pumped: 2080 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/4/2022 10:25 AM	00:00	7.52 pH	14.08 °C	280.44 µS/cm	5.65 mg/L	0.42 NTU	35.6 mV	23.01 ft	0.13 PSU	130.00 ml/min
2/4/2022 10:29 AM	04:00	7.56 pH	14.31 °C	280.66 µS/cm	6.02 mg/L	0.38 NTU	33.6 mV	23.01 ft	0.13 PSU	130.00 ml/min
2/4/2022 10:33 AM	08:00	7.57 pH	14.40 °C	280.86 µS/cm	6.04 mg/L	0.04 NTU	33.5 mV	23.01 ft	0.13 PSU	130.00 ml/min
2/4/2022 10:37 AM	12:00	7.57 pH	14.44 °C	282.33 µS/cm	6.09 mg/L	0.02 NTU	32.0 mV	23.01 ft	0.14 PSU	130.00 ml/min
2/4/2022 10:41 AM	16:00	7.58 pH	14.49 °C	281.79 µS/cm	6.14 mg/L	0.02 NTU	32.6 mV	23.01 ft	0.13 PSU	130.00 ml/min

Samples

Sample ID:	Description:
GWC-11R	Metals, Inorganics, TDS, Alkalinity
DUP-3	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/4/2022 10:41:08 AM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-14Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 66.34 ft Total Depth: 76.34 ft Initial Depth to Water: 31.35 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 71.34 ft Estimated Total Volume Pumped: 5280 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 2.4 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
2/4/2022 10:41 AM	00:00	6.86 pH	13.15 °C	154.70 µS/cm	2.91 mg/L	1.32 NTU	45.6 mV	32.20 ft	120.00 ml/min
2/4/2022 10:45 AM	04:00	6.33 pH	13.88 °C	140.17 µS/cm	4.00 mg/L	1.23 NTU	50.0 mV	32.46 ft	120.00 ml/min
2/4/2022 10:49 AM	08:00	5.96 pH	14.05 °C	125.99 µS/cm	4.45 mg/L	1.19 NTU	51.4 mV	32.75 ft	120.00 ml/min
2/4/2022 10:53 AM	12:00	5.78 pH	14.08 °C	120.11 µS/cm	4.60 mg/L	1.36 NTU	52.7 mV	33.00 ft	120.00 ml/min
2/4/2022 10:57 AM	16:00	5.76 pH	14.23 °C	120.02 µS/cm	4.71 mg/L	1.40 NTU	52.2 mV	33.19 ft	120.00 ml/min
2/4/2022 11:01 AM	20:00	5.81 pH	14.11 °C	122.67 µS/cm	4.82 mg/L	1.31 NTU	51.9 mV	33.33 ft	120.00 ml/min
2/4/2022 11:05 AM	24:00	5.85 pH	14.11 °C	126.75 µS/cm	4.87 mg/L	1.34 NTU	52.4 mV	33.46 ft	120.00 ml/min
2/4/2022 11:09 AM	28:00	5.91 pH	14.07 °C	129.96 µS/cm	4.95 mg/L	1.47 NTU	51.8 mV	33.54 ft	120.00 ml/min
2/4/2022 11:13 AM	32:00	5.96 pH	14.14 °C	133.20 µS/cm	4.98 mg/L	1.34 NTU	51.9 mV	33.61 ft	120.00 ml/min
2/4/2022 11:17 AM	36:00	5.99 pH	14.38 °C	136.27 µS/cm	5.02 mg/L	1.31 NTU	51.6 mV	33.66 ft	120.00 ml/min
2/4/2022 11:21 AM	40:00	6.04 pH	14.25 °C	138.61 µS/cm	5.04 mg/L	1.32 NTU	51.7 mV	33.70 ft	120.00 ml/min
2/4/2022 11:25 AM	44:00	6.06 pH	14.21 °C	141.06 µS/cm	5.11 mg/L	1.29 NTU	52.0 mV	33.75 ft	120.00 ml/min

Samples

Sample ID:	Description:
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GWC-14Z

Metals, inorganics, TDS, Alkalinity

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 2/4/2022 11:14:46 AM

Project: Plant Bowen LF January 2022

Operator Name: Kevin Stephenson

Location Name: GWC-15R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 87.5 ft Total Depth: 97.5 ft Initial Depth to Water: 40.64 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 92.5 ft Estimated Total Volume Pumped: 16240 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.3 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 2 liters

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/4/2022 11:14 AM	00:00	7.44 pH	13.89 °C	390.23 µS/cm	3.11 mg/L	8.26 NTU	177.3 mV	40.88 ft	0.19 PSU	140.00 ml/min
2/4/2022 11:18 AM	04:00	7.37 pH	14.21 °C	372.88 µS/cm	2.84 mg/L	11.30 NTU	130.9 mV	40.89 ft	0.18 PSU	140.00 ml/min
2/4/2022 11:22 AM	08:00	7.37 pH	14.27 °C	369.35 µS/cm	2.77 mg/L	14.00 NTU	105.9 mV	40.90 ft	0.18 PSU	140.00 ml/min
2/4/2022 11:26 AM	12:00	7.39 pH	14.14 °C	363.39 µS/cm	2.73 mg/L	14.80 NTU	90.6 mV	40.90 ft	0.17 PSU	140.00 ml/min
2/4/2022 11:30 AM	16:00	7.42 pH	14.12 °C	364.79 µS/cm	2.80 mg/L	15.70 NTU	77.5 mV	40.93 ft	0.18 PSU	140.00 ml/min
2/4/2022 11:34 AM	20:00	7.43 pH	14.22 °C	359.81 µS/cm	2.75 mg/L	11.80 NTU	68.0 mV	40.95 ft	0.17 PSU	140.00 ml/min
2/4/2022 11:38 AM	24:00	7.45 pH	14.25 °C	359.59 µS/cm	2.75 mg/L	11.10 NTU	58.3 mV	40.96 ft	0.17 PSU	140.00 ml/min
2/4/2022 11:42 AM	28:00	7.47 pH	14.21 °C	355.03 µS/cm	2.75 mg/L	10.59 NTU	52.3 mV	40.95 ft	0.17 PSU	140.00 ml/min
2/4/2022 11:46 AM	32:00	7.48 pH	14.16 °C	350.19 µS/cm	2.76 mg/L	10.87 NTU	47.6 mV	40.95 ft	0.17 PSU	140.00 ml/min
2/4/2022 11:50 AM	36:00	7.49 pH	14.07 °C	348.47 µS/cm	2.85 mg/L	11.80 NTU	44.1 mV	40.94 ft	0.17 PSU	140.00 ml/min
2/4/2022 11:54 AM	40:00	7.50 pH	14.06 °C	344.24 µS/cm	2.85 mg/L	10.66 NTU	42.1 mV	40.94 ft	0.17 PSU	140.00 ml/min
2/4/2022 11:58 AM	44:00	7.51 pH	14.11 °C	340.34 µS/cm	2.86 mg/L	9.78 NTU	40.7 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:02 PM	48:00	7.51 pH	14.12 °C	338.35 µS/cm	2.85 mg/L	9.08 NTU	39.5 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:06 PM	52:00	7.53 pH	13.98 °C	336.30 µS/cm	2.86 mg/L	9.00 NTU	38.5 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:10 PM	56:00	7.54 pH	14.21 °C	335.35 µS/cm	2.91 mg/L	8.54 NTU	37.4 mV	40.94 ft	0.16 PSU	140.00 ml/min

2/4/2022 12:14 PM	01:00:00	7.55 pH	14.16 °C	334.92 µS/cm	2.92 mg/L	7.96 NTU	36.6 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:18 PM	01:04:00	7.55 pH	14.21 °C	335.16 µS/cm	2.95 mg/L	7.40 NTU	36.3 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:22 PM	01:08:00	7.56 pH	14.04 °C	332.57 µS/cm	2.92 mg/L	7.17 NTU	36.1 mV	40.95 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:26 PM	01:12:00	7.57 pH	14.20 °C	332.38 µS/cm	2.90 mg/L	6.95 NTU	35.5 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:30 PM	01:16:00	7.57 pH	14.21 °C	333.48 µS/cm	2.92 mg/L	6.62 NTU	35.3 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:34 PM	01:20:00	7.57 pH	14.34 °C	332.47 µS/cm	2.93 mg/L	6.70 NTU	35.0 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:38 PM	01:24:00	7.58 pH	14.21 °C	329.68 µS/cm	2.92 mg/L	6.42 NTU	34.7 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:42 PM	01:28:00	7.59 pH	14.31 °C	329.30 µS/cm	2.92 mg/L	6.67 NTU	34.3 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:46 PM	01:32:00	7.59 pH	14.16 °C	328.16 µS/cm	2.91 mg/L	5.90 NTU	33.9 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:50 PM	01:36:00	7.60 pH	14.24 °C	328.01 µS/cm	2.94 mg/L	5.84 NTU	33.8 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:54 PM	01:40:00	7.60 pH	14.12 °C	326.50 µS/cm	2.92 mg/L	5.38 NTU	33.5 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 12:58 PM	01:44:00	7.61 pH	14.14 °C	326.58 µS/cm	2.93 mg/L	5.17 NTU	33.1 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 1:02 PM	01:48:00	7.61 pH	14.21 °C	325.79 µS/cm	2.97 mg/L	4.92 NTU	32.8 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 1:06 PM	01:52:00	7.62 pH	14.18 °C	324.35 µS/cm	2.97 mg/L	4.90 NTU	32.7 mV	40.94 ft	0.16 PSU	140.00 ml/min
2/4/2022 1:10 PM	01:56:00	7.61 pH	14.16 °C	324.65 µS/cm	2.96 mg/L	4.56 NTU	32.6 mV	40.94 ft	0.16 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWC-15R	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/4/2022 11:22:45 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWC-11 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 37.35 ft Total Depth: 47.35 ft Initial Depth to Water: 22.97 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 42.35 ft Estimated Total Volume Pumped: 9520 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/4/2022 11:22 AM	00:00	6.77 pH	14.40 °C	81.36 µS/cm	4.71 mg/L	3.21 NTU	57.1 mV	23.01 ft	0.04 PSU	140.00 ml/min
2/4/2022 11:26 AM	04:00	6.52 pH	14.72 °C	79.43 µS/cm	4.59 mg/L	3.22 NTU	52.1 mV	23.01 ft	0.04 PSU	140.00 ml/min
2/4/2022 11:30 AM	08:00	6.42 pH	14.86 °C	81.98 µS/cm	4.57 mg/L	2.35 NTU	49.7 mV	23.01 ft	0.04 PSU	140.00 ml/min
2/4/2022 11:34 AM	12:00	6.40 pH	14.98 °C	85.43 µS/cm	4.44 mg/L	2.02 NTU	48.8 mV	23.01 ft	0.04 PSU	140.00 ml/min
2/4/2022 11:38 AM	16:00	6.40 pH	15.00 °C	89.18 µS/cm	4.31 mg/L	2.94 NTU	47.8 mV	23.01 ft	0.04 PSU	140.00 ml/min
2/4/2022 11:42 AM	20:00	6.43 pH	15.07 °C	94.98 µS/cm	4.37 mg/L	3.10 NTU	46.8 mV	23.01 ft	0.04 PSU	140.00 ml/min
2/4/2022 11:46 AM	24:00	6.49 pH	15.03 °C	109.02 µS/cm	4.57 mg/L	2.61 NTU	45.3 mV	23.01 ft	0.05 PSU	140.00 ml/min
2/4/2022 11:50 AM	28:00	6.61 pH	15.13 °C	126.16 µS/cm	4.88 mg/L	1.76 NTU	44.0 mV	23.01 ft	0.06 PSU	140.00 ml/min
2/4/2022 11:54 AM	32:00	6.72 pH	15.17 °C	143.08 µS/cm	5.23 mg/L	1.48 NTU	43.2 mV	23.01 ft	0.07 PSU	140.00 ml/min
2/4/2022 11:58 AM	36:00	6.82 pH	15.30 °C	154.06 µS/cm	5.45 mg/L	1.05 NTU	42.0 mV	23.01 ft	0.07 PSU	140.00 ml/min
2/4/2022 12:02 PM	40:00	6.91 pH	15.22 °C	162.12 µS/cm	5.60 mg/L	0.75 NTU	40.9 mV	23.01 ft	0.08 PSU	140.00 ml/min
2/4/2022 12:06 PM	44:00	6.98 pH	15.15 °C	165.24 µS/cm	5.67 mg/L	0.95 NTU	40.4 mV	23.01 ft	0.08 PSU	140.00 ml/min
2/4/2022 12:10 PM	48:00	7.03 pH	15.26 °C	171.90 µS/cm	5.74 mg/L	0.37 NTU	39.4 mV	23.01 ft	0.08 PSU	140.00 ml/min
2/4/2022 12:14 PM	52:00	7.08 pH	15.21 °C	177.20 µS/cm	5.81 mg/L	0.51 NTU	38.4 mV	23.01 ft	0.08 PSU	140.00 ml/min
2/4/2022 12:18 PM	56:00	7.12 pH	15.35 °C	181.94 µS/cm	5.83 mg/L	0.43 NTU	37.6 mV	23.01 ft	0.09 PSU	140.00 ml/min

2/4/2022 12:22 PM	01:00:00	7.15 pH	15.34 °C	184.49 µS/cm	5.84 mg/L	0.27 NTU	36.7 mV	23.01 ft	0.09 PSU	140.00 ml/min
2/4/2022 12:26 PM	01:04:00	7.17 pH	15.32 °C	188.34 µS/cm	5.84 mg/L	0.11 NTU	36.0 mV	23.01 ft	0.09 PSU	140.00 ml/min
2/4/2022 12:30 PM	01:08:00	7.20 pH	15.35 °C	191.67 µS/cm	5.90 mg/L	0.13 NTU	35.2 mV	23.01 ft	0.09 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWC-11	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/4/2022 11:57:43 AM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWC-10R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 90.2 ft Total Depth: 100.2 ft Initial Depth to Water: 33.06 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 95.2 ft Estimated Total Volume Pumped: 6840 ml Flow Cell Volume: 90 ml Final Flow Rate: 190 ml/min Final Draw Down: -0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 3L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/4/2022 11:57 AM	00:00	7.57 pH	13.83 °C	295.48 µS/cm	2.08 mg/L	1.48 NTU	3.9 mV	33.06 ft	0.14 PSU	190.00 ml/min
2/4/2022 12:01 PM	04:00	7.60 pH	13.87 °C	298.08 µS/cm	3.16 mg/L	0.76 NTU	14.5 mV	33.06 ft	0.14 PSU	190.00 ml/min
2/4/2022 12:05 PM	08:00	7.63 pH	13.87 °C	296.27 µS/cm	3.83 mg/L	0.49 NTU	18.6 mV	33.05 ft	0.14 PSU	190.00 ml/min
2/4/2022 12:09 PM	12:00	7.64 pH	13.98 °C	295.22 µS/cm	4.45 mg/L	0.54 NTU	22.6 mV	33.04 ft	0.14 PSU	190.00 ml/min
2/4/2022 12:13 PM	16:00	7.66 pH	13.98 °C	293.29 µS/cm	4.91 mg/L	0.29 NTU	25.5 mV	33.04 ft	0.14 PSU	190.00 ml/min
2/4/2022 12:17 PM	20:00	7.67 pH	14.05 °C	291.62 µS/cm	5.29 mg/L	0.32 NTU	28.0 mV	33.05 ft	0.14 PSU	190.00 ml/min
2/4/2022 12:21 PM	24:00	7.68 pH	14.06 °C	290.15 µS/cm	5.57 mg/L	0.22 NTU	30.0 mV	33.04 ft	0.14 PSU	190.00 ml/min
2/4/2022 12:25 PM	28:00	7.68 pH	14.04 °C	288.32 µS/cm	5.82 mg/L	0.20 NTU	32.1 mV	33.04 ft	0.14 PSU	190.00 ml/min
2/4/2022 12:29 PM	32:00	7.69 pH	14.00 °C	287.05 µS/cm	6.06 mg/L	0.17 NTU	34.0 mV	33.04 ft	0.14 PSU	190.00 ml/min
2/4/2022 12:33 PM	36:00	7.69 pH	14.09 °C	286.00 µS/cm	6.18 mg/L	0.32 NTU	35.3 mV	33.03 ft	0.14 PSU	190.00 ml/min

Samples

Sample ID:	Description:
GWC-10R	Metals, Inorganic, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/7/2022 9:42:26 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWC-15Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 64.9 ft Total Depth: 74.9 ft Initial Depth to Water: 39.19 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 69.9 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.58 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/7/2022 9:42 AM	00:00	7.52 pH	14.94 °C	218.39 µS/cm	7.55 mg/L	0.48 NTU	59.7 mV	39.70 ft	0.10 PSU	120.00 ml/min
2/7/2022 9:46 AM	04:00	7.64 pH	15.34 °C	217.20 µS/cm	7.52 mg/L	0.16 NTU	42.5 mV	39.71 ft	0.10 PSU	120.00 ml/min
2/7/2022 9:50 AM	08:00	7.71 pH	15.47 °C	217.74 µS/cm	7.49 mg/L	0.14 NTU	38.7 mV	39.71 ft	0.10 PSU	120.00 ml/min
2/7/2022 9:54 AM	12:00	7.75 pH	15.68 °C	218.70 µS/cm	7.49 mg/L	0.15 NTU	35.6 mV	39.75 ft	0.10 PSU	120.00 ml/min
2/7/2022 9:58 AM	16:00	7.78 pH	15.58 °C	219.98 µS/cm	7.48 mg/L	0.49 NTU	34.3 mV	39.77 ft	0.10 PSU	120.00 ml/min
2/7/2022 10:02 AM	20:00	7.80 pH	15.57 °C	220.26 µS/cm	7.44 mg/L	0.90 NTU	33.0 mV	39.77 ft	0.10 PSU	120.00 ml/min
2/7/2022 10:06 AM	24:00	7.81 pH	15.60 °C	221.42 µS/cm	7.43 mg/L	1.14 NTU	31.5 mV	39.77 ft	0.11 PSU	120.00 ml/min
2/7/2022 10:10 AM	28:00	7.83 pH	15.55 °C	221.96 µS/cm	7.41 mg/L	1.07 NTU	30.2 mV	39.77 ft	0.11 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWC-15Z	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/17/2022 11:06:51 AM

Project: Plant Bowen LF January 2022

Operator Name: Kevin Stephenson

Location Name: GWC-13 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 74.8 ft Total Depth: 84.8 ft Initial Depth to Water: 31.3 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 79.8 ft Estimated Total Volume Pumped: 13320 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 7 liters.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/17/2022 11:06 AM	00:00	7.19 pH	17.49 °C	234.84 µS/cm	4.73 mg/L	18.40 NTU	126.2 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:10 AM	04:00	7.20 pH	17.42 °C	233.64 µS/cm	4.67 mg/L	17.60 NTU	105.4 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:14 AM	08:00	7.20 pH	17.44 °C	233.59 µS/cm	4.68 mg/L	15.90 NTU	91.6 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:18 AM	12:00	7.21 pH	17.45 °C	233.76 µS/cm	4.59 mg/L	15.00 NTU	77.1 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:22 AM	16:00	7.21 pH	17.40 °C	234.42 µS/cm	4.58 mg/L	13.50 NTU	65.4 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:26 AM	20:00	7.21 pH	17.32 °C	234.05 µS/cm	4.54 mg/L	12.20 NTU	56.1 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:30 AM	24:00	7.21 pH	17.36 °C	234.94 µS/cm	4.51 mg/L	12.00 NTU	50.1 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:34 AM	28:00	7.21 pH	17.44 °C	235.06 µS/cm	4.48 mg/L	10.15 NTU	45.9 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:38 AM	32:00	7.21 pH	17.31 °C	235.23 µS/cm	4.44 mg/L	10.21 NTU	42.8 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:42 AM	36:00	7.21 pH	17.26 °C	235.13 µS/cm	4.42 mg/L	9.45 NTU	41.2 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:46 AM	40:00	7.22 pH	17.09 °C	235.25 µS/cm	4.42 mg/L	8.59 NTU	39.6 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:50 AM	44:00	7.22 pH	16.88 °C	236.05 µS/cm	4.40 mg/L	9.03 NTU	38.0 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:54 AM	48:00	7.22 pH	16.86 °C	236.54 µS/cm	4.39 mg/L	8.39 NTU	37.4 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 11:58 AM	52:00	7.22 pH	16.91 °C	237.00 µS/cm	4.36 mg/L	8.45 NTU	36.4 mV	31.31 ft	0.11 PSU	120.00 ml/min
2/17/2022 12:02 PM	56:00	7.22 pH	16.93 °C	237.56 µS/cm	4.36 mg/L	8.10 NTU	36.2 mV	31.31 ft	0.11 PSU	110.00 ml/min

2/17/2022 12:06 PM	01:00:00	7.22 pH	17.00 °C	237.60 µS/cm	4.35 mg/L	7.58 NTU	35.6 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:10 PM	01:04:00	7.23 pH	16.98 °C	236.71 µS/cm	4.30 mg/L	7.22 NTU	34.6 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:14 PM	01:08:00	7.22 pH	16.91 °C	235.83 µS/cm	4.31 mg/L	7.01 NTU	34.9 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:18 PM	01:12:00	7.23 pH	16.95 °C	234.61 µS/cm	4.32 mg/L	6.71 NTU	33.9 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:22 PM	01:16:00	7.23 pH	16.99 °C	233.65 µS/cm	4.28 mg/L	6.55 NTU	34.2 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:26 PM	01:20:00	7.23 pH	17.08 °C	233.59 µS/cm	4.28 mg/L	6.31 NTU	33.9 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:30 PM	01:24:00	7.22 pH	17.02 °C	233.17 µS/cm	4.25 mg/L	5.88 NTU	33.4 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:34 PM	01:28:00	7.23 pH	17.00 °C	233.45 µS/cm	4.25 mg/L	5.84 NTU	33.2 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:38 PM	01:32:00	7.23 pH	17.00 °C	232.68 µS/cm	4.22 mg/L	5.75 NTU	33.1 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:42 PM	01:36:00	7.24 pH	17.00 °C	232.70 µS/cm	4.21 mg/L	5.53 NTU	32.7 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:46 PM	01:40:00	7.24 pH	16.99 °C	232.75 µS/cm	4.21 mg/L	5.26 NTU	32.7 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:50 PM	01:44:00	7.24 pH	16.87 °C	233.51 µS/cm	4.21 mg/L	5.19 NTU	32.6 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:54 PM	01:48:00	7.24 pH	16.91 °C	233.56 µS/cm	4.20 mg/L	4.93 NTU	32.1 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 12:58 PM	01:52:00	7.24 pH	16.96 °C	233.15 µS/cm	4.16 mg/L	4.86 NTU	32.1 mV	31.31 ft	0.11 PSU	110.00 ml/min
2/17/2022 1:02 PM	01:56:00	7.24 pH	16.96 °C	233.66 µS/cm	4.16 mg/L	4.72 NTU	31.7 mV	31.31 ft	0.11 PSU	110.00 ml/min

Samples

Sample ID:	Description:
GWC-13	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/25/2022 10:44:22 AM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWA-51RZ Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 84.23 ft Total Depth: 94.23 ft Initial Depth to Water: 55.49 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 89.23 ft Estimated Total Volume Pumped: 21786.1 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 29.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 1L

Performing complete evacuation

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
1/25/2022 10:44 AM	00:00	7.35 pH	16.82 °C	423.60 µS/cm	1.61 mg/L	0.46 NTU	-13.7 mV	56.86 ft	114.00 ml/min
1/25/2022 10:48 AM	04:00	7.31 pH	17.08 °C	421.06 µS/cm	0.82 mg/L	0.40 NTU	-18.0 mV	57.41 ft	114.00 ml/min
1/25/2022 10:52 AM	08:00	7.38 pH	17.30 °C	418.38 µS/cm	0.56 mg/L	0.48 NTU	-16.6 mV	58.07 ft	114.00 ml/min
1/25/2022 10:56 AM	12:00	7.45 pH	17.17 °C	413.11 µS/cm	0.83 mg/L	0.41 NTU	-15.4 mV	58.72 ft	114.00 ml/min
1/25/2022 10:57 AM	12:39	7.46 pH	17.19 °C	411.59 µS/cm	0.96 mg/L		-13.2 mV		114.00 ml/min
1/25/2022 11:01 AM	16:39	7.49 pH	17.52 °C	400.83 µS/cm	2.45 mg/L	0.24 NTU	-15.7 mV	59.43 ft	114.00 ml/min
1/25/2022 11:05 AM	20:39	7.52 pH	17.61 °C	394.77 µS/cm	3.87 mg/L	0.30 NTU	-16.2 mV	60.08 ft	114.00 ml/min
1/25/2022 11:09 AM	24:39	7.55 pH	17.53 °C	391.70 µS/cm	4.61 mg/L	1.70 NTU	-15.9 mV	60.79 ft	114.00 ml/min
1/25/2022 11:13 AM	28:39	7.57 pH	17.44 °C	389.89 µS/cm	4.99 mg/L	0.56 NTU	-13.9 mV	61.28 ft	114.00 ml/min
1/25/2022 11:17 AM	32:39	7.56 pH	17.21 °C	389.31 µS/cm	5.23 mg/L	0.41 NTU	-13.5 mV	61.91 ft	114.00 ml/min
1/25/2022 11:21 AM	36:39	7.57 pH	17.70 °C	385.79 µS/cm	5.19 mg/L	0.32 NTU	-12.9 mV	62.48 ft	114.00 ml/min
1/25/2022 11:25 AM	40:39	7.56 pH	17.88 °C	383.36 µS/cm	5.22 mg/L	0.43 NTU	-12.7 mV	63.06 ft	114.00 ml/min
1/25/2022 11:29 AM	44:39	7.57 pH	17.39 °C	378.89 µS/cm	5.25 mg/L	0.44 NTU	-11.6 mV	63.70 ft	114.00 ml/min
1/25/2022 11:33 AM	48:39	7.56 pH	16.82 °C	377.61 µS/cm	5.71 mg/L	0.35 NTU	-11.1 mV	64.30 ft	114.00 ml/min

1/25/2022 11:37 AM	52:39	7.55 pH	16.59 °C	375.54 µS/cm	5.50 mg/L	0.40 NTU	-10.3 mV	64.88 ft	114.00 ml/min
1/25/2022 11:41 AM	56:39	7.54 pH	16.45 °C	373.78 µS/cm	5.40 mg/L	0.34 NTU	-9.7 mV	65.45 ft	114.00 ml/min
1/25/2022 11:45 AM	01:00:39	7.53 pH	16.54 °C	373.81 µS/cm	5.34 mg/L	0.45 NTU	-9.6 mV	66.07 ft	114.00 ml/min
1/25/2022 11:49 AM	01:04:39	7.53 pH	16.47 °C	373.64 µS/cm	5.31 mg/L	0.34 NTU	-9.6 mV	66.68 ft	114.00 ml/min
1/25/2022 11:53 AM	01:08:39	7.53 pH	16.58 °C	372.68 µS/cm	5.29 mg/L	0.33 NTU	-9.6 mV	67.34 ft	114.00 ml/min
1/25/2022 11:57 AM	01:12:39	7.53 pH	16.63 °C	371.84 µS/cm	5.27 mg/L	0.40 NTU	-9.2 mV	67.93 ft	114.00 ml/min
1/25/2022 12:01 PM	01:16:39	7.54 pH	16.52 °C	371.28 µS/cm	5.27 mg/L	0.34 NTU	-9.1 mV	68.48 ft	114.00 ml/min
1/25/2022 12:05 PM	01:20:39	7.53 pH	16.59 °C	371.46 µS/cm	5.26 mg/L	0.38 NTU	-9.0 mV	69.12 ft	114.00 ml/min
1/25/2022 12:09 PM	01:24:39	7.53 pH	16.54 °C	371.32 µS/cm	5.25 mg/L	0.39 NTU	-8.6 mV	69.72 ft	114.00 ml/min
1/25/2022 12:13 PM	01:28:39	7.53 pH	16.63 °C	370.60 µS/cm	5.23 mg/L	0.37 NTU	-8.7 mV	70.36 ft	114.00 ml/min
1/25/2022 12:17 PM	01:32:39	7.53 pH	16.90 °C	371.57 µS/cm	5.22 mg/L	0.41 NTU	-9.2 mV	70.92 ft	114.00 ml/min
1/25/2022 12:21 PM	01:36:39	7.53 pH	16.76 °C	370.98 µS/cm	5.21 mg/L	0.37 NTU	-8.5 mV	71.52 ft	114.00 ml/min
1/25/2022 12:25 PM	01:40:39	7.54 pH	16.99 °C	369.91 µS/cm	5.22 mg/L	0.33 NTU	-8.5 mV	72.15 ft	114.00 ml/min
1/25/2022 12:29 PM	01:44:39	7.54 pH	17.30 °C	368.40 µS/cm	5.16 mg/L	0.35 NTU	-8.6 mV	72.77 ft	114.00 ml/min
1/25/2022 12:33 PM	01:48:39	7.54 pH	17.17 °C	367.99 µS/cm	5.15 mg/L	0.37 NTU	-8.0 mV	73.35 ft	114.00 ml/min
1/25/2022 12:37 PM	01:52:39	7.54 pH	17.15 °C	370.09 µS/cm	5.21 mg/L	0.38 NTU	-8.4 mV	73.94 ft	114.00 ml/min
1/25/2022 12:41 PM	01:56:39	7.53 pH	17.30 °C	368.84 µS/cm	5.16 mg/L	0.45 NTU	-8.0 mV	74.37 ft	114.00 ml/min
1/25/2022 12:45 PM	02:00:39	7.54 pH	17.35 °C	369.08 µS/cm	5.15 mg/L	0.38 NTU	-8.1 mV	75.11 ft	114.00 ml/min
1/25/2022 12:49 PM	02:04:39	7.54 pH	17.40 °C	370.64 µS/cm	5.30 mg/L	0.37 NTU	-8.0 mV	75.68 ft	114.00 ml/min
1/25/2022 12:53 PM	02:08:39	7.54 pH	17.39 °C	370.54 µS/cm	5.28 mg/L	0.33 NTU	-7.8 mV	76.23 ft	114.00 ml/min
1/25/2022 12:57 PM	02:12:39	7.54 pH	17.44 °C	371.08 µS/cm	5.30 mg/L	0.40 NTU	-7.7 mV	76.72 ft	114.00 ml/min
1/25/2022 1:01 PM	02:16:39	7.53 pH	17.64 °C	371.82 µS/cm	5.29 mg/L	0.37 NTU	-7.4 mV	77.28 ft	114.00 ml/min
1/25/2022 1:05 PM	02:20:39	7.54 pH	17.53 °C	372.03 µS/cm	5.29 mg/L	0.44 NTU	-7.1 mV	77.77 ft	114.00 ml/min
1/25/2022 1:09 PM	02:24:39	7.54 pH	17.08 °C	373.09 µS/cm	5.35 mg/L	0.35 NTU	-7.0 mV	78.31 ft	114.00 ml/min
1/25/2022 1:13 PM	02:28:39	7.55 pH	17.07 °C	373.39 µS/cm	5.35 mg/L	0.37 NTU	-6.5 mV	78.82 ft	110.00 ml/min
1/25/2022 1:17 PM	02:32:39	7.56 pH	16.59 °C	372.82 µS/cm	5.35 mg/L	0.34 NTU	-6.1 mV	79.32 ft	110.00 ml/min
1/25/2022 1:21 PM	02:36:39	7.56 pH	16.40 °C	374.27 µS/cm	5.39 mg/L	0.34 NTU	-6.0 mV	79.84 ft	110.00 ml/min
1/25/2022 1:25 PM	02:40:39	7.56 pH	16.34 °C	374.49 µS/cm	5.37 mg/L	0.78 NTU	-5.7 mV	80.34 ft	110.00 ml/min
1/25/2022 1:29 PM	02:44:39	7.56 pH	16.27 °C	374.55 µS/cm	5.37 mg/L	0.35 NTU	-5.2 mV	80.87 ft	110.00 ml/min

1/25/2022 1:33 PM	02:48:39	7.56 pH	16.16 °C	374.69 µS/cm	5.37 mg/L	0.36 NTU	-5.1 mV	81.43 ft	110.00 ml/min
1/25/2022 1:37 PM	02:52:39	7.57 pH	16.08 °C	375.38 µS/cm	5.36 mg/L	0.37 NTU	-5.0 mV	81.97 ft	110.00 ml/min
1/25/2022 1:41 PM	02:56:39	7.57 pH	16.09 °C	375.70 µS/cm	5.35 mg/L	0.30 NTU	-4.9 mV	82.50 ft	110.00 ml/min
1/25/2022 1:45 PM	03:00:39	7.57 pH	16.40 °C	375.14 µS/cm	5.29 mg/L	0.35 NTU	-5.0 mV	83.05 ft	110.00 ml/min
1/25/2022 1:49 PM	03:04:39	7.57 pH	16.27 °C	375.44 µS/cm	5.31 mg/L	0.58 NTU	-4.9 mV	83.57 ft	110.00 ml/min
1/25/2022 1:53 PM	03:08:39	7.57 pH	16.45 °C	376.06 µS/cm	5.31 mg/L	0.40 NTU	-4.7 mV	84.11 ft	110.00 ml/min
1/25/2022 1:57 PM	03:12:39	7.57 pH	16.58 °C	375.91 µS/cm	5.28 mg/L	0.33 NTU	-4.6 mV	84.51 ft	110.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/25/2022 11:45:26 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWA-36 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 71.77 ft Total Depth: 81.77 ft Initial Depth to Water: 31.87 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 76.77 ft Estimated Total Volume Pumped: 18180 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.11 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 2 L

At 24:00, lowered pump rate to 105 mL/min and at 44:00 raised pump rate to 120 mL/min to stabilize turb. Turb did not stabilize.

Will continue pumping 1/26.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/25/2022 11:45 AM	00:00	6.97 pH	17.03 °C	181.33 µS/cm	6.63 mg/L	10.30 NTU	103.1 mV	31.88 ft	0.09 PSU	130.00 ml/min
1/25/2022 11:49 AM	04:00	6.97 pH	16.96 °C	184.57 µS/cm	6.71 mg/L	10.85 NTU	102.6 mV	31.88 ft	0.09 PSU	130.00 ml/min
1/25/2022 11:53 AM	08:00	6.98 pH	17.01 °C	185.00 µS/cm	6.69 mg/L	11.30 NTU	102.9 mV	31.88 ft	0.09 PSU	130.00 ml/min
1/25/2022 11:57 AM	12:00	6.97 pH	16.87 °C	185.15 µS/cm	6.74 mg/L	11.30 NTU	105.6 mV	31.88 ft	0.09 PSU	130.00 ml/min
1/25/2022 12:01 PM	16:00	6.98 pH	16.83 °C	185.01 µS/cm	6.77 mg/L	11.50 NTU	104.7 mV	31.88 ft	0.09 PSU	130.00 ml/min
1/25/2022 12:05 PM	20:00	6.98 pH	16.96 °C	185.59 µS/cm	6.76 mg/L	12.50 NTU	105.0 mV	31.88 ft	0.09 PSU	130.00 ml/min
1/25/2022 12:09 PM	24:00	6.99 pH	16.87 °C	185.62 µS/cm	6.73 mg/L	14.00 NTU	105.0 mV	31.87 ft	0.09 PSU	105.00 ml/min
1/25/2022 12:13 PM	28:00	6.99 pH	16.85 °C	185.46 µS/cm	6.73 mg/L	18.90 NTU	105.6 mV	31.87 ft	0.09 PSU	105.00 ml/min
1/25/2022 12:17 PM	32:00	6.97 pH	16.97 °C	186.23 µS/cm	6.70 mg/L	24.40 NTU	105.7 mV	31.87 ft	0.09 PSU	105.00 ml/min
1/25/2022 12:21 PM	36:00	6.98 pH	17.23 °C	187.25 µS/cm	6.61 mg/L	25.60 NTU	104.6 mV	31.87 ft	0.09 PSU	105.00 ml/min
1/25/2022 12:25 PM	40:00	6.98 pH	17.18 °C	188.29 µS/cm	6.59 mg/L	25.70 NTU	110.1 mV	31.87 ft	0.09 PSU	105.00 ml/min
1/25/2022 12:29 PM	44:00	6.98 pH	17.41 °C	192.93 µS/cm	6.57 mg/L	25.80 NTU	104.8 mV	31.88 ft	0.09 PSU	120.00 ml/min
1/25/2022 12:33 PM	48:00	6.97 pH	17.30 °C	198.28 µS/cm	6.43 mg/L	25.70 NTU	104.8 mV	31.88 ft	0.09 PSU	120.00 ml/min
1/25/2022 12:37 PM	52:00	6.97 pH	17.20 °C	209.94 µS/cm	6.34 mg/L	26.70 NTU	104.8 mV	31.88 ft	0.10 PSU	120.00 ml/min

1/25/2022 12:41 PM	56:00	6.98 pH	17.54 °C	220.15 µS/cm	6.08 mg/L	28.10 NTU	103.9 mV	31.88 ft	0.11 PSU	120.00 ml/min
1/25/2022 12:45 PM	01:00:00	6.98 pH	17.54 °C	227.19 µS/cm	5.90 mg/L	27.70 NTU	104.1 mV	31.88 ft	0.11 PSU	120.00 ml/min
1/25/2022 12:49 PM	01:04:00	6.99 pH	17.23 °C	232.87 µS/cm	5.84 mg/L	28.70 NTU	104.4 mV	31.88 ft	0.11 PSU	120.00 ml/min
1/25/2022 12:53 PM	01:08:00	6.99 pH	17.44 °C	235.87 µS/cm	5.69 mg/L	29.50 NTU	104.4 mV	31.88 ft	0.11 PSU	120.00 ml/min
1/25/2022 12:57 PM	01:12:00	7.00 pH	17.27 °C	240.08 µS/cm	5.67 mg/L	29.60 NTU	104.6 mV	31.90 ft	0.11 PSU	120.00 ml/min
1/25/2022 1:01 PM	01:16:00	6.99 pH	17.28 °C	244.22 µS/cm	5.60 mg/L	29.50 NTU	105.1 mV	31.90 ft	0.12 PSU	120.00 ml/min
1/25/2022 1:05 PM	01:20:00	7.00 pH	17.22 °C	247.00 µS/cm	5.50 mg/L	28.30 NTU	105.1 mV	31.90 ft	0.12 PSU	120.00 ml/min
1/25/2022 1:09 PM	01:24:00	7.00 pH	17.11 °C	249.39 µS/cm	5.49 mg/L	24.40 NTU	105.3 mV	31.91 ft	0.12 PSU	120.00 ml/min
1/25/2022 1:13 PM	01:28:00	7.00 pH	17.00 °C	251.22 µS/cm	5.45 mg/L	25.40 NTU	105.2 mV	31.91 ft	0.12 PSU	120.00 ml/min
1/25/2022 1:17 PM	01:32:00	7.01 pH	16.74 °C	253.42 µS/cm	5.43 mg/L	23.70 NTU	105.1 mV	31.92 ft	0.12 PSU	120.00 ml/min
1/25/2022 1:21 PM	01:36:00	7.01 pH	16.61 °C	254.52 µS/cm	5.43 mg/L	22.90 NTU	105.4 mV	31.92 ft	0.12 PSU	120.00 ml/min
1/25/2022 1:25 PM	01:40:00	7.01 pH	16.58 °C	255.36 µS/cm	5.44 mg/L	22.00 NTU	105.4 mV	31.93 ft	0.12 PSU	120.00 ml/min
1/25/2022 1:29 PM	01:44:00	7.02 pH	16.50 °C	256.86 µS/cm	5.45 mg/L	22.50 NTU	105.4 mV	31.93 ft	0.12 PSU	120.00 ml/min
1/25/2022 1:33 PM	01:48:00	7.01 pH	16.56 °C	260.20 µS/cm	5.40 mg/L	21.80 NTU	105.7 mV	31.94 ft	0.12 PSU	120.00 ml/min
1/25/2022 1:37 PM	01:52:00	7.01 pH	16.65 °C	263.29 µS/cm	5.31 mg/L	20.50 NTU	105.7 mV	31.94 ft	0.13 PSU	120.00 ml/min
1/25/2022 1:41 PM	01:56:00	7.01 pH	16.74 °C	266.09 µS/cm	5.27 mg/L	21.50 NTU	105.6 mV	31.94 ft	0.13 PSU	120.00 ml/min
1/25/2022 1:45 PM	02:00:00	7.02 pH	16.88 °C	267.65 µS/cm	5.21 mg/L	21.20 NTU	105.4 mV	31.94 ft	0.13 PSU	120.00 ml/min
1/25/2022 1:49 PM	02:04:00	7.02 pH	16.83 °C	269.11 µS/cm	5.21 mg/L	20.90 NTU	105.4 mV	31.94 ft	0.13 PSU	120.00 ml/min
1/25/2022 1:53 PM	02:08:00	7.02 pH	16.88 °C	270.19 µS/cm	5.18 mg/L	20.40 NTU	105.4 mV	31.95 ft	0.13 PSU	120.00 ml/min
1/25/2022 1:57 PM	02:12:00	7.02 pH	16.90 °C	271.43 µS/cm	5.15 mg/L	21.30 NTU	105.5 mV	31.96 ft	0.13 PSU	120.00 ml/min
1/25/2022 2:01 PM	02:16:00	7.02 pH	16.92 °C	272.44 µS/cm	5.12 mg/L	21.00 NTU	105.5 mV	31.96 ft	0.13 PSU	120.00 ml/min
1/25/2022 2:05 PM	02:20:00	7.02 pH	16.92 °C	272.92 µS/cm	5.10 mg/L	21.60 NTU	105.7 mV	31.96 ft	0.13 PSU	120.00 ml/min
1/25/2022 2:09 PM	02:24:00	7.02 pH	17.01 °C	273.44 µS/cm	5.09 mg/L	23.70 NTU	105.6 mV	31.97 ft	0.13 PSU	120.00 ml/min
1/25/2022 2:13 PM	02:28:00	7.03 pH	17.01 °C	273.84 µS/cm	5.06 mg/L	23.90 NTU	105.4 mV	31.97 ft	0.13 PSU	120.00 ml/min
1/25/2022 2:17 PM	02:32:00	7.03 pH	17.08 °C	273.36 µS/cm	5.05 mg/L	25.40 NTU	105.5 mV	31.98 ft	0.13 PSU	120.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/25/2022 1:20:09 PM

Project: Plant Bowen LF January 2022

Operator Name: Kevin Stephenson

Location Name: GWA-38 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 59.35 ft Total Depth: 69.35 ft Initial Depth to Water: 50.68 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 64.35 ft Estimated Total Volume Pumped: 3080 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 1.4 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 2 liters

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/25/2022 1:20 PM	00:00	6.25 pH	16.32 °C	48.27 µS/cm	7.56 mg/L	0.38 NTU	131.1 mV	51.70 ft	0.02 PSU	110.00 ml/min
1/25/2022 1:24 PM	04:00	5.14 pH	17.12 °C	36.88 µS/cm	7.31 mg/L	0.21 NTU	99.3 mV	51.76 ft	0.02 PSU	110.00 ml/min
1/25/2022 1:28 PM	08:00	5.14 pH	17.07 °C	34.94 µS/cm	7.27 mg/L	0.18 NTU	85.6 mV	51.83 ft	0.02 PSU	110.00 ml/min
1/25/2022 1:32 PM	12:00	5.13 pH	17.17 °C	33.90 µS/cm	7.24 mg/L	0.29 NTU	77.0 mV	51.91 ft	0.01 PSU	110.00 ml/min
1/25/2022 1:36 PM	16:00	5.13 pH	17.13 °C	33.24 µS/cm	7.20 mg/L	0.11 NTU	71.7 mV	51.94 ft	0.01 PSU	110.00 ml/min
1/25/2022 1:40 PM	20:00	5.14 pH	17.08 °C	33.14 µS/cm	7.17 mg/L	0.17 NTU	69.3 mV	51.99 ft	0.01 PSU	110.00 ml/min
1/25/2022 1:44 PM	24:00	5.14 pH	17.56 °C	32.97 µS/cm	7.10 mg/L	0.31 NTU	67.0 mV	52.05 ft	0.01 PSU	110.00 ml/min
1/25/2022 1:48 PM	28:00	5.14 pH	17.37 °C	32.82 µS/cm	7.11 mg/L	0.17 NTU	65.4 mV	52.08 ft	0.01 PSU	110.00 ml/min

Samples

Sample ID:	Description:
GWA-38	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/25/2022 2:57:57 PM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

<p>Location Name: GWA-36RA Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 100.28 ft Total Depth: 110.28 ft Initial Depth to Water: 32.68 ft</p>	<p>Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 105.28 ft Estimated Total Volume Pumped: 9600 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.19 ft</p>	<p>Instrument Used: Aqua TROLL 400 Serial Number: 789301</p>
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Test Notes:

Prepurged 1L

Turb did not stabilize. Will return on 1/26.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/25/2022 2:57 PM	00:00	7.36 pH	17.50 °C	386.20 µS/cm	1.45 mg/L	28.20 NTU	92.1 mV	32.70 ft	0.19 PSU	120.00 ml/min
1/25/2022 3:01 PM	04:00	7.37 pH	17.36 °C	386.30 µS/cm	1.61 mg/L	38.20 NTU	93.8 mV	32.70 ft	0.19 PSU	120.00 ml/min
1/25/2022 3:05 PM	08:00	7.36 pH	17.19 °C	386.28 µS/cm	1.76 mg/L	41.00 NTU	95.0 mV	32.75 ft	0.19 PSU	120.00 ml/min
1/25/2022 3:09 PM	12:00	7.35 pH	17.23 °C	383.78 µS/cm	1.93 mg/L	42.70 NTU	95.4 mV	32.75 ft	0.19 PSU	120.00 ml/min
1/25/2022 3:13 PM	16:00	7.34 pH	17.26 °C	380.89 µS/cm	2.08 mg/L	38.20 NTU	95.8 mV	32.75 ft	0.18 PSU	120.00 ml/min
1/25/2022 3:17 PM	20:00	7.34 pH	17.03 °C	380.20 µS/cm	2.23 mg/L	36.70 NTU	96.0 mV	32.75 ft	0.18 PSU	120.00 ml/min
1/25/2022 3:21 PM	24:00	7.33 pH	16.92 °C	378.16 µS/cm	2.36 mg/L	34.10 NTU	96.2 mV	32.75 ft	0.18 PSU	120.00 ml/min
1/25/2022 3:25 PM	28:00	7.32 pH	16.86 °C	376.19 µS/cm	2.52 mg/L	32.80 NTU	96.2 mV	32.76 ft	0.18 PSU	120.00 ml/min
1/25/2022 3:29 PM	32:00	7.31 pH	16.83 °C	374.85 µS/cm	2.66 mg/L	28.40 NTU	96.3 mV	32.76 ft	0.18 PSU	120.00 ml/min
1/25/2022 3:33 PM	36:00	7.30 pH	16.76 °C	373.51 µS/cm	2.74 mg/L	28.40 NTU	96.4 mV	32.76 ft	0.18 PSU	120.00 ml/min
1/25/2022 3:37 PM	40:00	7.29 pH	16.79 °C	372.41 µS/cm	2.81 mg/L	27.40 NTU	96.4 mV	32.76 ft	0.18 PSU	120.00 ml/min
1/25/2022 3:41 PM	44:00	7.29 pH	16.85 °C	371.15 µS/cm	2.86 mg/L	25.60 NTU	96.3 mV	32.76 ft	0.18 PSU	120.00 ml/min
1/25/2022 3:45 PM	48:00	7.28 pH	16.86 °C	370.28 µS/cm	2.93 mg/L	23.70 NTU	96.3 mV	32.77 ft	0.18 PSU	120.00 ml/min
1/25/2022 3:49 PM	52:00	7.28 pH	16.83 °C	370.37 µS/cm	2.99 mg/L	22.10 NTU	96.3 mV	32.77 ft	0.18 PSU	120.00 ml/min
1/25/2022 3:53 PM	56:00	7.27 pH	16.85 °C	369.65 µS/cm	3.04 mg/L	22.20 NTU	96.2 mV	32.77 ft	0.18 PSU	120.00 ml/min

1/25/2022 3:57 PM	01:00:00	7.27 pH	16.77 °C	368.81 µS/cm	3.10 mg/L	22.50 NTU	96.3 mV	32.90 ft	0.18 PSU	120.00 ml/min
1/25/2022 4:01 PM	01:04:00	7.26 pH	16.78 °C	368.67 µS/cm	3.15 mg/L	22.60 NTU	96.4 mV	32.90 ft	0.18 PSU	120.00 ml/min
1/25/2022 4:05 PM	01:08:00	7.26 pH	16.69 °C	367.86 µS/cm	3.18 mg/L	21.60 NTU	96.6 mV	32.90 ft	0.18 PSU	120.00 ml/min
1/25/2022 4:09 PM	01:12:00	7.25 pH	16.65 °C	367.86 µS/cm	3.24 mg/L	21.10 NTU	96.5 mV	32.90 ft	0.18 PSU	120.00 ml/min
1/25/2022 4:13 PM	01:16:00	7.25 pH	16.74 °C	367.44 µS/cm	3.27 mg/L	19.60 NTU	96.5 mV	32.90 ft	0.18 PSU	120.00 ml/min
1/25/2022 4:17 PM	01:20:00	7.24 pH	17.09 °C	367.81 µS/cm	3.30 mg/L	19.00 NTU	96.4 mV	32.87 ft	0.18 PSU	120.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/25/2022 2:58:19 PM

Project: Plant Bowen LF January 2022

Operator Name: Kevin Stephenson

Location Name: GWA-54 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 66.11 ft Total Depth: 76.11 ft Initial Depth to Water: 50.49 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 71.11 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 1 liter

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/25/2022 2:58 PM	00:00	7.52 pH	18.36 °C	155.02 µS/cm	6.70 mg/L	0.28 NTU	56.9 mV	50.49 ft	0.07 PSU	120.00 ml/min
1/25/2022 3:02 PM	04:00	7.04 pH	17.42 °C	196.36 µS/cm	5.93 mg/L	0.23 NTU	43.3 mV	50.49 ft	0.09 PSU	120.00 ml/min
1/25/2022 3:06 PM	08:00	7.11 pH	17.10 °C	217.47 µS/cm	3.78 mg/L	0.23 NTU	36.8 mV	50.49 ft	0.10 PSU	120.00 ml/min
1/25/2022 3:10 PM	12:00	7.20 pH	17.04 °C	221.21 µS/cm	3.28 mg/L	0.60 NTU	32.6 mV	50.49 ft	0.11 PSU	120.00 ml/min
1/25/2022 3:14 PM	16:00	7.26 pH	17.11 °C	221.96 µS/cm	3.25 mg/L	0.41 NTU	30.3 mV	50.49 ft	0.11 PSU	120.00 ml/min
1/25/2022 3:18 PM	20:00	7.30 pH	16.92 °C	222.86 µS/cm	3.41 mg/L	0.27 NTU	29.0 mV	50.49 ft	0.11 PSU	120.00 ml/min
1/25/2022 3:22 PM	24:00	7.34 pH	16.95 °C	224.80 µS/cm	3.40 mg/L	0.54 NTU	27.6 mV	50.49 ft	0.11 PSU	120.00 ml/min
1/25/2022 3:26 PM	28:00	7.38 pH	16.95 °C	225.92 µS/cm	3.44 mg/L	0.41 NTU	26.4 mV	50.49 ft	0.11 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWA-54	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/25/2022 3:56:18 PM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWA-52 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 73.96 ft Total Depth: 83.96 ft Initial Depth to Water: 56.29 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 78.96 ft Estimated Total Volume Pumped: 3648 ml Flow Cell Volume: 90 ml Final Flow Rate: 114 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
1/25/2022 3:56 PM	00:00	7.42 pH	16.81 °C	268.14 µS/cm	7.68 mg/L	0.35 NTU	21.4 mV	56.30 ft	114.00 ml/min
1/25/2022 4:00 PM	04:00	7.14 pH	16.72 °C	247.72 µS/cm	7.59 mg/L	0.48 NTU	19.8 mV	56.30 ft	114.00 ml/min
1/25/2022 4:04 PM	08:00	7.14 pH	16.63 °C	260.16 µS/cm	7.52 mg/L	0.67 NTU	17.2 mV	56.30 ft	114.00 ml/min
1/25/2022 4:08 PM	12:00	7.23 pH	16.60 °C	268.23 µS/cm	7.44 mg/L	0.27 NTU	15.6 mV	56.30 ft	114.00 ml/min
1/25/2022 4:12 PM	16:00	7.32 pH	16.59 °C	267.51 µS/cm	7.38 mg/L	0.29 NTU	14.1 mV	56.31 ft	114.00 ml/min
1/25/2022 4:16 PM	20:00	7.36 pH	16.57 °C	267.30 µS/cm	7.37 mg/L	0.45 NTU	14.5 mV	56.31 ft	114.00 ml/min
1/25/2022 4:20 PM	24:00	7.40 pH	16.63 °C	267.07 µS/cm	7.34 mg/L	0.46 NTU	14.5 mV	56.31 ft	114.00 ml/min
1/25/2022 4:24 PM	28:00	7.43 pH	16.45 °C	267.51 µS/cm	7.34 mg/L	0.43 NTU	14.3 mV	56.31 ft	114.00 ml/min
1/25/2022 4:28 PM	32:00	7.44 pH	16.45 °C	267.56 µS/cm	7.35 mg/L	0.48 NTU	14.4 mV	56.31 ft	114.00 ml/min

Samples

Sample ID:	Description:
GWA-52	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/26/2022 9:47:51 AM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWA-53 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 110.92 ft Total Depth: 120.92 ft Initial Depth to Water: 57.64 ft	Pump Type: Bladder Pump Tubing Type: LDPE Pump Intake From TOC: 115.92 ft Estimated Total Volume Pumped: 15680 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: -0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
1/26/2022 9:47 AM	00:00	7.53 pH	13.42 °C	267.36 µS/cm	8.72 mg/L	26.10 NTU	93.5 mV	57.67 ft	140.00 ml/min
1/26/2022 9:51 AM	04:00	7.60 pH	14.11 °C	261.83 µS/cm	7.74 mg/L	15.30 NTU	69.7 mV	57.65 ft	140.00 ml/min
1/26/2022 9:55 AM	08:00	7.62 pH	14.36 °C	261.97 µS/cm	7.60 mg/L	12.30 NTU	63.4 mV	57.65 ft	140.00 ml/min
1/26/2022 9:59 AM	12:00	7.64 pH	14.74 °C	259.80 µS/cm	7.47 mg/L	10.31 NTU	60.2 mV	57.65 ft	140.00 ml/min
1/26/2022 10:03 AM	16:00	7.64 pH	15.20 °C	259.15 µS/cm	7.33 mg/L	11.40 NTU	58.9 mV	57.65 ft	140.00 ml/min
1/26/2022 10:07 AM	20:00	7.66 pH	15.19 °C	258.53 µS/cm	7.28 mg/L	9.89 NTU	57.4 mV	57.65 ft	140.00 ml/min
1/26/2022 10:11 AM	24:00	7.67 pH	15.28 °C	258.56 µS/cm	7.24 mg/L	9.34 NTU	56.7 mV	57.65 ft	140.00 ml/min
1/26/2022 10:15 AM	28:00	7.67 pH	15.51 °C	259.42 µS/cm	7.28 mg/L	8.09 NTU	55.5 mV	57.65 ft	140.00 ml/min
1/26/2022 10:19 AM	32:00	7.68 pH	15.69 °C	256.89 µS/cm	7.14 mg/L	7.48 NTU	55.3 mV	57.65 ft	140.00 ml/min
1/26/2022 10:23 AM	36:00	7.69 pH	15.51 °C	257.83 µS/cm	7.17 mg/L	8.81 NTU	55.2 mV	57.65 ft	140.00 ml/min
1/26/2022 10:27 AM	40:00	7.69 pH	15.49 °C	258.53 µS/cm	7.20 mg/L	8.20 NTU	54.7 mV	57.65 ft	140.00 ml/min
1/26/2022 10:31 AM	44:00	7.70 pH	15.47 °C	257.46 µS/cm	7.17 mg/L	8.28 NTU	54.5 mV	57.64 ft	140.00 ml/min
1/26/2022 10:35 AM	48:00	7.69 pH	15.43 °C	258.16 µS/cm	7.18 mg/L	9.27 NTU	54.4 mV	57.64 ft	140.00 ml/min
1/26/2022 10:39 AM	52:00	7.70 pH	15.56 °C	257.78 µS/cm	7.20 mg/L	9.03 NTU	54.3 mV	57.64 ft	140.00 ml/min
1/26/2022 10:43 AM	56:00	7.70 pH	15.54 °C	257.07 µS/cm	7.15 mg/L	9.32 NTU	54.5 mV	57.65 ft	140.00 ml/min

1/26/2022 10:47 AM	01:00:00	7.70 pH	15.69 °C	258.50 µS/cm	7.17 mg/L	8.48 NTU	54.2 mV	57.65 ft	140.00 ml/min
1/26/2022 10:51 AM	01:04:00	7.71 pH	15.60 °C	257.18 µS/cm	7.13 mg/L	6.59 NTU	54.1 mV	57.65 ft	140.00 ml/min
1/26/2022 10:55 AM	01:08:00	7.70 pH	15.55 °C	257.32 µS/cm	7.16 mg/L	6.20 NTU	54.3 mV	57.66 ft	140.00 ml/min
1/26/2022 10:59 AM	01:12:00	7.70 pH	15.69 °C	257.73 µS/cm	7.13 mg/L	7.02 NTU	54.0 mV	57.66 ft	140.00 ml/min
1/26/2022 11:03 AM	01:16:00	7.70 pH	15.54 °C	257.44 µS/cm	7.16 mg/L	7.52 NTU	54.2 mV	57.65 ft	140.00 ml/min
1/26/2022 11:07 AM	01:20:00	7.71 pH	15.66 °C	257.37 µS/cm	7.13 mg/L	6.60 NTU	54.1 mV	57.65 ft	140.00 ml/min
1/26/2022 11:11 AM	01:24:00	7.71 pH	15.87 °C	257.08 µS/cm	7.10 mg/L	6.76 NTU	53.6 mV	57.65 ft	140.00 ml/min
1/26/2022 11:15 AM	01:28:00	7.70 pH	15.91 °C	257.63 µS/cm	7.14 mg/L	6.11 NTU	54.1 mV	57.65 ft	140.00 ml/min
1/26/2022 11:19 AM	01:32:00	7.71 pH	15.86 °C	257.72 µS/cm	7.12 mg/L	5.56 NTU	53.7 mV	57.65 ft	140.00 ml/min
1/26/2022 11:23 AM	01:36:00	7.72 pH	15.75 °C	256.88 µS/cm	7.11 mg/L	5.21 NTU	53.7 mV	57.65 ft	140.00 ml/min
1/26/2022 11:27 AM	01:40:00	7.71 pH	15.62 °C	257.69 µS/cm	7.14 mg/L	5.13 NTU	53.9 mV	57.65 ft	140.00 ml/min
1/26/2022 11:31 AM	01:44:00	7.72 pH	15.91 °C	257.05 µS/cm	7.08 mg/L	4.34 NTU	53.6 mV	57.64 ft	140.00 ml/min
1/26/2022 11:35 AM	01:48:00	7.71 pH	15.74 °C	257.38 µS/cm	7.10 mg/L	4.17 NTU	54.5 mV	57.63 ft	140.00 ml/min
1/26/2022 11:39 AM	01:52:00	7.72 pH	15.76 °C	257.23 µS/cm	7.09 mg/L	4.45 NTU	53.8 mV	57.63 ft	140.00 ml/min

Samples

Sample ID:	Description:
GWA-53	Metals, inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/26/2022 9:51:47 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWA-36RA Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 100.28 ft Total Depth: 110.28 ft Initial Depth to Water: 33.1 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 105.28 ft Estimated Total Volume Pumped: 4400 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/26/2022 9:51 AM	00:00	7.09 pH	13.31 °C	371.48 µS/cm	2.92 mg/L	5.64 NTU	100.1 mV	33.10 ft	0.18 PSU	110.00 ml/min
1/26/2022 9:55 AM	04:00	7.10 pH	13.26 °C	371.13 µS/cm	3.02 mg/L	7.25 NTU	93.8 mV	33.10 ft	0.18 PSU	110.00 ml/min
1/26/2022 9:59 AM	08:00	7.10 pH	13.40 °C	371.15 µS/cm	3.02 mg/L	8.25 NTU	89.2 mV	33.10 ft	0.18 PSU	110.00 ml/min
1/26/2022 10:03 AM	12:00	7.07 pH	13.56 °C	372.01 µS/cm	3.06 mg/L	8.01 NTU	87.7 mV	33.10 ft	0.18 PSU	110.00 ml/min
1/26/2022 10:07 AM	16:00	7.07 pH	14.44 °C	363.48 µS/cm	3.04 mg/L	6.75 NTU	86.2 mV	33.10 ft	0.17 PSU	110.00 ml/min
1/26/2022 10:11 AM	20:00	7.06 pH	14.23 °C	362.77 µS/cm	3.03 mg/L	5.99 NTU	84.7 mV	33.10 ft	0.17 PSU	110.00 ml/min
1/26/2022 10:15 AM	24:00	7.04 pH	14.76 °C	363.34 µS/cm	3.07 mg/L	5.34 NTU	83.3 mV	33.10 ft	0.17 PSU	110.00 ml/min
1/26/2022 10:19 AM	28:00	7.04 pH	14.52 °C	356.54 µS/cm	3.07 mg/L	5.18 NTU	82.8 mV	33.10 ft	0.17 PSU	110.00 ml/min
1/26/2022 10:23 AM	32:00	7.01 pH	14.67 °C	361.10 µS/cm	3.17 mg/L	4.89 NTU	82.3 mV	33.10 ft	0.17 PSU	110.00 ml/min
1/26/2022 10:27 AM	36:00	7.01 pH	15.21 °C	357.73 µS/cm	3.17 mg/L	4.78 NTU	80.9 mV	33.10 ft	0.17 PSU	110.00 ml/min
1/26/2022 10:31 AM	40:00	7.01 pH	14.69 °C	353.53 µS/cm	3.17 mg/L	4.41 NTU	80.6 mV	33.10 ft	0.17 PSU	110.00 ml/min

Samples

Sample ID:	Description:
GWA-36RA	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/26/2022 11:53:05 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWA-37 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 97.52 ft Total Depth: 107.52 ft Initial Depth to Water: 49.64 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 102.52 ft Estimated Total Volume Pumped: 10260 ml Flow Cell Volume: 90 ml Final Flow Rate: 105 ml/min Final Draw Down: 15.96 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 8 L

Prepurged at 300 mL/min to drawdown about 10 . At 20:00, lowered pump rate to 105 mL/min to stabilize drawdown. Pumped well for an additional hour after stabilization to attempt to bring into pH range, with no effect.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/26/2022 11:53 AM	00:00	4.46 pH	15.99 °C	18.59 µS/cm	6.27 mg/L	0.17 NTU	171.0 mV	61.78 ft	0.01 PSU	240.00 ml/min
1/26/2022 11:57 AM	04:00	4.51 pH	15.84 °C	18.83 µS/cm	6.17 mg/L	0.07 NTU	153.6 mV	62.50 ft	0.01 PSU	240.00 ml/min
1/26/2022 12:01 PM	08:00	4.50 pH	15.89 °C	19.09 µS/cm	6.07 mg/L	0.18 NTU	149.7 mV	63.52 ft	0.01 PSU	240.00 ml/min
1/26/2022 12:05 PM	12:00	4.49 pH	15.98 °C	19.34 µS/cm	6.00 mg/L	0.21 NTU	146.6 mV	64.56 ft	0.01 PSU	240.00 ml/min
1/26/2022 12:09 PM	16:00	4.51 pH	16.02 °C	19.55 µS/cm	5.91 mg/L	0.16 NTU	144.7 mV	65.49 ft	0.01 PSU	240.00 ml/min
1/26/2022 12:13 PM	20:00	4.59 pH	15.14 °C	19.35 µS/cm	5.76 mg/L	0.17 NTU	139.8 mV	65.87 ft	0.01 PSU	105.00 ml/min
1/26/2022 12:17 PM	24:00	4.59 pH	14.98 °C	19.53 µS/cm	5.76 mg/L	0.11 NTU	137.8 mV	65.95 ft	0.01 PSU	105.00 ml/min
1/26/2022 12:21 PM	28:00	4.60 pH	14.44 °C	19.85 µS/cm	5.78 mg/L	0.13 NTU	136.3 mV	65.93 ft	0.01 PSU	105.00 ml/min
1/26/2022 12:25 PM	32:00	4.62 pH	14.58 °C	20.06 µS/cm	5.74 mg/L	0.18 NTU	135.2 mV	65.90 ft	0.01 PSU	105.00 ml/min
1/26/2022 12:29 PM	36:00	4.64 pH	14.44 °C	20.35 µS/cm	5.76 mg/L	0.14 NTU	134.7 mV	65.87 ft	0.01 PSU	105.00 ml/min
1/26/2022 12:33 PM	40:00	4.63 pH	14.68 °C	20.62 µS/cm	5.70 mg/L	0.05 NTU	134.7 mV	65.83 ft	0.01 PSU	105.00 ml/min
1/26/2022 12:37 PM	44:00	4.66 pH	15.02 °C	20.71 µS/cm	5.60 mg/L	0.13 NTU	133.8 mV	65.84 ft	0.01 PSU	105.00 ml/min
1/26/2022 12:41 PM	48:00	4.66 pH	15.12 °C	21.07 µS/cm	5.66 mg/L	0.09 NTU	134.2 mV	65.80 ft	0.01 PSU	105.00 ml/min
1/26/2022 12:45 PM	52:00	4.70 pH	15.12 °C	21.04 µS/cm	5.57 mg/L	0.09 NTU	132.7 mV	65.77 ft	0.01 PSU	105.00 ml/min

1/26/2022 12:49 PM	56:00	4.70 pH	15.44 °C	21.41 µS/cm	5.60 mg/L	0.09 NTU	132.8 mV	65.74 ft	0.01 PSU	105.00 ml/min
1/26/2022 12:53 PM	01:00:00	4.70 pH	15.09 °C	21.69 µS/cm	5.69 mg/L	0.06 NTU	133.2 mV	65.69 ft	0.01 PSU	105.00 ml/min
1/26/2022 12:57 PM	01:04:00	4.71 pH	15.66 °C	22.01 µS/cm	5.69 mg/L	0.07 NTU	133.0 mV	65.68 ft	0.01 PSU	105.00 ml/min
1/26/2022 1:01 PM	01:08:00	4.71 pH	15.49 °C	21.85 µS/cm	5.61 mg/L	0.00 NTU	133.6 mV	65.65 ft	0.01 PSU	105.00 ml/min
1/26/2022 1:05 PM	01:12:00	4.69 pH	15.60 °C	22.02 µS/cm	5.60 mg/L	0.03 NTU	133.7 mV	65.60 ft	0.01 PSU	105.00 ml/min

Samples

Sample ID:	Description:
GWA-37	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/26/2022 1:42:47 PM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWA-53R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 158.48 ft Total Depth: 168.48 ft Initial Depth to Water: 58.18 ft	Pump Type: Bladder Pump Tubing Type: LDPE Pump Intake From TOC: 163.48 ft Estimated Total Volume Pumped: 3408 ml Flow Cell Volume: 90 ml Final Flow Rate: 142 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
1/26/2022 1:42 PM	00:00	7.71 pH	15.51 °C	277.39 µS/cm	8.62 mg/L	721.00 NTU	53.9 mV	58.21 ft	142.00 ml/min
1/26/2022 1:46 PM	04:00	7.76 pH	16.00 °C	274.64 µS/cm	6.99 mg/L	34.70 NTU	53.1 mV	58.21 ft	142.00 ml/min
1/26/2022 1:50 PM	08:00	7.77 pH	16.09 °C	274.49 µS/cm	6.93 mg/L	10.70 NTU	52.6 mV	58.21 ft	142.00 ml/min
1/26/2022 1:54 PM	12:00	7.78 pH	16.00 °C	274.56 µS/cm	6.94 mg/L	6.61 NTU	52.2 mV	58.21 ft	142.00 ml/min
1/26/2022 1:58 PM	16:00	7.77 pH	16.01 °C	274.67 µS/cm	6.92 mg/L	4.98 NTU	52.6 mV	58.21 ft	142.00 ml/min
1/26/2022 2:02 PM	20:00	7.77 pH	15.98 °C	274.95 µS/cm	6.97 mg/L	4.09 NTU	51.9 mV	58.21 ft	142.00 ml/min
1/26/2022 2:06 PM	24:00	7.78 pH	16.05 °C	274.58 µS/cm	6.93 mg/L	3.39 NTU	51.8 mV	58.21 ft	142.00 ml/min

Samples

Sample ID:	Description:
GWA-53R	Metals, inorganic, tds, alkalinity

Low-Flow Test Report:

Test Date / Time: 1/26/2022 2:27:18 PM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWA-56 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 75.87 ft Total Depth: 85.87 ft Initial Depth to Water: 38.63 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 80.87 ft Estimated Total Volume Pumped: 3640 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.5 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Stopped troll to recalibrate pH and attempt to bring into range. Will resume trolling.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/26/2022 2:27 PM	00:00	7.10 pH	15.57 °C	548.59 µS/cm	1.34 mg/L	0.03 NTU	105.2 mV	39.07 ft	0.27 PSU	130.00 ml/min
1/26/2022 2:31 PM	04:00	7.33 pH	15.41 °C	548.24 µS/cm	1.19 mg/L	0.01 NTU	98.4 mV	39.09 ft	0.27 PSU	130.00 ml/min
1/26/2022 2:35 PM	08:00	7.43 pH	15.48 °C	547.48 µS/cm	1.29 mg/L	0.03 NTU	95.1 mV	39.11 ft	0.27 PSU	130.00 ml/min
1/26/2022 2:39 PM	12:00	7.48 pH	15.53 °C	544.00 µS/cm	1.40 mg/L	0.20 NTU	92.8 mV	39.13 ft	0.26 PSU	130.00 ml/min
1/26/2022 2:43 PM	16:00	7.50 pH	15.48 °C	542.77 µS/cm	1.42 mg/L	0.31 NTU	87.4 mV	39.13 ft	0.26 PSU	130.00 ml/min
1/26/2022 2:47 PM	20:00	7.51 pH	15.39 °C	539.53 µS/cm	1.42 mg/L	0.59 NTU	79.3 mV	39.13 ft	0.26 PSU	130.00 ml/min
1/26/2022 2:51 PM	24:00	7.51 pH	15.30 °C	536.93 µS/cm	1.48 mg/L	0.77 NTU	71.7 mV	39.13 ft	0.26 PSU	130.00 ml/min
1/26/2022 2:55 PM	28:00	7.50 pH	15.26 °C	537.03 µS/cm	1.60 mg/L	0.42 NTU	64.7 mV	39.13 ft	0.26 PSU	130.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/26/2022 2:55:00 PM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWA-55 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 55.24 ft Total Depth: 65.24 ft Initial Depth to Water: 43.09 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 60.24 ft Estimated Total Volume Pumped: 3840 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0.11 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
1/26/2022 2:55 PM	00:00	7.24 pH	16.50 °C	446.88 µS/cm	3.96 mg/L	0.72 NTU	65.7 mV	43.19 ft	160.00 ml/min
1/26/2022 2:59 PM	04:00	7.23 pH	16.51 °C	442.06 µS/cm	3.62 mg/L	0.61 NTU	64.0 mV	43.19 ft	160.00 ml/min
1/26/2022 3:03 PM	08:00	7.24 pH	16.50 °C	445.70 µS/cm	3.29 mg/L	0.64 NTU	63.6 mV	43.19 ft	160.00 ml/min
1/26/2022 3:07 PM	12:00	7.23 pH	16.55 °C	446.85 µS/cm	3.12 mg/L	0.78 NTU	63.5 mV	43.20 ft	160.00 ml/min
1/26/2022 3:11 PM	16:00	7.23 pH	16.50 °C	445.97 µS/cm	3.08 mg/L	0.58 NTU	63.3 mV	43.20 ft	160.00 ml/min
1/26/2022 3:15 PM	20:00	7.21 pH	16.54 °C	443.83 µS/cm	3.05 mg/L	0.54 NTU	63.4 mV	43.20 ft	160.00 ml/min
1/26/2022 3:19 PM	24:00	7.21 pH	16.45 °C	444.75 µS/cm	3.01 mg/L	0.50 NTU	63.1 mV	43.20 ft	160.00 ml/min

Samples

Sample ID:	Description:
GWA-55	Metals inorganic tds alkalinity
DUP-1	Metal inorganic tds alkalinity

Low-Flow Test Report:

Test Date / Time: 1/26/2022 3:13:43 PM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWA-56 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 75.87 ft Total Depth: 85.87 ft Initial Depth to Water: 38.63 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 80.87 ft Estimated Total Volume Pumped: 5720 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.46 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 4.64 L

Recalibrated troll, pH still out of range therefore pumped an additional hour after initial stabilization to attempt to bring into range, with no effect

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/26/2022 3:13 PM	00:00	7.16 pH	14.54 °C	528.16 µS/cm	1.99 mg/L	0.41 NTU	74.0 mV	39.00 ft	0.26 PSU	130.00 ml/min
1/26/2022 3:17 PM	04:00	7.38 pH	15.17 °C	530.14 µS/cm	1.80 mg/L	0.44 NTU	61.6 mV	39.07 ft	0.26 PSU	130.00 ml/min
1/26/2022 3:21 PM	08:00	7.45 pH	15.36 °C	528.06 µS/cm	1.84 mg/L	0.33 NTU	54.3 mV	39.09 ft	0.26 PSU	130.00 ml/min
1/26/2022 3:25 PM	12:00	7.46 pH	15.41 °C	523.41 µS/cm	2.06 mg/L	0.21 NTU	54.4 mV	39.09 ft	0.25 PSU	130.00 ml/min
1/26/2022 3:29 PM	16:00	7.46 pH	15.35 °C	518.88 µS/cm	2.18 mg/L	0.23 NTU	53.9 mV	39.09 ft	0.25 PSU	130.00 ml/min
1/26/2022 3:33 PM	20:00	7.46 pH	15.22 °C	517.26 µS/cm	2.24 mg/L	0.31 NTU	52.8 mV	39.09 ft	0.25 PSU	130.00 ml/min
1/26/2022 3:37 PM	24:00	7.46 pH	15.21 °C	513.56 µS/cm	2.27 mg/L	0.34 NTU	50.6 mV	39.09 ft	0.25 PSU	130.00 ml/min
1/26/2022 3:41 PM	28:00	7.46 pH	15.21 °C	512.33 µS/cm	2.34 mg/L	0.28 NTU	49.0 mV	39.09 ft	0.25 PSU	130.00 ml/min
1/26/2022 3:45 PM	32:00	7.46 pH	15.19 °C	511.68 µS/cm	2.39 mg/L	0.28 NTU	46.8 mV	39.09 ft	0.25 PSU	130.00 ml/min
1/26/2022 3:49 PM	36:00	7.46 pH	15.35 °C	510.01 µS/cm	2.41 mg/L	0.27 NTU	43.8 mV	39.09 ft	0.25 PSU	130.00 ml/min
1/26/2022 3:53 PM	40:00	7.45 pH	15.26 °C	508.37 µS/cm	2.46 mg/L	0.26 NTU	40.6 mV	39.09 ft	0.25 PSU	130.00 ml/min
1/26/2022 3:57 PM	44:00	7.45 pH	15.35 °C	508.07 µS/cm	2.55 mg/L	0.25 NTU	38.7 mV	39.09 ft	0.25 PSU	130.00 ml/min

Samples

Sample ID:	Description:
GWA-56	Metals, Inorganics, TDS, Alkalinity

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 1/27/2022 10:02:17 AM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-16R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 88.12 ft Total Depth: 98.12 ft Initial Depth to Water: 78.87 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 93.12 ft Estimated Total Volume Pumped: 11752 ml Flow Cell Volume: 90 ml Final Flow Rate: 132 ml/min Final Draw Down: 9.47 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Water level dropped into the top of the screen. Performing complete evacuation

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
1/27/2022 10:02 AM	00:00	7.28 pH	11.67 °C	594.61 µS/cm	8.71 mg/L	2.76 NTU	108.2 mV	79.66 ft	116.00 ml/min
1/27/2022 10:06 AM	04:00	7.17 pH	12.61 °C	601.61 µS/cm	5.26 mg/L	1.95 NTU	78.6 mV	79.92 ft	116.00 ml/min
1/27/2022 10:10 AM	08:00	7.14 pH	12.91 °C	612.97 µS/cm	4.10 mg/L	2.34 NTU	64.8 mV	80.41 ft	116.00 ml/min
1/27/2022 10:14 AM	12:00	7.14 pH	12.84 °C	616.20 µS/cm	3.73 mg/L	3.09 NTU	61.2 mV	80.80 ft	116.00 ml/min
1/27/2022 10:18 AM	16:00	7.13 pH	13.02 °C	622.56 µS/cm	3.60 mg/L	2.84 NTU	60.3 mV	81.15 ft	116.00 ml/min
1/27/2022 10:22 AM	20:00	7.14 pH	13.02 °C	622.14 µS/cm	3.55 mg/L	1.86 NTU	58.4 mV	81.52 ft	116.00 ml/min
1/27/2022 10:26 AM	24:00	7.15 pH	12.94 °C	622.53 µS/cm	3.49 mg/L	1.75 NTU	57.2 mV	81.78 ft	116.00 ml/min
1/27/2022 10:30 AM	28:00	7.14 pH	13.24 °C	623.51 µS/cm	3.40 mg/L	1.86 NTU	57.0 mV	82.04 ft	116.00 ml/min
1/27/2022 10:34 AM	32:00	7.15 pH	13.20 °C	623.26 µS/cm	3.35 mg/L	1.69 NTU	55.7 mV	82.24 ft	116.00 ml/min
1/27/2022 10:38 AM	36:00	7.16 pH	13.15 °C	623.14 µS/cm	3.34 mg/L	1.54 NTU	55.4 mV	82.49 ft	116.00 ml/min
1/27/2022 10:42 AM	40:00	7.16 pH	13.11 °C	622.66 µS/cm	3.40 mg/L	1.83 NTU	54.9 mV	82.71 ft	116.00 ml/min
1/27/2022 10:46 AM	44:00	7.16 pH	13.20 °C	621.90 µS/cm	3.48 mg/L	1.60 NTU	53.9 mV	83.12 ft	116.00 ml/min
1/27/2022 10:50 AM	48:00	7.15 pH	13.33 °C	623.96 µS/cm	3.53 mg/L	1.66 NTU	53.3 mV	83.41 ft	94.00 ml/min

1/27/2022 10:54 AM	52:00	7.16 pH	13.33 °C	621.19 µS/cm	3.58 mg/L	1.56 NTU	52.6 mV	83.68 ft	132.00 ml/min
1/27/2022 10:58 AM	56:00	7.15 pH	13.84 °C	626.03 µS/cm	3.71 mg/L	1.55 NTU	51.8 mV	84.03 ft	132.00 ml/min
1/27/2022 11:02 AM	01:00:00	7.15 pH	14.40 °C	621.85 µS/cm	3.70 mg/L	1.51 NTU	51.3 mV	84.46 ft	132.00 ml/min
1/27/2022 11:06 AM	01:04:00	7.15 pH	14.50 °C	620.49 µS/cm	3.75 mg/L	1.55 NTU	50.9 mV	84.92 ft	132.00 ml/min
1/27/2022 11:10 AM	01:08:00	7.15 pH	14.59 °C	619.75 µS/cm	3.81 mg/L	1.45 NTU	50.4 mV	85.32 ft	132.00 ml/min
1/27/2022 11:14 AM	01:12:00	7.15 pH	14.74 °C	617.16 µS/cm	3.81 mg/L	1.47 NTU	49.9 mV	85.79 ft	132.00 ml/min
1/27/2022 11:18 AM	01:16:00	7.14 pH	15.06 °C	617.19 µS/cm	3.83 mg/L	1.10 NTU	49.3 mV	86.20 ft	132.00 ml/min
1/27/2022 11:22 AM	01:20:00	7.15 pH	15.13 °C	616.85 µS/cm	3.84 mg/L	1.12 NTU	48.7 mV	86.61 ft	132.00 ml/min
1/27/2022 11:26 AM	01:24:00	7.15 pH	14.91 °C	614.62 µS/cm	3.83 mg/L	1.22 NTU	48.2 mV	87.05 ft	132.00 ml/min
1/27/2022 11:30 AM	01:28:00	7.15 pH	14.95 °C	615.49 µS/cm	3.86 mg/L	1.30 NTU	47.9 mV	87.46 ft	132.00 ml/min
1/27/2022 11:34 AM	01:32:00	7.15 pH	14.66 °C	617.97 µS/cm	3.89 mg/L	1.21 NTU	47.5 mV	87.87 ft	132.00 ml/min
1/27/2022 11:38 AM	01:36:00	7.14 pH	14.47 °C	618.51 µS/cm	3.92 mg/L	1.23 NTU	47.3 mV	88.34 ft	132.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/27/2022 12:05:00 PM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWA-55R Well Diameter: 2 in Casing Type: PVC Screen Length: 100.7 ft Top of Screen: 95.7 ft Total Depth: 105.7 ft Initial Depth to Water: 43.12 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 100.7 ft Estimated Total Volume Pumped: 2600 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: -0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 2.8L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/27/2022 12:05 PM	00:00	7.25 pH	16.81 °C	382.47 µS/cm	4.41 mg/L	1.02 NTU	53.7 mV	43.12 ft	0.18 PSU	130.00 ml/min
1/27/2022 12:09 PM	04:00	7.26 pH	16.77 °C	385.20 µS/cm	4.57 mg/L	0.99 NTU	55.1 mV	43.12 ft	0.19 PSU	130.00 ml/min
1/27/2022 12:13 PM	08:00	7.27 pH	16.90 °C	386.91 µS/cm	4.65 mg/L	0.83 NTU	56.5 mV	43.11 ft	0.19 PSU	130.00 ml/min
1/27/2022 12:17 PM	12:00	7.27 pH	16.99 °C	386.80 µS/cm	4.68 mg/L	0.65 NTU	57.6 mV	43.11 ft	0.19 PSU	130.00 ml/min
1/27/2022 12:21 PM	16:00	7.27 pH	16.99 °C	387.30 µS/cm	4.70 mg/L	0.65 NTU	56.7 mV	43.12 ft	0.19 PSU	130.00 ml/min
1/27/2022 12:25 PM	20:00	7.27 pH	16.97 °C	387.30 µS/cm	4.71 mg/L	0.59 NTU	57.8 mV	43.11 ft	0.19 PSU	130.00 ml/min

Samples

Sample ID:	Description:
GWA-55R	Metals, Inorganic, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/27/2022 12:27:18 PM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-17R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 82.93 ft Total Depth: 92.93 ft Initial Depth to Water: 82.99 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 87.93 ft Estimated Total Volume Pumped: 1728 ml Flow Cell Volume: 90 ml Final Flow Rate: 108 ml/min Final Draw Down: 1.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Water level below top of screen. Monitoring groundwater parameters while performing complete evacuation

Stopped when water level dropped beneath the top of the pump

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
1/27/2022 12:27 PM	00:00	7.61 pH	19.58 °C	519.15 µS/cm	7.68 mg/L	2.86 NTU	32.2 mV	83.27 ft	108.00 ml/min
1/27/2022 12:31 PM	04:00	7.31 pH	17.70 °C	574.98 µS/cm	7.38 mg/L	1.84 NTU	22.7 mV	83.44 ft	108.00 ml/min
1/27/2022 12:35 PM	08:00	7.23 pH	17.70 °C	583.72 µS/cm	7.45 mg/L	1.86 NTU	19.8 mV	83.71 ft	108.00 ml/min
1/27/2022 12:39 PM	12:00	7.21 pH	17.57 °C	586.07 µS/cm	7.43 mg/L	1.56 NTU	18.6 mV	84.00 ft	108.00 ml/min
1/27/2022 12:43 PM	16:00	7.20 pH	17.48 °C	585.83 µS/cm	7.25 mg/L	1.33 NTU	17.9 mV		108.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/27/2022 12:42:36 PM

Project: Plant Bowen LF January 2022

Operator Name: Kevin Stephenson

Location Name: GWC-18R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 130.1 ft Total Depth: 140.1 ft Initial Depth to Water: 72.81 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 135.1 ft Estimated Total Volume Pumped: 2800 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 1 liter.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/27/2022 12:42 PM	00:00	7.59 pH	15.64 °C	284.69 µS/cm	5.91 mg/L	2.04 NTU	117.2 mV	72.81 ft	0.14 PSU	140.00 ml/min
1/27/2022 12:46 PM	04:00	7.67 pH	15.59 °C	284.55 µS/cm	6.03 mg/L	1.89 NTU	89.3 mV	72.81 ft	0.14 PSU	140.00 ml/min
1/27/2022 12:50 PM	08:00	7.71 pH	15.81 °C	284.32 µS/cm	6.04 mg/L	1.34 NTU	76.9 mV	72.81 ft	0.14 PSU	140.00 ml/min
1/27/2022 12:54 PM	12:00	7.73 pH	15.98 °C	282.80 µS/cm	6.02 mg/L	1.24 NTU	68.0 mV	72.81 ft	0.14 PSU	140.00 ml/min
1/27/2022 12:58 PM	16:00	7.75 pH	16.01 °C	282.73 µS/cm	6.02 mg/L	1.18 NTU	58.6 mV	72.81 ft	0.14 PSU	140.00 ml/min
1/27/2022 1:02 PM	20:00	7.76 pH	16.01 °C	283.20 µS/cm	6.06 mg/L	1.33 NTU	50.2 mV	72.81 ft	0.14 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWC-18R	Metals, Inorganics, TDS, Alkalinity
DUP-2	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/27/2022 1:25:34 PM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWC-25R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 89.97 ft Total Depth: 99.97 ft Initial Depth to Water: 23.51 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 94.97 ft Estimated Total Volume Pumped: 3120 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/27/2022 1:25 PM	00:00	7.08 pH	15.75 °C	342.74 µS/cm	4.98 mg/L	0.04 NTU	71.7 mV	23.51 ft	0.16 PSU	130.00 ml/min
1/27/2022 1:29 PM	04:00	7.28 pH	15.60 °C	341.91 µS/cm	6.31 mg/L	0.03 NTU	68.9 mV	23.51 ft	0.16 PSU	130.00 ml/min
1/27/2022 1:33 PM	08:00	7.38 pH	15.50 °C	342.31 µS/cm	6.64 mg/L	0.26 NTU	65.6 mV	23.51 ft	0.16 PSU	130.00 ml/min
1/27/2022 1:37 PM	12:00	7.41 pH	15.70 °C	341.39 µS/cm	6.66 mg/L	0.09 NTU	64.2 mV	23.51 ft	0.16 PSU	130.00 ml/min
1/27/2022 1:41 PM	16:00	7.44 pH	15.80 °C	341.13 µS/cm	6.68 mg/L	0.01 NTU	62.0 mV	23.51 ft	0.16 PSU	130.00 ml/min
1/27/2022 1:45 PM	20:00	7.45 pH	15.66 °C	341.38 µS/cm	6.73 mg/L	0.06 NTU	61.1 mV	23.51 ft	0.16 PSU	130.00 ml/min
1/27/2022 1:49 PM	24:00	7.46 pH	15.57 °C	341.09 µS/cm	6.75 mg/L	0.01 NTU	60.3 mV	23.51 ft	0.16 PSU	130.00 ml/min

Samples

Sample ID:	Description:
GWC-25R	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/27/2022 1:51:26 PM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWC-19R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 136.6 ft Total Depth: 146.6 ft Initial Depth to Water: 76.67 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 151.6 ft Estimated Total Volume Pumped: 2880 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

1.5L prepurge

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/27/2022 1:51 PM	00:00	7.73 pH	17.79 °C	292.84 µS/cm	6.52 mg/L	1.77 NTU	55.6 mV	76.67 ft	0.14 PSU	120.00 ml/min
1/27/2022 1:55 PM	04:00	7.74 pH	17.55 °C	294.53 µS/cm	6.54 mg/L	0.97 NTU	54.8 mV	76.67 ft	0.14 PSU	120.00 ml/min
1/27/2022 1:59 PM	08:00	7.74 pH	17.07 °C	296.21 µS/cm	6.62 mg/L	0.75 NTU	54.1 mV	76.68 ft	0.14 PSU	120.00 ml/min
1/27/2022 2:03 PM	12:00	7.74 pH	16.85 °C	297.46 µS/cm	6.68 mg/L	0.71 NTU	53.4 mV	76.69 ft	0.14 PSU	120.00 ml/min
1/27/2022 2:07 PM	16:00	7.74 pH	16.60 °C	297.91 µS/cm	6.70 mg/L	0.79 NTU	53.5 mV	76.68 ft	0.14 PSU	120.00 ml/min
1/27/2022 2:11 PM	20:00	7.74 pH	16.27 °C	299.21 µS/cm	6.76 mg/L	0.83 NTU	53.2 mV	76.68 ft	0.14 PSU	120.00 ml/min
1/27/2022 2:15 PM	24:00	7.74 pH	16.11 °C	300.68 µS/cm	6.82 mg/L		53.2 mV	76.68 ft	0.14 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWC-19R	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/27/2022 2:00:50 PM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-23R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 39.57 ft Total Depth: 49.57 ft Initial Depth to Water: 38.92 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 44.57 ft Estimated Total Volume Pumped: 4248 ml Flow Cell Volume: 90 ml Final Flow Rate: 118 ml/min Final Draw Down: 1.83 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Water level just above the top of the screen. Stopped when water level dropped below the top of the pump

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
1/27/2022 2:00 PM	00:00	7.49 pH	14.41 °C	719.85 µS/cm	7.49 mg/L	2.17 NTU	45.5 mV	39.43 ft	118.00 ml/min
1/27/2022 2:04 PM	04:00	7.23 pH	15.14 °C	784.32 µS/cm	3.75 mg/L	1.92 NTU	41.4 mV	39.73 ft	118.00 ml/min
1/27/2022 2:08 PM	08:00	7.20 pH	15.04 °C	785.51 µS/cm	2.95 mg/L	1.01 NTU	38.5 mV	39.92 ft	118.00 ml/min
1/27/2022 2:12 PM	12:00	7.19 pH	15.19 °C	778.33 µS/cm	2.79 mg/L	0.98 NTU	36.5 mV	39.99 ft	118.00 ml/min
1/27/2022 2:16 PM	16:00	7.20 pH	15.29 °C	785.81 µS/cm	2.54 mg/L	1.14 NTU	36.0 mV	39.99 ft	118.00 ml/min
1/27/2022 2:20 PM	20:00	7.22 pH	15.49 °C	818.48 µS/cm	2.62 mg/L	1.40 NTU	36.1 mV	40.13 ft	118.00 ml/min
1/27/2022 2:24 PM	24:00	7.22 pH	15.33 °C	849.86 µS/cm	2.85 mg/L	1.11 NTU	36.8 mV	40.35 ft	118.00 ml/min
1/27/2022 2:28 PM	28:00	7.22 pH	15.32 °C	857.12 µS/cm	2.91 mg/L	1.10 NTU	35.8 mV	40.58 ft	118.00 ml/min
1/27/2022 2:32 PM	32:00	7.23 pH	15.35 °C	879.64 µS/cm	3.06 mg/L	0.70 NTU	36.2 mV	40.75 ft	118.00 ml/min
1/27/2022 2:36 PM	36:00	7.23 pH	15.29 °C	896.95 µS/cm	3.20 mg/L		36.0 mV		118.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 1/27/2022 3:23:02 PM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-20R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 77.47 ft Total Depth: 87.47 ft Initial Depth to Water: 70.71 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 82.47 ft Estimated Total Volume Pumped: 3216 ml Flow Cell Volume: 90 ml Final Flow Rate: 134 ml/min Final Draw Down: 0.15 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
1/27/2022 3:23 PM	00:00	7.66 pH	13.93 °C	345.21 µS/cm	8.97 mg/L	1.45 NTU	7.5 mV	70.84 ft	134.00 ml/min
1/27/2022 3:27 PM	04:00	7.56 pH	15.51 °C	329.05 µS/cm	7.13 mg/L	1.26 NTU	10.7 mV	70.85 ft	134.00 ml/min
1/27/2022 3:31 PM	08:00	7.67 pH	15.77 °C	314.92 µS/cm	6.71 mg/L	0.76 NTU	11.0 mV	70.86 ft	134.00 ml/min
1/27/2022 3:35 PM	12:00	7.72 pH	15.78 °C	311.00 µS/cm	6.57 mg/L	1.17 NTU	11.1 mV	70.86 ft	134.00 ml/min
1/27/2022 3:39 PM	16:00	7.74 pH	15.82 °C	310.01 µS/cm	6.49 mg/L	0.75 NTU	11.6 mV	70.86 ft	134.00 ml/min
1/27/2022 3:43 PM	20:00	7.74 pH	15.87 °C	314.38 µS/cm	6.43 mg/L	0.65 NTU	12.2 mV	70.86 ft	134.00 ml/min
1/27/2022 3:47 PM	24:00	7.73 pH	15.82 °C	322.04 µS/cm	6.44 mg/L	0.72 NTU	12.6 mV	70.86 ft	134.00 ml/min

Samples

Sample ID:	Description:
GWC-20R	Metals, inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/27/2022 3:34:14 PM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWC-22R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 109.6 ft Total Depth: 119.6 ft Initial Depth to Water: 63.55 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 114.6 ft Estimated Total Volume Pumped: 2400 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/27/2022 3:34 PM	00:00	7.18 pH	17.85 °C	368.86 µS/cm	0.26 mg/L	0.87 NTU	-20.2 mV	63.55 ft	0.18 PSU	120.00 ml/min
1/27/2022 3:38 PM	04:00	7.25 pH	17.76 °C	379.57 µS/cm	0.16 mg/L	1.82 NTU	-61.1 mV	63.55 ft	0.18 PSU	120.00 ml/min
1/27/2022 3:42 PM	08:00	7.21 pH	17.74 °C	375.89 µS/cm	0.13 mg/L	1.04 NTU	-70.3 mV	63.55 ft	0.18 PSU	120.00 ml/min
1/27/2022 3:46 PM	12:00	7.21 pH	17.78 °C	373.59 µS/cm	0.12 mg/L	1.17 NTU	-74.9 mV	63.55 ft	0.18 PSU	120.00 ml/min
1/27/2022 3:50 PM	16:00	7.24 pH	17.61 °C	370.76 µS/cm	0.16 mg/L	1.09 NTU	-79.3 mV	63.55 ft	0.18 PSU	120.00 ml/min
1/27/2022 3:54 PM	20:00	7.28 pH	17.49 °C	363.43 µS/cm	0.37 mg/L	1.08 NTU	-78.6 mV	63.55 ft	0.18 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWC-22R	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/28/2022 9:59:44 AM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWC-24R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.11 ft Total Depth: 40.11 ft Initial Depth to Water: 25.3 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 35.11 ft Estimated Total Volume Pumped: 3416 ml Flow Cell Volume: 90 ml Final Flow Rate: 122 ml/min Final Draw Down: -0.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 3L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/28/2022 9:59 AM	00:00	7.56 pH	13.65 °C	277.43 µS/cm	2.10 mg/L	1.83 NTU	17.2 mV	25.30 ft	0.13 PSU	122.00 ml/min
1/28/2022 10:03 AM	04:00	7.61 pH	13.74 °C	274.80 µS/cm	2.55 mg/L	1.61 NTU	13.0 mV	25.29 ft	0.13 PSU	122.00 ml/min
1/28/2022 10:07 AM	08:00	7.63 pH	13.88 °C	273.65 µS/cm	2.76 mg/L	0.81 NTU	9.5 mV	25.29 ft	0.13 PSU	122.00 ml/min
1/28/2022 10:11 AM	12:00	7.64 pH	13.88 °C	272.57 µS/cm	2.97 mg/L	0.71 NTU	6.1 mV	25.28 ft	0.13 PSU	122.00 ml/min
1/28/2022 10:15 AM	16:00	7.65 pH	13.88 °C	272.05 µS/cm	3.17 mg/L	0.71 NTU	2.6 mV	25.26 ft	0.13 PSU	122.00 ml/min
1/28/2022 10:19 AM	20:00	7.66 pH	13.87 °C	271.55 µS/cm	3.37 mg/L	0.84 NTU	-0.6 mV	25.25 ft	0.13 PSU	122.00 ml/min
1/28/2022 10:23 AM	24:00	7.67 pH	13.90 °C	271.44 µS/cm	3.54 mg/L	1.02 NTU	-3.5 mV	25.23 ft	0.13 PSU	122.00 ml/min
1/28/2022 10:27 AM	28:00	7.68 pH	14.01 °C	271.24 µS/cm	3.60 mg/L	0.73 NTU	-5.7 mV	25.23 ft	0.13 PSU	122.00 ml/min

Samples

Sample ID:	Description:
GWC-24R	Metals, Inorganic, TDS, Alkalinity
DUP-3	Metals, Inorganic, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/28/2022 10:05:26 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWC-21R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 80.59 ft Total Depth: 90.59 ft Initial Depth to Water: 71.69 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 85.59 ft Estimated Total Volume Pumped: 13440 ml Flow Cell Volume: 90 ml Final Flow Rate: 105 ml/min Final Draw Down: 5.54 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Water has strong odor. Pumped an additional hour after stabilization to attempt to bring pH into range with no effect.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/28/2022 10:05 AM	00:00	6.63 pH	14.08 °C	621.61 µS/cm	1.47 mg/L	0.21 NTU	0.1 mV	73.48 ft	0.30 PSU	105.00 ml/min
1/28/2022 10:09 AM	04:00	6.61 pH	14.26 °C	620.31 µS/cm	0.85 mg/L	0.15 NTU	-1.4 mV	73.77 ft	0.30 PSU	105.00 ml/min
1/28/2022 10:13 AM	08:00	6.61 pH	14.35 °C	617.47 µS/cm	0.61 mg/L	0.50 NTU	-3.3 mV	74.14 ft	0.30 PSU	105.00 ml/min
1/28/2022 10:17 AM	12:00	6.61 pH	14.52 °C	612.31 µS/cm	0.50 mg/L	0.11 NTU	-3.6 mV	74.49 ft	0.30 PSU	105.00 ml/min
1/28/2022 10:21 AM	16:00	6.62 pH	14.58 °C	601.05 µS/cm	0.45 mg/L	0.19 NTU	-0.7 mV	74.82 ft	0.29 PSU	105.00 ml/min
1/28/2022 10:25 AM	20:00	6.62 pH	14.61 °C	590.09 µS/cm	0.42 mg/L	0.36 NTU	3.2 mV	75.10 ft	0.29 PSU	105.00 ml/min
1/28/2022 10:29 AM	24:00	6.61 pH	14.67 °C	581.41 µS/cm	0.40 mg/L	0.47 NTU	6.9 mV	75.36 ft	0.28 PSU	105.00 ml/min
1/28/2022 10:33 AM	28:00	6.62 pH	14.67 °C	576.68 µS/cm	0.39 mg/L	0.32 NTU	9.5 mV	75.60 ft	0.28 PSU	105.00 ml/min
1/28/2022 10:37 AM	32:00	6.62 pH	14.72 °C	574.94 µS/cm	0.37 mg/L	0.34 NTU	11.7 mV	75.83 ft	0.28 PSU	105.00 ml/min
1/28/2022 10:41 AM	36:00	6.63 pH	14.72 °C	574.03 µS/cm	0.36 mg/L	0.26 NTU	13.7 mV	76.02 ft	0.28 PSU	105.00 ml/min
1/28/2022 10:45 AM	40:00	6.63 pH	14.80 °C	575.24 µS/cm	0.37 mg/L	0.28 NTU	15.0 mV	76.20 ft	0.28 PSU	105.00 ml/min
1/28/2022 10:49 AM	44:00	6.64 pH	14.76 °C	576.84 µS/cm	0.37 mg/L	0.24 NTU	16.6 mV	76.38 ft	0.28 PSU	105.00 ml/min
1/28/2022 10:53 AM	48:00	6.64 pH	14.93 °C	578.17 µS/cm	0.37 mg/L	0.33 NTU	17.5 mV	76.54 ft	0.28 PSU	105.00 ml/min
1/28/2022 10:57 AM	52:00	6.65 pH	14.94 °C	578.97 µS/cm	0.37 mg/L	0.20 NTU	18.1 mV	76.68 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:01 AM	56:00	6.65 pH	15.39 °C	577.20 µS/cm	0.39 mg/L	0.05 NTU	18.0 mV	76.79 ft	0.28 PSU	105.00 ml/min

1/28/2022 11:05 AM	01:00:00	6.65 pH	15.39 °C	577.29 µS/cm	0.41 mg/L	0.04 NTU	18.2 mV	76.87 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:09 AM	01:04:00	6.65 pH	15.39 °C	577.30 µS/cm	0.44 mg/L	0.01 NTU	18.4 mV	76.96 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:13 AM	01:08:00	6.65 pH	15.55 °C	575.52 µS/cm	0.50 mg/L	0.01 NTU	18.5 mV	77.04 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:17 AM	01:12:00	6.66 pH	15.44 °C	573.89 µS/cm	0.59 mg/L	0.03 NTU	18.6 mV	77.08 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:21 AM	01:16:00	6.66 pH	15.39 °C	572.16 µS/cm	0.70 mg/L	0.01 NTU	18.5 mV	77.11 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:25 AM	01:20:00	6.66 pH	15.30 °C	572.75 µS/cm	0.84 mg/L	0.04 NTU	18.7 mV	77.12 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:29 AM	01:24:00	6.66 pH	15.39 °C	571.22 µS/cm	0.97 mg/L	0.04 NTU	18.6 mV	77.14 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:33 AM	01:28:00	6.66 pH	15.39 °C	569.19 µS/cm	1.11 mg/L	0.02 NTU	18.7 mV	77.16 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:37 AM	01:32:00	6.66 pH	15.52 °C	567.09 µS/cm	1.23 mg/L	0.03 NTU	18.8 mV	77.17 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:41 AM	01:36:00	6.66 pH	15.44 °C	564.62 µS/cm	1.37 mg/L	0.01 NTU	18.8 mV	77.17 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:45 AM	01:40:00	6.66 pH	15.72 °C	563.99 µS/cm	1.51 mg/L	0.01 NTU	18.4 mV	77.17 ft	0.28 PSU	105.00 ml/min
1/28/2022 11:49 AM	01:44:00	6.67 pH	15.59 °C	562.63 µS/cm	1.66 mg/L	0.03 NTU	18.7 mV	77.17 ft	0.27 PSU	105.00 ml/min
1/28/2022 11:53 AM	01:48:00	6.67 pH	15.51 °C	560.50 µS/cm	1.78 mg/L	0.01 NTU	18.8 mV	77.17 ft	0.27 PSU	105.00 ml/min
1/28/2022 11:57 AM	01:52:00	6.68 pH	15.52 °C	559.92 µS/cm	1.91 mg/L	0.01 NTU	18.4 mV	77.17 ft	0.27 PSU	105.00 ml/min
1/28/2022 12:01 PM	01:56:00	6.68 pH	15.43 °C	558.43 µS/cm	2.01 mg/L	0.08 NTU	18.7 mV	77.17 ft	0.27 PSU	105.00 ml/min
1/28/2022 12:05 PM	02:00:00	6.68 pH	15.30 °C	556.12 µS/cm	2.10 mg/L	0.06 NTU	18.8 mV	77.18 ft	0.27 PSU	105.00 ml/min
1/28/2022 12:09 PM	02:04:00	6.68 pH	15.31 °C	556.01 µS/cm	2.18 mg/L	0.13 NTU	18.5 mV	77.20 ft	0.27 PSU	105.00 ml/min
1/28/2022 12:13 PM	02:08:00	6.69 pH	15.34 °C	553.13 µS/cm	2.28 mg/L	0.09 NTU	18.5 mV	77.23 ft	0.27 PSU	105.00 ml/min

Samples

Sample ID:	Description:
GWC-21R	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/28/2022 10:44:44 AM

Project: Plant Bowen LF January 2022

Operator Name: Kevin Stephenson

Location Name: GWC-18 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 70.31 ft Total Depth: 80.31 ft Initial Depth to Water: 73.62 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 79.31 ft Estimated Total Volume Pumped: 18240 ml Flow Cell Volume: 90 ml Final Flow Rate: 240 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 3 liter. WL started in the screen. Well does not evacuate. 3 well volume method initiated.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/28/2022 10:44 AM	00:00	6.80 pH	13.30 °C	128.94 µS/cm	8.15 mg/L	0.86 NTU	144.6 mV	73.62 ft	0.06 PSU	240.00 ml/min
1/28/2022 10:48 AM	04:00	6.35 pH	14.97 °C	106.25 µS/cm	7.53 mg/L	0.62 NTU	100.3 mV	73.62 ft	0.05 PSU	240.00 ml/min
1/28/2022 10:52 AM	08:00	6.22 pH	15.11 °C	106.02 µS/cm	7.46 mg/L	0.60 NTU	82.2 mV	73.62 ft	0.05 PSU	240.00 ml/min
1/28/2022 10:56 AM	12:00	6.21 pH	15.11 °C	107.12 µS/cm	7.44 mg/L	0.73 NTU	71.3 mV	73.62 ft	0.05 PSU	240.00 ml/min
1/28/2022 11:00 AM	16:00	6.22 pH	15.20 °C	108.65 µS/cm	7.41 mg/L	0.75 NTU	63.2 mV	73.62 ft	0.05 PSU	240.00 ml/min
1/28/2022 11:04 AM	20:00	6.24 pH	15.16 °C	111.40 µS/cm	7.39 mg/L	0.58 NTU	56.5 mV	73.62 ft	0.05 PSU	240.00 ml/min
1/28/2022 11:08 AM	24:00	6.26 pH	15.15 °C	114.60 µS/cm	7.38 mg/L	0.82 NTU	52.5 mV	73.62 ft	0.05 PSU	240.00 ml/min
1/28/2022 11:12 AM	28:00	6.29 pH	15.25 °C	118.14 µS/cm	7.35 mg/L	0.79 NTU	51.5 mV	73.62 ft	0.06 PSU	240.00 ml/min
1/28/2022 11:16 AM	32:00	6.31 pH	15.34 °C	122.65 µS/cm	7.34 mg/L	0.63 NTU	47.4 mV	73.62 ft	0.06 PSU	240.00 ml/min
1/28/2022 11:20 AM	36:00	6.35 pH	15.22 °C	127.70 µS/cm	7.28 mg/L	0.54 NTU	45.3 mV	73.62 ft	0.06 PSU	240.00 ml/min
1/28/2022 11:24 AM	40:00	6.38 pH	15.19 °C	133.30 µS/cm	7.28 mg/L	0.56 NTU	43.5 mV	73.62 ft	0.06 PSU	240.00 ml/min
1/28/2022 11:28 AM	44:00	6.41 pH	15.22 °C	139.58 µS/cm	7.24 mg/L	0.60 NTU	41.5 mV	73.62 ft	0.07 PSU	240.00 ml/min
1/28/2022 11:32 AM	48:00	6.45 pH	15.27 °C	145.50 µS/cm	7.23 mg/L	0.57 NTU	39.9 mV	73.62 ft	0.07 PSU	240.00 ml/min
1/28/2022 11:36 AM	52:00	6.48 pH	15.27 °C	150.70 µS/cm	7.19 mg/L	0.18 NTU	39.6 mV	73.62 ft	0.07 PSU	240.00 ml/min
1/28/2022 11:40 AM	56:00	6.47 pH	15.23 °C	154.61 µS/cm	7.17 mg/L	0.26 NTU	38.5 mV	73.62 ft	0.07 PSU	240.00 ml/min

1/28/2022 11:44 AM	01:00:00	6.50 pH	15.38 °C	159.75 µS/cm	7.15 mg/L	0.20 NTU	37.5 mV	73.62 ft	0.08 PSU	240.00 ml/min
1/28/2022 11:48 AM	01:04:00	6.52 pH	15.29 °C	163.58 µS/cm	7.13 mg/L	0.18 NTU	37.4 mV	73.62 ft	0.08 PSU	240.00 ml/min
1/28/2022 11:52 AM	01:08:00	6.55 pH	15.25 °C	167.00 µS/cm	7.10 mg/L	0.22 NTU	36.6 mV	73.62 ft	0.08 PSU	240.00 ml/min
1/28/2022 11:56 AM	01:12:00	6.58 pH	15.20 °C	171.21 µS/cm	7.14 mg/L	0.24 NTU	36.1 mV	73.62 ft	0.08 PSU	240.00 ml/min
1/28/2022 12:00 PM	01:16:00	6.60 pH	15.15 °C	173.81 µS/cm	7.08 mg/L	0.28 NTU	35.2 mV	73.62 ft	0.08 PSU	240.00 ml/min

Samples

Sample ID:	Description:
GWC-18	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/31/2022 10:22:49 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWA-41R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 121.05 ft Total Depth: 131.05 ft Initial Depth to Water: 79.27 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 126.05 ft Estimated Total Volume Pumped: 3600 ml Flow Cell Volume: 90 ml Final Flow Rate: 180 ml/min Final Draw Down: 0.33 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/31/2022 10:22 AM	00:00	6.88 pH	14.15 °C	319.28 µS/cm	1.96 mg/L	1.24 NTU	50.8 mV	79.60 ft	0.15 PSU	180.00 ml/min
1/31/2022 10:26 AM	04:00	6.69 pH	14.40 °C	289.54 µS/cm	0.58 mg/L	1.41 NTU	30.7 mV	79.60 ft	0.14 PSU	180.00 ml/min
1/31/2022 10:30 AM	08:00	6.67 pH	14.54 °C	282.62 µS/cm	0.35 mg/L	0.99 NTU	22.1 mV	79.60 ft	0.14 PSU	180.00 ml/min
1/31/2022 10:34 AM	12:00	6.65 pH	14.54 °C	278.41 µS/cm	0.28 mg/L	1.25 NTU	24.6 mV	79.60 ft	0.13 PSU	180.00 ml/min
1/31/2022 10:38 AM	16:00	6.64 pH	14.70 °C	277.05 µS/cm	0.23 mg/L	1.60 NTU	27.6 mV	79.60 ft	0.13 PSU	180.00 ml/min
1/31/2022 10:42 AM	20:00	6.63 pH	14.76 °C	276.68 µS/cm	0.22 mg/L	1.29 NTU	28.9 mV	79.60 ft	0.13 PSU	180.00 ml/min

Samples

Sample ID:	Description:
GWA-41R	Metals, Inorganics, TDS, Alkalinity
DUP-1	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/31/2022 10:39:34 AM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWA-43R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 104.58 ft Total Depth: 114.58 ft Initial Depth to Water: 52.7 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 109.58 ft Estimated Total Volume Pumped: 10080 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: -0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 2L

Pumped for an extra hour in an attempt to get pH into range, with no effect

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/31/2022 10:39 AM	00:00	7.94 pH	13.75 °C	272.25 µS/cm	7.52 mg/L	0.03 NTU	142.2 mV	52.70 ft	0.13 PSU	120.00 ml/min
1/31/2022 10:43 AM	04:00	7.97 pH	14.16 °C	270.52 µS/cm	7.46 mg/L	0.32 NTU	125.6 mV	52.72 ft	0.13 PSU	120.00 ml/min
1/31/2022 10:47 AM	08:00	8.01 pH	13.94 °C	266.37 µS/cm	7.17 mg/L	0.17 NTU	113.0 mV	52.71 ft	0.13 PSU	120.00 ml/min
1/31/2022 10:51 AM	12:00	8.01 pH	13.93 °C	269.70 µS/cm	7.22 mg/L	0.22 NTU	105.8 mV	52.70 ft	0.13 PSU	120.00 ml/min
1/31/2022 10:55 AM	16:00	8.01 pH	14.70 °C	268.81 µS/cm	7.21 mg/L	2.16 NTU	96.2 mV	52.73 ft	0.13 PSU	180.00 ml/min
1/31/2022 10:59 AM	20:00	8.02 pH	14.85 °C	267.61 µS/cm	7.11 mg/L	1.12 NTU	90.6 mV	52.73 ft	0.13 PSU	180.00 ml/min
1/31/2022 11:03 AM	24:00	8.02 pH	14.93 °C	266.36 µS/cm	7.11 mg/L	3.02 NTU	85.8 mV	52.74 ft	0.13 PSU	180.00 ml/min
1/31/2022 11:07 AM	28:00	8.02 pH	14.96 °C	265.05 µS/cm	7.08 mg/L	4.20 NTU	82.8 mV	52.74 ft	0.13 PSU	180.00 ml/min
1/31/2022 11:11 AM	32:00	8.03 pH	14.74 °C	263.38 µS/cm	7.03 mg/L	4.47 NTU	80.3 mV	52.71 ft	0.13 PSU	120.00 ml/min
1/31/2022 11:15 AM	36:00	8.03 pH	14.51 °C	262.62 µS/cm	6.97 mg/L	5.22 NTU	79.1 mV	52.70 ft	0.13 PSU	120.00 ml/min
1/31/2022 11:19 AM	40:00	8.03 pH	14.46 °C	261.81 µS/cm	7.04 mg/L	5.84 NTU	77.6 mV	52.70 ft	0.13 PSU	120.00 ml/min
1/31/2022 11:23 AM	44:00	8.03 pH	14.53 °C	260.79 µS/cm	7.03 mg/L	6.44 NTU	76.1 mV	52.70 ft	0.12 PSU	120.00 ml/min
1/31/2022 11:27 AM	48:00	8.03 pH	14.55 °C	260.85 µS/cm	7.06 mg/L	6.57 NTU	75.3 mV	52.70 ft	0.12 PSU	120.00 ml/min
1/31/2022 11:31 AM	52:00	8.03 pH	14.65 °C	259.55 µS/cm	7.05 mg/L	6.48 NTU	74.4 mV	52.70 ft	0.12 PSU	120.00 ml/min
1/31/2022 11:35 AM	56:00	8.03 pH	14.65 °C	259.81 µS/cm	7.09 mg/L	6.41 NTU	73.9 mV	52.69 ft	0.12 PSU	120.00 ml/min

1/31/2022 11:39 AM	01:00:00	8.03 pH	14.64 °C	258.44 µS/cm	7.07 mg/L	5.84 NTU	73.2 mV	52.69 ft	0.12 PSU	120.00 ml/min
1/31/2022 11:43 AM	01:04:00	8.03 pH	14.70 °C	257.77 µS/cm	7.06 mg/L	5.32 NTU	73.1 mV	52.69 ft	0.12 PSU	120.00 ml/min
1/31/2022 11:47 AM	01:08:00	8.04 pH	14.74 °C	257.49 µS/cm	7.08 mg/L	4.94 NTU	72.6 mV	52.68 ft	0.12 PSU	120.00 ml/min
1/31/2022 11:51 AM	01:12:00	8.04 pH	14.72 °C	257.07 µS/cm	7.08 mg/L	4.44 NTU	71.6 mV	52.68 ft	0.12 PSU	120.00 ml/min
1/31/2022 11:55 AM	01:16:00	8.04 pH	14.74 °C	256.16 µS/cm	7.06 mg/L	4.41 NTU	71.3 mV	52.67 ft	0.12 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWA-43R	Metals, Inorganic, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/31/2022 11:28:32 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWA-41 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 92.5 ft Total Depth: 102.5 ft Initial Depth to Water: 78.54 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 97.5 ft Estimated Total Volume Pumped: 12600 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/31/2022 11:28 AM	00:00	6.48 pH	14.99 °C	89.41 µS/cm	7.39 mg/L	0.32 NTU	55.8 mV	78.59 ft	0.04 PSU	150.00 ml/min
1/31/2022 11:32 AM	04:00	5.90 pH	15.12 °C	56.93 µS/cm	7.47 mg/L	0.28 NTU	63.7 mV	78.59 ft	0.03 PSU	150.00 ml/min
1/31/2022 11:36 AM	08:00	5.60 pH	15.21 °C	47.63 µS/cm	7.46 mg/L	0.59 NTU	65.6 mV	78.59 ft	0.02 PSU	150.00 ml/min
1/31/2022 11:40 AM	12:00	5.45 pH	15.22 °C	43.91 µS/cm	7.44 mg/L	1.52 NTU	66.4 mV	78.59 ft	0.02 PSU	150.00 ml/min
1/31/2022 11:44 AM	16:00	5.37 pH	15.23 °C	41.89 µS/cm	7.44 mg/L	1.82 NTU	67.0 mV	78.59 ft	0.02 PSU	150.00 ml/min
1/31/2022 11:48 AM	20:00	5.35 pH	15.15 °C	40.69 µS/cm	7.45 mg/L	2.11 NTU	66.8 mV	78.59 ft	0.02 PSU	150.00 ml/min
1/31/2022 11:52 AM	24:00	5.34 pH	15.04 °C	41.39 µS/cm	7.43 mg/L	1.61 NTU	67.1 mV	78.59 ft	0.02 PSU	150.00 ml/min
1/31/2022 11:56 AM	28:00	5.36 pH	15.08 °C	44.96 µS/cm	7.37 mg/L	1.47 NTU	67.6 mV	78.59 ft	0.02 PSU	150.00 ml/min
1/31/2022 12:00 PM	32:00	5.43 pH	15.12 °C	51.88 µS/cm	7.28 mg/L	1.28 NTU	67.0 mV	78.59 ft	0.02 PSU	150.00 ml/min
1/31/2022 12:04 PM	36:00	5.50 pH	15.19 °C	62.18 µS/cm	7.20 mg/L	1.08 NTU	66.8 mV	78.59 ft	0.03 PSU	150.00 ml/min
1/31/2022 12:08 PM	40:00	5.60 pH	15.22 °C	71.38 µS/cm	7.16 mg/L	1.18 NTU	66.2 mV	78.59 ft	0.03 PSU	150.00 ml/min
1/31/2022 12:12 PM	44:00	5.67 pH	15.56 °C	79.09 µS/cm	7.09 mg/L	0.92 NTU	66.3 mV	78.59 ft	0.04 PSU	150.00 ml/min
1/31/2022 12:16 PM	48:00	5.73 pH	15.44 °C	86.88 µS/cm	7.11 mg/L	0.92 NTU	66.3 mV	78.59 ft	0.04 PSU	150.00 ml/min
1/31/2022 12:20 PM	52:00	5.79 pH	15.40 °C	95.63 µS/cm	7.09 mg/L	1.08 NTU	66.8 mV	78.59 ft	0.04 PSU	150.00 ml/min
1/31/2022 12:24 PM	56:00	5.84 pH	15.44 °C	101.35 µS/cm	7.09 mg/L	1.12 NTU	67.2 mV	78.59 ft	0.05 PSU	150.00 ml/min

1/31/2022 12:28 PM	01:00:00	5.88 pH	15.51 °C	107.55 µS/cm	7.06 mg/L	0.82 NTU	67.4 mV	78.59 ft	0.05 PSU	150.00 ml/min
1/31/2022 12:32 PM	01:04:00	5.91 pH	15.57 °C	111.93 µS/cm	7.02 mg/L	0.69 NTU	68.3 mV	78.59 ft	0.05 PSU	150.00 ml/min
1/31/2022 12:36 PM	01:08:00	5.95 pH	15.48 °C	117.13 µS/cm	7.06 mg/L	0.66 NTU	68.9 mV	78.59 ft	0.05 PSU	150.00 ml/min
1/31/2022 12:40 PM	01:12:00	5.96 pH	15.48 °C	118.24 µS/cm	7.05 mg/L	0.92 NTU	70.0 mV	78.59 ft	0.06 PSU	150.00 ml/min
1/31/2022 12:44 PM	01:16:00	5.98 pH	15.48 °C	120.74 µS/cm	7.04 mg/L	0.62 NTU	71.0 mV	78.59 ft	0.06 PSU	150.00 ml/min
1/31/2022 12:48 PM	01:20:00	6.00 pH	15.66 °C	123.98 µS/cm	7.05 mg/L	0.81 NTU	71.2 mV	78.59 ft	0.06 PSU	150.00 ml/min
1/31/2022 12:52 PM	01:24:00	6.02 pH	15.80 °C	126.37 µS/cm	6.98 mg/L	0.65 NTU	72.3 mV	78.59 ft	0.06 PSU	150.00 ml/min

Samples

Sample ID:	Description:
GWA-41	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/31/2022 12:46:25 PM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWA-43 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 82.53 ft Total Depth: 92.53 ft Initial Depth to Water: 52.41 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 87.53 ft Estimated Total Volume Pumped: 4040 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: -0.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 2.5L

At 12 min in, changed pump rate to 110ml/min

At 16 min in, changed pump rate to 150ml/min

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/31/2022 12:46 PM	00:00	5.70 pH	15.64 °C	24.65 µS/cm	7.32 mg/L	1.63 NTU	133.5 mV	52.41 ft	0.01 PSU	200.00 ml/min
1/31/2022 12:50 PM	04:00	5.71 pH	15.70 °C	23.39 µS/cm	7.55 mg/L	1.78 NTU	129.5 mV	52.39 ft	0.01 PSU	200.00 ml/min
1/31/2022 12:54 PM	08:00	5.70 pH	15.80 °C	22.73 µS/cm	7.56 mg/L	1.29 NTU	130.1 mV	52.40 ft	0.01 PSU	200.00 ml/min
1/31/2022 12:58 PM	12:00	5.69 pH	15.74 °C	22.32 µS/cm	7.41 mg/L	1.42 NTU	129.7 mV	52.33 ft	0.01 PSU	110.00 ml/min
1/31/2022 1:02 PM	16:00	5.69 pH	16.19 °C	22.09 µS/cm	7.32 mg/L	0.56 NTU	129.1 mV	52.37 ft	0.01 PSU	150.00 ml/min
1/31/2022 1:06 PM	20:00	5.68 pH	16.28 °C	21.48 µS/cm	7.30 mg/L	0.26 NTU	128.7 mV	52.36 ft	0.01 PSU	150.00 ml/min
1/31/2022 1:10 PM	24:00	5.71 pH	16.12 °C	21.94 µS/cm	7.22 mg/L	0.14 NTU	126.9 mV	52.37 ft	0.01 PSU	150.00 ml/min

Samples

Sample ID:	Description:
GWA-43	Metals, Inorganic, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/31/2022 1:14:22 PM

Project: Plant Bowen LF January 2022

Operator Name: Kevin Stephenson

Location Name: GWA-39Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 107.54 ft Total Depth: 117.54 ft Initial Depth to Water: 66.54 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 112.54 ft Estimated Total Volume Pumped: 4480 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.17 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 2 liters.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/31/2022 1:14 PM	00:00	6.61 pH	13.76 °C	160.11 µS/cm	4.88 mg/L	1.73 NTU	145.0 mV	66.71 ft	0.08 PSU	140.00 ml/min
1/31/2022 1:18 PM	04:00	6.48 pH	14.16 °C	148.14 µS/cm	5.80 mg/L	2.23 NTU	110.7 mV	66.71 ft	0.07 PSU	140.00 ml/min
1/31/2022 1:22 PM	08:00	6.48 pH	14.35 °C	140.37 µS/cm	6.37 mg/L	1.69 NTU	93.1 mV	66.71 ft	0.07 PSU	140.00 ml/min
1/31/2022 1:26 PM	12:00	6.46 pH	14.34 °C	134.71 µS/cm	6.74 mg/L	1.89 NTU	80.8 mV	66.71 ft	0.06 PSU	140.00 ml/min
1/31/2022 1:30 PM	16:00	6.43 pH	14.38 °C	130.49 µS/cm	7.00 mg/L	1.37 NTU	72.6 mV	66.71 ft	0.06 PSU	140.00 ml/min
1/31/2022 1:34 PM	20:00	6.42 pH	14.48 °C	128.26 µS/cm	7.19 mg/L	1.54 NTU	64.3 mV	66.71 ft	0.06 PSU	140.00 ml/min
1/31/2022 1:38 PM	24:00	6.42 pH	14.59 °C	126.47 µS/cm	7.30 mg/L	1.38 NTU	59.7 mV	66.71 ft	0.06 PSU	140.00 ml/min
1/31/2022 1:42 PM	28:00	6.41 pH	14.54 °C	125.86 µS/cm	7.41 mg/L	1.26 NTU	56.7 mV	66.71 ft	0.06 PSU	140.00 ml/min
1/31/2022 1:46 PM	32:00	6.41 pH	14.55 °C	125.44 µS/cm	7.49 mg/L	1.04 NTU	53.2 mV	66.71 ft	0.06 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWA-39Z	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/31/2022 1:47:04 PM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWA-40 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 145.02 ft Total Depth: 155.02 ft Initial Depth to Water: 68.82 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 150.02 ft Estimated Total Volume Pumped: 3960 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
1/31/2022 1:47 PM	00:00	7.23 pH	15.24 °C	169.27 µS/cm	9.39 mg/L	1.74 NTU	70.9 mV	68.83 ft	120.00 ml/min
1/31/2022 1:51 PM	04:00	6.96 pH	15.96 °C	167.11 µS/cm	5.33 mg/L	1.96 NTU	57.2 mV	68.83 ft	120.00 ml/min
1/31/2022 1:55 PM	08:00	6.80 pH	15.97 °C	162.26 µS/cm	5.65 mg/L	1.98 NTU	55.7 mV	68.83 ft	120.00 ml/min
1/31/2022 1:59 PM	12:00	6.79 pH	15.86 °C	154.32 µS/cm	7.65 mg/L	2.05 NTU	47.4 mV	68.83 ft	120.00 ml/min
1/31/2022 2:03 PM	16:00	6.82 pH	16.05 °C	151.86 µS/cm	8.54 mg/L	2.00 NTU	45.2 mV	68.83 ft	120.00 ml/min
1/31/2022 2:07 PM	20:00	6.83 pH	15.91 °C	151.64 µS/cm	8.83 mg/L	2.04 NTU	45.3 mV	68.83 ft	120.00 ml/min
1/31/2022 2:11 PM	24:00	6.85 pH	15.56 °C	151.71 µS/cm	8.93 mg/L	1.82 NTU	44.1 mV	68.83 ft	120.00 ml/min
1/31/2022 2:15 PM	28:00	6.85 pH	15.87 °C	153.46 µS/cm	9.15 mg/L	1.65 NTU	44.0 mV	68.83 ft	150.00 ml/min
1/31/2022 2:19 PM	32:00	6.85 pH	15.92 °C	153.83 µS/cm	9.12 mg/L	1.68 NTU	43.9 mV	68.83 ft	150.00 ml/min

Samples

Sample ID:	Description:
GWA-40	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/31/2022 2:14:25 PM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWC-44 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 81.1 ft Total Depth: 91.1 ft Initial Depth to Water: 52.09 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 96.1 ft Estimated Total Volume Pumped: 8160 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.27 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 1L

Pumped for an extra hour in an attempt to get pH in range, to no effect

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/31/2022 2:14 PM	00:00	4.80 pH	17.17 °C	123.70 µS/cm	4.15 mg/L	3.94 NTU	159.3 mV	52.09 ft	0.06 PSU	120.00 ml/min
1/31/2022 2:18 PM	04:00	4.77 pH	17.15 °C	123.98 µS/cm	3.63 mg/L	2.30 NTU	152.3 mV	52.13 ft	0.06 PSU	120.00 ml/min
1/31/2022 2:22 PM	08:00	4.78 pH	17.16 °C	123.61 µS/cm	3.52 mg/L	0.91 NTU	149.2 mV	52.14 ft	0.06 PSU	120.00 ml/min
1/31/2022 2:26 PM	12:00	4.78 pH	16.94 °C	123.73 µS/cm	3.49 mg/L	2.56 NTU	147.3 mV	52.14 ft	0.06 PSU	120.00 ml/min
1/31/2022 2:30 PM	16:00	4.78 pH	16.97 °C	123.35 µS/cm	3.47 mg/L	0.46 NTU	145.9 mV	52.16 ft	0.06 PSU	120.00 ml/min
1/31/2022 2:34 PM	20:00	4.78 pH	16.90 °C	123.10 µS/cm	3.47 mg/L	0.17 NTU	144.5 mV	52.20 ft	0.06 PSU	120.00 ml/min
1/31/2022 2:38 PM	24:00	4.78 pH	16.90 °C	122.82 µS/cm	3.48 mg/L	0.15 NTU	143.1 mV	52.22 ft	0.06 PSU	120.00 ml/min
1/31/2022 2:42 PM	28:00	4.78 pH	16.88 °C	122.40 µS/cm	3.48 mg/L	0.11 NTU	142.6 mV	52.24 ft	0.06 PSU	120.00 ml/min
1/31/2022 2:46 PM	32:00	4.78 pH	16.86 °C	122.22 µS/cm	3.49 mg/L	0.07 NTU	141.8 mV	52.24 ft	0.06 PSU	120.00 ml/min
1/31/2022 2:50 PM	36:00	4.78 pH	16.85 °C	121.96 µS/cm	3.49 mg/L	0.05 NTU	141.8 mV	52.25 ft	0.06 PSU	120.00 ml/min
1/31/2022 2:54 PM	40:00	4.78 pH	16.77 °C	122.11 µS/cm	3.51 mg/L	0.06 NTU	140.5 mV	52.28 ft	0.06 PSU	120.00 ml/min
1/31/2022 2:58 PM	44:00	4.78 pH	16.88 °C	121.76 µS/cm	3.51 mg/L	0.10 NTU	140.5 mV	52.28 ft	0.06 PSU	120.00 ml/min
1/31/2022 3:02 PM	48:00	4.78 pH	17.00 °C	121.55 µS/cm	3.51 mg/L	0.09 NTU	140.2 mV	52.29 ft	0.06 PSU	120.00 ml/min
1/31/2022 3:06 PM	52:00	4.78 pH	17.12 °C	121.03 µS/cm	3.50 mg/L	0.14 NTU	139.2 mV	52.30 ft	0.06 PSU	120.00 ml/min
1/31/2022 3:10 PM	56:00	4.78 pH	17.09 °C	120.75 µS/cm	3.50 mg/L	0.07 NTU	139.2 mV	52.32 ft	0.06 PSU	120.00 ml/min

1/31/2022 3:14 PM	01:00:00	4.78 pH	17.16 °C	120.80 µS/cm	3.51 mg/L	0.06 NTU	139.0 mV	52.33 ft	0.06 PSU	120.00 ml/min
1/31/2022 3:18 PM	01:04:00	4.78 pH	17.30 °C	120.30 µS/cm	3.49 mg/L	0.06 NTU	139.0 mV	52.35 ft	0.06 PSU	120.00 ml/min
1/31/2022 3:22 PM	01:08:00	4.78 pH	17.34 °C	120.30 µS/cm	3.50 mg/L	0.07 NTU	138.1 mV	52.36 ft	0.06 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWC-44	Metals, Inorganic, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/31/2022 2:29:58 PM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWA-42 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 74.36 ft Total Depth: 84.36 ft Initial Depth to Water: 75.7 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 79.36 ft Estimated Total Volume Pumped: 2400 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 16 L

Water level started in screen interval. Well historically does not drawdown, therefore 3 well volume method was initiated.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/31/2022 2:29 PM	00:00	7.09 pH	16.07 °C	266.32 µS/cm	4.53 mg/L	0.23 NTU	61.0 mV	75.73 ft	0.13 PSU	150.00 ml/min
1/31/2022 2:33 PM	04:00	7.12 pH	15.99 °C	274.13 µS/cm	4.50 mg/L	0.13 NTU	64.3 mV	75.73 ft	0.13 PSU	150.00 ml/min
1/31/2022 2:37 PM	08:00	7.15 pH	15.98 °C	275.74 µS/cm	4.48 mg/L	0.08 NTU	66.1 mV	75.73 ft	0.13 PSU	150.00 ml/min
1/31/2022 2:41 PM	12:00	7.16 pH	15.93 °C	276.03 µS/cm	4.48 mg/L	0.11 NTU	67.6 mV	75.73 ft	0.13 PSU	150.00 ml/min
1/31/2022 2:45 PM	16:00	7.17 pH	16.02 °C	275.77 µS/cm	4.46 mg/L	0.09 NTU	68.5 mV	75.73 ft	0.13 PSU	150.00 ml/min

Samples

Sample ID:	Description:
GWA-42	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/31/2022 2:58:05 PM

Project: Plant Bowen LF January 2022

Operator Name: Kevin Stephenson

Location Name: GWC-46R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 49.01 ft Total Depth: 59.01 ft Initial Depth to Water: 38.62 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 54.01 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 1.6 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 2 liters.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
1/31/2022 2:58 PM	00:00	4.18 pH	19.40 °C	2.09 µS/cm	8.63 mg/L	1.23 NTU	50.9 mV	39.93 ft	0.00 PSU	120.00 ml/min
1/31/2022 3:02 PM	04:00	6.97 pH	16.95 °C	420.32 µS/cm	6.29 mg/L	1.50 NTU	55.5 mV	39.96 ft	0.20 PSU	120.00 ml/min
1/31/2022 3:06 PM	08:00	7.29 pH	16.60 °C	423.95 µS/cm	6.38 mg/L	1.31 NTU	39.9 mV	40.02 ft	0.21 PSU	120.00 ml/min
1/31/2022 3:10 PM	12:00	7.40 pH	16.60 °C	421.59 µS/cm	6.31 mg/L	1.41 NTU	33.8 mV	40.10 ft	0.20 PSU	120.00 ml/min
1/31/2022 3:14 PM	16:00	7.44 pH	16.66 °C	420.84 µS/cm	6.28 mg/L	1.93 NTU	31.2 mV	40.17 ft	0.20 PSU	120.00 ml/min
1/31/2022 3:18 PM	20:00	7.47 pH	16.86 °C	418.82 µS/cm	6.23 mg/L	1.88 NTU	29.8 mV	40.19 ft	0.20 PSU	120.00 ml/min
1/31/2022 3:22 PM	24:00	7.47 pH	16.86 °C	417.55 µS/cm	6.20 mg/L	0.63 NTU	28.9 mV	40.21 ft	0.20 PSU	120.00 ml/min
1/31/2022 3:26 PM	28:00	7.48 pH	16.82 °C	414.01 µS/cm	6.11 mg/L	0.16 NTU	28.3 mV	40.22 ft	0.20 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWC-46R	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 1/31/2022 3:08:07 PM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-48 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 49.49 ft Total Depth: 59.49 ft Initial Depth to Water: 36.59 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 54.49 ft Estimated Total Volume Pumped: 6600 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.12 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L. Purged for additional time due to lower pH

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
1/31/2022 3:08 PM	00:00	6.31 pH	15.29 °C	45.44 µS/cm	7.67 mg/L	1.45 NTU	45.2 mV	36.66 ft	110.00 ml/min
1/31/2022 3:12 PM	04:00	4.82 pH	16.11 °C	43.92 µS/cm	4.55 mg/L	1.46 NTU	39.5 mV	36.67 ft	110.00 ml/min
1/31/2022 3:16 PM	08:00	4.69 pH	16.36 °C	43.67 µS/cm	3.75 mg/L	1.41 NTU	38.4 mV	36.68 ft	110.00 ml/min
1/31/2022 3:20 PM	12:00	4.70 pH	16.38 °C	44.72 µS/cm	3.54 mg/L	1.43 NTU	37.5 mV	36.68 ft	110.00 ml/min
1/31/2022 3:24 PM	16:00	4.72 pH	16.46 °C	45.83 µS/cm	3.50 mg/L	1.37 NTU	36.9 mV	36.68 ft	110.00 ml/min
1/31/2022 3:28 PM	20:00	4.74 pH	16.41 °C	46.49 µS/cm	3.48 mg/L	1.39 NTU	36.8 mV	36.69 ft	110.00 ml/min
1/31/2022 3:32 PM	24:00	4.76 pH	16.46 °C	47.15 µS/cm	3.49 mg/L	1.38 NTU	37.0 mV	36.69 ft	110.00 ml/min
1/31/2022 3:36 PM	28:00	4.77 pH	16.56 °C	47.39 µS/cm	3.45 mg/L	1.35 NTU	36.5 mV	36.69 ft	110.00 ml/min
1/31/2022 3:40 PM	32:00	4.77 pH	16.50 °C	47.41 µS/cm	3.43 mg/L	1.33 NTU	37.0 mV	36.70 ft	110.00 ml/min
1/31/2022 3:44 PM	36:00	4.79 pH	16.40 °C	47.35 µS/cm	3.42 mg/L	1.36 NTU	36.9 mV	36.70 ft	110.00 ml/min
1/31/2022 3:48 PM	40:00	4.80 pH	16.30 °C	47.08 µS/cm	3.41 mg/L	1.33 NTU	36.9 mV	36.70 ft	110.00 ml/min
1/31/2022 3:52 PM	44:00	4.82 pH	16.16 °C	46.81 µS/cm	3.42 mg/L	1.37 NTU	36.4 mV	36.70 ft	110.00 ml/min
1/31/2022 3:56 PM	48:00	4.83 pH	16.09 °C	46.56 µS/cm	3.46 mg/L	1.35 NTU	36.5 mV	36.71 ft	110.00 ml/min
1/31/2022 4:00 PM	52:00	4.84 pH	16.09 °C	46.55 µS/cm	3.47 mg/L	1.37 NTU	36.9 mV	36.71 ft	110.00 ml/min
1/31/2022 4:04 PM	56:00	4.84 pH	16.10 °C	46.61 µS/cm	3.49 mg/L	1.36 NTU	37.3 mV	36.71 ft	110.00 ml/min

1/31/2022 4:08 PM	01:00:00	4.86 pH	16.09 °C	46.64 µS/cm	3.53 mg/L	1.34 NTU	37.1 mV	36.71 ft	110.00 ml/min
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Samples

Sample ID:	Description:
GWC-48	Metals, inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/1/2022 9:47:15 AM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-47R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 74.55 ft Total Depth: 84.55 ft Initial Depth to Water: 40.04 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 79.55 ft Estimated Total Volume Pumped: 6272 ml Flow Cell Volume: 90 ml Final Flow Rate: 116 ml/min Final Draw Down: 4.12 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
2/1/2022 9:47 AM	00:00	7.29 pH	13.10 °C	281.28 µS/cm	3.13 mg/L	1.65 NTU	36.0 mV	41.13 ft	160.00 ml/min
2/1/2022 9:51 AM	04:00	7.37 pH	15.28 °C	309.23 µS/cm	3.77 mg/L	1.57 NTU	27.2 mV	41.54 ft	160.00 ml/min
2/1/2022 9:55 AM	08:00	7.52 pH	15.74 °C	316.98 µS/cm	3.68 mg/L	1.50 NTU	26.1 mV	42.22 ft	160.00 ml/min
2/1/2022 9:59 AM	12:00	7.58 pH	15.78 °C	313.29 µS/cm	3.42 mg/L	1.54 NTU	25.2 mV	42.84 ft	160.00 ml/min
2/1/2022 10:03 AM	16:00	7.59 pH	15.65 °C	309.73 µS/cm	3.35 mg/L	2.06 NTU	26.7 mV	43.19 ft	116.00 ml/min
2/1/2022 10:07 AM	20:00	7.57 pH	15.55 °C	305.44 µS/cm	3.22 mg/L	2.36 NTU	29.2 mV	43.36 ft	116.00 ml/min
2/1/2022 10:11 AM	24:00	7.52 pH	15.33 °C	296.38 µS/cm	3.04 mg/L	2.59 NTU	31.7 mV	43.51 ft	116.00 ml/min
2/1/2022 10:15 AM	28:00	7.49 pH	15.51 °C	288.41 µS/cm	3.08 mg/L	2.62 NTU	32.7 mV	43.69 ft	116.00 ml/min
2/1/2022 10:19 AM	32:00	7.48 pH	15.66 °C	280.50 µS/cm	3.13 mg/L	2.60 NTU	33.6 mV	43.90 ft	116.00 ml/min
2/1/2022 10:23 AM	36:00	7.50 pH	15.78 °C	273.12 µS/cm	3.12 mg/L	2.59 NTU	34.4 mV	44.00 ft	116.00 ml/min
2/1/2022 10:27 AM	40:00	7.51 pH	15.74 °C	270.06 µS/cm	3.11 mg/L	2.39 NTU	34.9 mV	44.11 ft	116.00 ml/min
2/1/2022 10:31 AM	44:00	7.52 pH	15.70 °C	267.77 µS/cm	3.15 mg/L	2.10 NTU	35.7 mV	44.15 ft	116.00 ml/min
2/1/2022 10:35 AM	48:00	7.54 pH	15.82 °C	268.94 µS/cm	3.27 mg/L	2.13 NTU	35.3 mV	44.16 ft	116.00 ml/min

Samples

Sample ID:	Description:
GWC-47R	Metals, inorganics, TDS, Alkalinity

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 2/1/2022 10:00:27 AM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWC-45R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 120.12 ft Total Depth: 130.12 ft Initial Depth to Water: 51.12 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 125.12 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: -0.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/1/2022 10:00 AM	00:00	6.93 pH	14.64 °C	4.45 µS/cm	1.39 mg/L	0.22 NTU	87.9 mV	51.12 ft	0.00 PSU	120.00 ml/min
2/1/2022 10:04 AM	04:00	7.00 pH	15.19 °C	4.49 µS/cm	1.89 mg/L	0.63 NTU	78.1 mV	51.11 ft	0.00 PSU	120.00 ml/min
2/1/2022 10:08 AM	08:00	7.10 pH	15.39 °C	4.53 µS/cm	3.62 mg/L	0.43 NTU	77.6 mV	51.10 ft	0.00 PSU	120.00 ml/min
2/1/2022 10:12 AM	12:00	7.13 pH	15.39 °C	4.53 µS/cm	3.92 mg/L	0.38 NTU	75.8 mV	51.10 ft	0.00 PSU	120.00 ml/min
2/1/2022 10:16 AM	16:00	7.13 pH	15.46 °C	4.54 µS/cm	4.07 mg/L	0.52 NTU	74.0 mV	51.08 ft	0.00 PSU	120.00 ml/min
2/1/2022 10:20 AM	20:00	7.14 pH	15.64 °C	4.54 µS/cm	4.13 mg/L	0.29 NTU	72.4 mV	51.05 ft	0.00 PSU	120.00 ml/min
2/1/2022 10:24 AM	24:00	7.14 pH	15.67 °C	4.55 µS/cm	4.21 mg/L	0.41 NTU	71.6 mV	51.04 ft	0.00 PSU	120.00 ml/min
2/1/2022 10:28 AM	28:00	7.15 pH	15.60 °C	4.54 µS/cm	4.26 mg/L	0.30 NTU	70.9 mV	51.02 ft	0.00 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWC-45R	Metals, Inorganics, TDS, Alkalinity
DUP-2	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/1/2022 10:07:07 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWC-49R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 126.8 ft Total Depth: 136.8 ft Initial Depth to Water: 55.33 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 131.8 ft Estimated Total Volume Pumped: 3120 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/1/2022 10:07 AM	00:00	7.86 pH	14.63 °C	255.77 µS/cm	1.86 mg/L	2.81 NTU	44.3 mV	55.33 ft	0.12 PSU	130.00 ml/min
2/1/2022 10:11 AM	04:00	7.75 pH	14.68 °C	249.84 µS/cm	5.42 mg/L	0.96 NTU	52.2 mV	55.33 ft	0.12 PSU	130.00 ml/min
2/1/2022 10:15 AM	08:00	7.68 pH	14.76 °C	248.35 µS/cm	6.19 mg/L	0.41 NTU	57.8 mV	55.33 ft	0.12 PSU	130.00 ml/min
2/1/2022 10:19 AM	12:00	7.65 pH	14.76 °C	248.04 µS/cm	6.39 mg/L	0.23 NTU	60.6 mV	55.33 ft	0.12 PSU	130.00 ml/min
2/1/2022 10:23 AM	16:00	7.64 pH	14.76 °C	247.77 µS/cm	6.51 mg/L	0.06 NTU	62.3 mV	55.33 ft	0.12 PSU	130.00 ml/min
2/1/2022 10:27 AM	20:00	7.63 pH	14.80 °C	247.88 µS/cm	6.61 mg/L	0.08 NTU	63.8 mV	55.33 ft	0.12 PSU	130.00 ml/min
2/1/2022 10:31 AM	24:00	7.63 pH	14.72 °C	247.56 µS/cm	6.66 mg/L	0.01 NTU	64.7 mV	55.33 ft	0.12 PSU	130.00 ml/min

Samples

Sample ID:	Description:
GWC-49R	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/1/2022 10:38:21 AM

Project: Plant Bowen LF January 2022

Operator Name: Kevin Stephenson

Location Name: GWA-39RZ Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 130.07 ft Total Depth: 140.07 ft Initial Depth to Water: 64.96 ft	Pump Type: QED Bladder Tubing Type: LDPE Pump Intake From TOC: 135.07 ft Estimated Total Volume Pumped: 56320 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 65.25 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 6 liters. WL did not stabilize and dropped below top of screen. Complete evacuation method initiated. Samples to be collected 2/2/22.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/1/2022 10:38 AM	00:00	7.42 pH	13.85 °C	332.19 µS/cm	1.54 mg/L	3.70 NTU	44.4 mV	76.44 ft	0.16 PSU	200.00 ml/min
2/1/2022 10:42 AM	04:00	7.41 pH	14.23 °C	309.61 µS/cm	1.40 mg/L	3.21 NTU	12.9 mV	77.08 ft	0.15 PSU	200.00 ml/min
2/1/2022 10:46 AM	08:00	7.43 pH	14.30 °C	310.62 µS/cm	1.21 mg/L	4.39 NTU	1.7 mV	77.84 ft	0.15 PSU	200.00 ml/min
2/1/2022 10:50 AM	12:00	7.45 pH	14.42 °C	309.48 µS/cm	1.10 mg/L	4.10 NTU	-4.8 mV	78.31 ft	0.15 PSU	200.00 ml/min
2/1/2022 10:54 AM	16:00	7.46 pH	14.39 °C	309.54 µS/cm	1.05 mg/L	3.81 NTU	-6.8 mV	79.44 ft	0.15 PSU	200.00 ml/min
2/1/2022 10:58 AM	20:00	7.48 pH	14.39 °C	307.65 µS/cm	1.04 mg/L	3.37 NTU	-8.2 mV	79.82 ft	0.15 PSU	200.00 ml/min
2/1/2022 11:02 AM	24:00	7.48 pH	14.45 °C	307.23 µS/cm	0.99 mg/L	4.14 NTU	-9.2 mV	80.41 ft	0.15 PSU	200.00 ml/min
2/1/2022 11:06 AM	28:00	7.50 pH	14.46 °C	305.51 µS/cm	0.96 mg/L	4.62 NTU	-9.8 mV	81.37 ft	0.15 PSU	200.00 ml/min
2/1/2022 11:10 AM	32:00	7.51 pH	14.40 °C	305.45 µS/cm	0.95 mg/L	3.96 NTU	-10.6 mV	81.92 ft	0.15 PSU	200.00 ml/min
2/1/2022 11:14 AM	36:00	7.51 pH	14.48 °C	305.80 µS/cm	0.84 mg/L	3.78 NTU	-10.9 mV	82.63 ft	0.15 PSU	200.00 ml/min
2/1/2022 11:18 AM	40:00	7.52 pH	14.64 °C	303.31 µS/cm	0.83 mg/L	4.01 NTU	-10.8 mV	83.77 ft	0.15 PSU	200.00 ml/min
2/1/2022 11:22 AM	44:00	7.52 pH	14.72 °C	302.75 µS/cm	0.84 mg/L	4.07 NTU	-8.2 mV	84.46 ft	0.15 PSU	300.00 ml/min
2/1/2022 11:26 AM	48:00	7.51 pH	14.81 °C	302.92 µS/cm	0.84 mg/L	3.43 NTU	-7.7 mV	85.55 ft	0.15 PSU	300.00 ml/min
2/1/2022 11:30 AM	52:00	7.50 pH	14.95 °C	300.91 µS/cm	0.80 mg/L	4.08 NTU	-4.7 mV	87.12 ft	0.14 PSU	300.00 ml/min
2/1/2022 11:34 AM	56:00	7.49 pH	15.03 °C	299.69 µS/cm	0.80 mg/L	4.81 NTU	-2.7 mV	88.43 ft	0.14 PSU	300.00 ml/min

2/1/2022 11:38 AM	01:00:00	7.49 pH	15.06 °C	300.06 µS/cm	0.79 mg/L	3.06 NTU	-2.0 mV	90.78 ft	0.14 PSU	300.00 ml/min
2/1/2022 11:42 AM	01:04:00	7.49 pH	15.06 °C	299.97 µS/cm	0.81 mg/L	5.13 NTU	-1.6 mV	91.28 ft	0.14 PSU	300.00 ml/min
2/1/2022 11:46 AM	01:08:00	7.49 pH	15.11 °C	301.27 µS/cm	0.82 mg/L	3.91 NTU	-1.5 mV	92.87 ft	0.14 PSU	300.00 ml/min
2/1/2022 11:50 AM	01:12:00	7.49 pH	15.09 °C	300.23 µS/cm	0.86 mg/L	4.58 NTU	-0.6 mV	94.05 ft	0.14 PSU	300.00 ml/min
2/1/2022 11:54 AM	01:16:00	7.48 pH	15.11 °C	301.38 µS/cm	0.89 mg/L	4.87 NTU	-0.2 mV	95.28 ft	0.14 PSU	300.00 ml/min
2/1/2022 11:58 AM	01:20:00	7.49 pH	15.15 °C	300.78 µS/cm	0.90 mg/L	3.68 NTU	0.8 mV	95.28 ft	0.14 PSU	300.00 ml/min
2/1/2022 12:02 PM	01:24:00	7.49 pH	15.24 °C	301.00 µS/cm	0.95 mg/L	4.01 NTU	1.2 mV	95.28 ft	0.14 PSU	300.00 ml/min
2/1/2022 12:06 PM	01:28:00	7.49 pH	15.20 °C	301.08 µS/cm	0.98 mg/L	3.64 NTU	1.7 mV	99.68 ft	0.14 PSU	300.00 ml/min
2/1/2022 12:10 PM	01:32:00	7.49 pH	15.18 °C	300.61 µS/cm	1.00 mg/L	4.23 NTU	2.0 mV	100.33 ft	0.14 PSU	300.00 ml/min
2/1/2022 12:14 PM	01:36:00	7.50 pH	15.18 °C	300.49 µS/cm	1.03 mg/L	3.66 NTU	2.6 mV	102.96 ft	0.14 PSU	300.00 ml/min
2/1/2022 12:18 PM	01:40:00	7.50 pH	15.16 °C	301.19 µS/cm	1.07 mg/L	3.21 NTU	3.0 mV	103.51 ft	0.14 PSU	300.00 ml/min
2/1/2022 12:22 PM	01:44:00	7.50 pH	15.19 °C	301.90 µS/cm	1.09 mg/L	3.46 NTU	3.5 mV	104.57 ft	0.14 PSU	300.00 ml/min
2/1/2022 12:26 PM	01:48:00	7.50 pH	15.16 °C	302.54 µS/cm	1.14 mg/L	4.03 NTU	4.1 mV	105.97 ft	0.15 PSU	300.00 ml/min
2/1/2022 12:30 PM	01:52:00	7.49 pH	15.16 °C	303.38 µS/cm	1.18 mg/L	2.86 NTU	4.5 mV	107.12 ft	0.15 PSU	300.00 ml/min
2/1/2022 12:34 PM	01:56:00	7.50 pH	15.16 °C	304.48 µS/cm	1.24 mg/L	3.01 NTU	5.1 mV	108.54 ft	0.15 PSU	300.00 ml/min
2/1/2022 12:38 PM	02:00:00	7.50 pH	15.16 °C	304.27 µS/cm	1.27 mg/L	2.96 NTU	5.3 mV	109.46 ft	0.15 PSU	300.00 ml/min
2/1/2022 12:42 PM	02:04:00	7.50 pH	15.19 °C	305.78 µS/cm	1.29 mg/L	3.04 NTU	5.5 mV	111.29 ft	0.15 PSU	300.00 ml/min
2/1/2022 12:46 PM	02:08:00	7.51 pH	15.20 °C	305.89 µS/cm	1.36 mg/L	2.56 NTU	5.9 mV	112.48 ft	0.15 PSU	300.00 ml/min
2/1/2022 12:50 PM	02:12:00	7.51 pH	15.24 °C	306.68 µS/cm	1.41 mg/L	4.59 NTU	6.3 mV	113.32 ft	0.15 PSU	300.00 ml/min
2/1/2022 12:54 PM	02:16:00	7.52 pH	15.23 °C	307.87 µS/cm	1.43 mg/L	2.62 NTU	6.5 mV	114.33 ft	0.15 PSU	300.00 ml/min
2/1/2022 12:58 PM	02:20:00	7.51 pH	15.25 °C	308.76 µS/cm	1.47 mg/L	3.07 NTU	6.9 mV	115.48 ft	0.15 PSU	300.00 ml/min
2/1/2022 1:02 PM	02:24:00	7.51 pH	15.25 °C	309.40 µS/cm	1.52 mg/L	2.64 NTU	7.1 mV	116.22 ft	0.15 PSU	300.00 ml/min
2/1/2022 1:06 PM	02:28:00	7.51 pH	15.25 °C	309.82 µS/cm	1.57 mg/L	2.22 NTU	7.3 mV	117.54 ft	0.15 PSU	300.00 ml/min
2/1/2022 1:10 PM	02:32:00	7.51 pH	15.25 °C	310.35 µS/cm	1.61 mg/L	2.02 NTU	7.5 mV	118.98 ft	0.15 PSU	300.00 ml/min
2/1/2022 1:14 PM	02:36:00	7.52 pH	15.28 °C	311.87 µS/cm	1.63 mg/L	2.44 NTU	7.5 mV	120.12 ft	0.15 PSU	300.00 ml/min
2/1/2022 1:18 PM	02:40:00	7.52 pH	15.27 °C	313.01 µS/cm	1.78 mg/L	3.46 NTU	7.8 mV	121.41 ft	0.15 PSU	300.00 ml/min
2/1/2022 1:22 PM	02:44:00	7.53 pH	15.25 °C	314.40 µS/cm	1.82 mg/L	2.65 NTU	7.8 mV	123.10 ft	0.15 PSU	300.00 ml/min
2/1/2022 1:26 PM	02:48:00	7.53 pH	15.25 °C	314.95 µS/cm	1.83 mg/L	2.40 NTU	8.0 mV	124.12 ft	0.15 PSU	300.00 ml/min
2/1/2022 1:30 PM	02:52:00	7.52 pH	15.25 °C	314.96 µS/cm	1.86 mg/L	2.92 NTU	8.5 mV	125.35 ft	0.15 PSU	300.00 ml/min

2/1/2022 1:34 PM	02:56:00	7.53 pH	15.27 °C	317.34 µS/cm	1.83 mg/L	3.52 NTU	8.2 mV	125.98 ft	0.15 PSU	300.00 ml/min
2/1/2022 1:38 PM	03:00:00	7.54 pH	15.25 °C	318.70 µS/cm	1.85 mg/L	2.86 NTU	8.3 mV	126.46 ft	0.15 PSU	120.00 ml/min
2/1/2022 1:42 PM	03:04:00	7.54 pH	15.02 °C	319.40 µS/cm	1.90 mg/L	2.35 NTU	8.3 mV	126.82 ft	0.15 PSU	120.00 ml/min
2/1/2022 1:46 PM	03:08:00	7.59 pH	15.01 °C	309.13 µS/cm	2.25 mg/L	2.30 NTU	5.4 mV	127.14 ft	0.15 PSU	120.00 ml/min
2/1/2022 1:50 PM	03:12:00	7.63 pH	15.00 °C	308.99 µS/cm	2.41 mg/L	3.26 NTU	5.0 mV	127.34 ft	0.15 PSU	120.00 ml/min
2/1/2022 1:54 PM	03:16:00	7.64 pH	15.01 °C	308.99 µS/cm	2.52 mg/L	3.16 NTU	5.5 mV	127.60 ft	0.15 PSU	120.00 ml/min
2/1/2022 1:58 PM	03:20:00	7.64 pH	15.02 °C	312.22 µS/cm	2.51 mg/L	2.87 NTU	5.4 mV	127.98 ft	0.15 PSU	120.00 ml/min
2/1/2022 2:02 PM	03:24:00	7.65 pH	15.07 °C	312.19 µS/cm	2.55 mg/L	3.21 NTU	5.4 mV	128.21 ft	0.15 PSU	120.00 ml/min
2/1/2022 2:06 PM	03:28:00	7.65 pH	15.06 °C	312.49 µS/cm	2.60 mg/L	2.57 NTU	6.0 mV	128.40 ft	0.15 PSU	120.00 ml/min
2/1/2022 2:10 PM	03:32:00	7.65 pH	15.07 °C	313.38 µS/cm	2.64 mg/L	2.72 NTU	5.8 mV	128.68 ft	0.15 PSU	120.00 ml/min
2/1/2022 2:14 PM	03:36:00	7.65 pH	15.07 °C	313.85 µS/cm	2.65 mg/L	2.30 NTU	6.2 mV	128.95 ft	0.15 PSU	120.00 ml/min
2/1/2022 2:18 PM	03:40:00	7.65 pH	15.07 °C	312.83 µS/cm	2.67 mg/L	2.46 NTU	6.5 mV	129.22 ft	0.15 PSU	120.00 ml/min
2/1/2022 2:22 PM	03:44:00	7.65 pH	15.09 °C	312.94 µS/cm	2.62 mg/L	2.60 NTU	6.5 mV	129.44 ft	0.15 PSU	120.00 ml/min
2/1/2022 2:26 PM	03:48:00	7.65 pH	15.11 °C	312.70 µS/cm	2.63 mg/L	2.20 NTU	6.4 mV	129.69 ft	0.15 PSU	120.00 ml/min
2/1/2022 2:30 PM	03:52:00	7.65 pH	15.11 °C	313.03 µS/cm	2.68 mg/L	2.04 NTU	6.6 mV	130.01 ft	0.15 PSU	120.00 ml/min
2/1/2022 2:34 PM	03:56:00	7.66 pH	15.11 °C	312.75 µS/cm	2.72 mg/L	2.07 NTU	6.5 mV	130.21 ft	0.15 PSU	120.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 2/1/2022 11:09:08 AM

Project: Plant Bowen LF January 2022

Operator Name: William Laaker

Location Name: GWC-49Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 85.2 ft Total Depth: 95.2 ft Initial Depth to Water: 54.56 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 90.2 ft Estimated Total Volume Pumped: 8840 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 1.09 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Fine black sediment in water. pH out of range, therefore pumped an hour to attempt to bring into range, with no effect.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/1/2022 11:09 AM	00:00	5.62 pH	15.30 °C	23.75 µS/cm	7.45 mg/L	0.99 NTU	104.6 mV	55.25 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:13 AM	04:00	5.21 pH	15.39 °C	24.22 µS/cm	7.76 mg/L	1.07 NTU	102.0 mV	55.34 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:17 AM	08:00	5.10 pH	15.53 °C	24.26 µS/cm	7.78 mg/L	0.99 NTU	99.7 mV	55.44 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:21 AM	12:00	5.06 pH	15.64 °C	24.32 µS/cm	7.80 mg/L	0.88 NTU	98.7 mV	55.50 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:25 AM	16:00	5.02 pH	15.75 °C	24.33 µS/cm	7.80 mg/L	1.01 NTU	99.4 mV	55.55 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:29 AM	20:00	5.03 pH	15.93 °C	24.33 µS/cm	7.69 mg/L	1.14 NTU	98.3 mV	55.60 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:33 AM	24:00	5.03 pH	15.93 °C	24.37 µS/cm	7.61 mg/L	1.25 NTU	98.7 mV	55.64 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:37 AM	28:00	5.00 pH	16.20 °C	24.36 µS/cm	7.58 mg/L	1.36 NTU	99.1 mV	55.65 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:41 AM	32:00	5.03 pH	16.02 °C	24.32 µS/cm	7.59 mg/L	1.38 NTU	98.2 mV	55.66 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:45 AM	36:00	5.01 pH	16.11 °C	24.34 µS/cm	7.65 mg/L	1.16 NTU	98.7 mV	55.67 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:49 AM	40:00	5.03 pH	16.38 °C	24.17 µS/cm	7.62 mg/L	1.08 NTU	97.8 mV	55.67 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:53 AM	44:00	5.03 pH	16.52 °C	24.14 µS/cm	7.63 mg/L	0.96 NTU	97.7 mV	55.67 ft	0.01 PSU	130.00 ml/min
2/1/2022 11:57 AM	48:00	5.05 pH	16.25 °C	24.20 µS/cm	7.72 mg/L	1.02 NTU	97.2 mV	55.67 ft	0.01 PSU	130.00 ml/min
2/1/2022 12:01 PM	52:00	4.99 pH	16.64 °C	23.96 µS/cm	7.65 mg/L	0.84 NTU	99.5 mV	55.67 ft	0.01 PSU	130.00 ml/min
2/1/2022 12:05 PM	56:00	4.99 pH	16.70 °C	23.94 µS/cm	7.68 mg/L	0.74 NTU	99.5 mV	55.66 ft	0.01 PSU	130.00 ml/min

2/1/2022 12:09 PM	01:00:00	5.01 pH	16.58 °C	23.94 µS/cm	7.72 mg/L	0.81 NTU	98.5 mV	55.65 ft	0.01 PSU	130.00 ml/min
2/1/2022 12:13 PM	01:04:00	5.03 pH	16.65 °C	23.96 µS/cm	7.73 mg/L	1.02 NTU	98.0 mV	55.65 ft	0.01 PSU	130.00 ml/min
2/1/2022 12:17 PM	01:08:00	5.00 pH	16.92 °C	23.84 µS/cm	7.68 mg/L	0.79 NTU	98.9 mV	55.65 ft	0.01 PSU	130.00 ml/min

Samples

Sample ID:	Description:
GWC-49Z	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/1/2022 11:28:48 AM

Project: Plant Bowen LF January 2022

Operator Name: Robert Mull

Location Name: GWC-47 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.63 ft Total Depth: 67.63 ft Initial Depth to Water: 39.7 ft	Pump Type: QED Dedicated Pump Tubing Type: LDPE Pump Intake From TOC: 62.63 ft Estimated Total Volume Pumped: 4144 ml Flow Cell Volume: 90 ml Final Flow Rate: 148 ml/min Final Draw Down: -0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
2/1/2022 11:28 AM	00:00	7.82 pH	18.62 °C	192.69 µS/cm	7.75 mg/L	1.49 NTU	25.9 mV	39.70 ft	148.00 ml/min
2/1/2022 11:32 AM	04:00	7.68 pH	17.60 °C	200.68 µS/cm	3.76 mg/L	1.43 NTU	20.3 mV	39.70 ft	148.00 ml/min
2/1/2022 11:36 AM	08:00	7.62 pH	17.37 °C	201.72 µS/cm	3.43 mg/L	2.25 NTU	18.6 mV	39.69 ft	148.00 ml/min
2/1/2022 11:40 AM	12:00	7.58 pH	17.35 °C	202.04 µS/cm	3.36 mg/L	2.38 NTU	17.8 mV	39.68 ft	148.00 ml/min
2/1/2022 11:44 AM	16:00	7.57 pH	17.39 °C	201.82 µS/cm	3.36 mg/L	2.20 NTU	17.0 mV	39.68 ft	148.00 ml/min
2/1/2022 11:48 AM	20:00	7.57 pH	17.30 °C	201.43 µS/cm	3.33 mg/L	2.01 NTU	16.6 mV	39.68 ft	148.00 ml/min
2/1/2022 11:52 AM	24:00	7.56 pH	17.26 °C	201.20 µS/cm	3.36 mg/L	1.82 NTU	16.3 mV	39.67 ft	148.00 ml/min
2/1/2022 11:56 AM	28:00	7.55 pH	17.30 °C	200.51 µS/cm	3.36 mg/L	1.86 NTU	16.8 mV	39.67 ft	148.00 ml/min

Samples

Sample ID:	Description:
GWC-47	Metals, inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 2/1/2022 11:39:18 AM

Project: Plant Bowen LF January 2022

Operator Name: Meredith Duncan

Location Name: GWC-45 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.55 ft Total Depth: 67.55 ft Initial Depth to Water: 43.05 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 62.55 ft Estimated Total Volume Pumped: 9520 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 3.39 ft	Instrument Used: Aqua TROLL 400 Serial Number: 850762
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Test Notes:

Prepurge 5L

Pumped for an extra hour in an attempt to get pH in range, to no effect

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
2/1/2022 11:39 AM	00:00	4.91 pH	16.72 °C	0.29 µS/cm	5.30 mg/L	0.40 NTU	139.2 mV	44.69 ft	0.00 PSU	140.00 ml/min
2/1/2022 11:43 AM	04:00	4.86 pH	16.71 °C	0.29 µS/cm	5.54 mg/L	0.21 NTU	134.0 mV	44.75 ft	0.00 PSU	140.00 ml/min
2/1/2022 11:47 AM	08:00	4.86 pH	16.80 °C	0.30 µS/cm	5.61 mg/L	0.33 NTU	133.2 mV	44.91 ft	0.00 PSU	140.00 ml/min
2/1/2022 11:51 AM	12:00	4.87 pH	16.81 °C	0.30 µS/cm	5.73 mg/L	0.33 NTU	132.5 mV	45.07 ft	0.00 PSU	140.00 ml/min
2/1/2022 11:55 AM	16:00	4.87 pH	16.86 °C	0.30 µS/cm	5.76 mg/L	0.23 NTU	132.6 mV	45.21 ft	0.00 PSU	140.00 ml/min
2/1/2022 11:59 AM	20:00	4.86 pH	16.88 °C	0.30 µS/cm	5.76 mg/L	0.21 NTU	133.2 mV	45.32 ft	0.00 PSU	140.00 ml/min
2/1/2022 12:03 PM	24:00	4.87 pH	16.94 °C	0.30 µS/cm	5.75 mg/L	0.18 NTU	132.7 mV	45.50 ft	0.00 PSU	140.00 ml/min
2/1/2022 12:07 PM	28:00	4.88 pH	16.99 °C	0.30 µS/cm	5.74 mg/L	0.16 NTU	132.7 mV	45.60 ft	0.00 PSU	140.00 ml/min
2/1/2022 12:11 PM	32:00	4.87 pH	17.03 °C	0.30 µS/cm	5.76 mg/L	0.09 NTU	132.6 mV	45.72 ft	0.00 PSU	140.00 ml/min
2/1/2022 12:15 PM	36:00	4.88 pH	17.08 °C	0.30 µS/cm	5.76 mg/L	0.09 NTU	132.9 mV	45.83 ft	0.00 PSU	140.00 ml/min
2/1/2022 12:19 PM	40:00	4.88 pH	17.10 °C	0.30 µS/cm	5.76 mg/L	0.12 NTU	133.5 mV	45.94 ft	0.00 PSU	140.00 ml/min
2/1/2022 12:23 PM	44:00	4.88 pH	17.21 °C	0.30 µS/cm	5.77 mg/L	0.23 NTU	133.0 mV	46.01 ft	0.00 PSU	140.00 ml/min
2/1/2022 12:27 PM	48:00	4.88 pH	17.21 °C	0.30 µS/cm	5.77 mg/L	0.07 NTU	133.5 mV	46.12 ft	0.00 PSU	140.00 ml/min
2/1/2022 12:31 PM	52:00	4.87 pH	17.25 °C	0.30 µS/cm	5.78 mg/L	0.09 NTU	133.2 mV	46.21 ft	0.00 PSU	140.00 ml/min
2/1/2022 12:35 PM	56:00	4.87 pH	17.30 °C	0.30 µS/cm	5.79 mg/L	0.10 NTU	134.1 mV	46.24 ft	0.00 PSU	140.00 ml/min

2/1/2022 12:39 PM	01:00:00	4.87 pH	17.34 °C	0.30 µS/cm	5.76 mg/L	0.10 NTU	134.5 mV	46.35 ft	0.00 PSU	140.00 ml/min
2/1/2022 12:43 PM	01:04:00	4.87 pH	17.39 °C	0.30 µS/cm	5.79 mg/L	0.15 NTU	133.9 mV	46.41 ft	0.00 PSU	140.00 ml/min
2/1/2022 12:47 PM	01:08:00	4.88 pH	17.52 °C	0.30 µS/cm	5.80 mg/L	0.06 NTU	134.9 mV	46.44 ft	0.00 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWC-45	Metals, Inorganics, TDS, Alkalinity

Low-Flow Test Report:

Test Date / Time: 8/16/2022 9:44:18 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWA-1 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 141.8 ft Total Depth: 151.8 ft Initial Depth to Water: 94.12 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 146.8 ft Estimated Total Volume Pumped: 3680 ml Flow Cell Volume: 90 ml Final Flow Rate: 115 ml/min Final Draw Down: 0.72 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 9L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/16/2022 9:44 AM	00:00	7.37 pH	17.62 °C	302.47 µS/cm	1.68 mg/L	1.97 NTU	59.3 mV	94.12 ft	115.00 ml/min
8/16/2022 9:48 AM	04:00	7.36 pH	18.00 °C	300.85 µS/cm	1.60 mg/L	1.80 NTU	65.8 mV	94.16 ft	115.00 ml/min
8/16/2022 9:52 AM	08:00	7.33 pH	18.09 °C	300.62 µS/cm	1.47 mg/L	1.85 NTU	67.1 mV	94.24 ft	115.00 ml/min
8/16/2022 9:56 AM	12:00	7.34 pH	18.14 °C	302.57 µS/cm	1.12 mg/L	2.14 NTU	66.1 mV	94.31 ft	115.00 ml/min
8/16/2022 10:00 AM	16:00	7.35 pH	18.19 °C	303.46 µS/cm	0.91 mg/L	3.10 NTU	63.2 mV	94.43 ft	115.00 ml/min
8/16/2022 10:04 AM	20:00	7.36 pH	18.17 °C	303.58 µS/cm	0.84 mg/L	2.26 NTU	60.7 mV	94.55 ft	115.00 ml/min
8/16/2022 10:08 AM	24:00	7.36 pH	18.22 °C	303.74 µS/cm	0.82 mg/L	2.92 NTU	57.8 mV	94.64 ft	115.00 ml/min
8/16/2022 10:12 AM	28:00	7.36 pH	18.27 °C	304.27 µS/cm	0.82 mg/L	2.45 NTU	54.7 mV	94.74 ft	115.00 ml/min
8/16/2022 10:16 AM	32:00	7.36 pH	18.25 °C	304.19 µS/cm	0.83 mg/L	2.18 NTU	52.1 mV	94.84 ft	115.00 ml/min

Samples

Sample ID:	Description:
GWA-1	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/16/2022 10:57:08 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: William Laaker

Location Name: GWA-4RZ Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 110.74 ft Total Depth: 120.74 ft Initial Depth to Water: 87.05 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 115.74 ft Estimated Total Volume Pumped: 13480 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 23.75 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 4 L

Historic full evac. Water level fell into screen interval. Full evac complete.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/16/2022 10:57 AM	00:00	7.11 pH	17.54 °C	476.28 µS/cm	0.18 mg/L	1.22 NTU	38.2 mV	93.57 ft	0.23 PSU	220.00 ml/min
8/16/2022 11:01 AM	04:00	7.09 pH	17.71 °C	445.98 µS/cm	0.31 mg/L	0.15 NTU	59.0 mV	94.45 ft	0.22 PSU	200.00 ml/min
8/16/2022 11:05 AM	08:00	7.05 pH	17.59 °C	433.04 µS/cm	0.43 mg/L	0.13 NTU	66.8 mV	95.59 ft	0.21 PSU	200.00 ml/min
8/16/2022 11:09 AM	12:00	7.02 pH	17.65 °C	427.70 µS/cm	0.50 mg/L	0.05 NTU	72.3 mV	96.70 ft	0.21 PSU	200.00 ml/min
8/16/2022 11:13 AM	16:00	6.99 pH	18.19 °C	425.83 µS/cm	0.54 mg/L	0.13 NTU	74.4 mV	97.58 ft	0.21 PSU	150.00 ml/min
8/16/2022 11:17 AM	20:00	6.98 pH	18.23 °C	424.35 µS/cm	0.57 mg/L	0.12 NTU	76.5 mV	98.40 ft	0.21 PSU	150.00 ml/min
8/16/2022 11:21 AM	24:00	6.98 pH	17.99 °C	421.54 µS/cm	0.57 mg/L	0.05 NTU	78.3 mV	99.25 ft	0.20 PSU	150.00 ml/min
8/16/2022 11:25 AM	28:00	6.98 pH	17.79 °C	423.72 µS/cm	0.59 mg/L	0.01 NTU	79.4 mV	100.22 ft	0.21 PSU	150.00 ml/min
8/16/2022 11:29 AM	32:00	6.98 pH	17.87 °C	424.81 µS/cm	0.62 mg/L	0.01 NTU	79.8 mV	101.14 ft	0.21 PSU	150.00 ml/min
8/16/2022 11:33 AM	36:00	6.97 pH	18.08 °C	423.83 µS/cm	0.65 mg/L	0.07 NTU	80.3 mV	102.05 ft	0.21 PSU	150.00 ml/min
8/16/2022 11:37 AM	40:00	6.97 pH	17.96 °C	422.91 µS/cm	0.66 mg/L	0.01 NTU	80.9 mV	102.96 ft	0.20 PSU	150.00 ml/min
8/16/2022 11:41 AM	44:00	6.97 pH	17.77 °C	423.73 µS/cm	0.68 mg/L	0.09 NTU	81.3 mV	103.86 ft	0.21 PSU	150.00 ml/min
8/16/2022 11:45 AM	48:00	6.97 pH	17.84 °C	423.91 µS/cm	0.69 mg/L	0.12 NTU	81.6 mV	104.74 ft	0.21 PSU	150.00 ml/min
8/16/2022 11:49 AM	52:00	6.97 pH	17.83 °C	424.43 µS/cm	0.71 mg/L	0.12 NTU	81.6 mV	105.62 ft	0.21 PSU	150.00 ml/min
8/16/2022 11:53 AM	56:00	6.96 pH	18.12 °C	424.13 µS/cm	0.74 mg/L	0.10 NTU	81.6 mV	106.50 ft	0.21 PSU	150.00 ml/min

8/16/2022 11:57 AM	01:00:00	6.96 pH	18.29 °C	425.54 µS/cm	0.76 mg/L	0.04 NTU	81.5 mV	107.42 ft	0.21 PSU	150.00 ml/min
8/16/2022 12:01 PM	01:04:00	6.96 pH	18.38 °C	423.16 µS/cm	0.76 mg/L	0.03 NTU	81.5 mV	108.28 ft	0.21 PSU	150.00 ml/min
8/16/2022 12:05 PM	01:08:00	6.95 pH	18.48 °C	425.70 µS/cm	0.79 mg/L	0.11 NTU	81.5 mV	109.12 ft	0.21 PSU	150.00 ml/min
8/16/2022 12:09 PM	01:12:00	6.95 pH	18.75 °C	424.61 µS/cm	0.81 mg/L	0.08 NTU	81.6 mV	109.95 ft	0.21 PSU	150.00 ml/min
8/16/2022 12:13 PM	01:16:00	6.96 pH	18.53 °C	424.45 µS/cm	0.82 mg/L	0.07 NTU	81.9 mV	110.46 ft	0.21 PSU	150.00 ml/min
8/16/2022 12:17 PM	01:20:00	6.96 pH	18.43 °C	425.07 µS/cm	0.82 mg/L	0.06 NTU	81.8 mV	110.67 ft	0.21 PSU	150.00 ml/min
8/16/2022 12:21 PM	01:24:00	6.97 pH	18.08 °C	425.59 µS/cm	0.84 mg/L	0.06 NTU	82.6 mV	110.80 ft	0.21 PSU	150.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/16/2022 11:09:04 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWA-2R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 97.4 ft Total Depth: 107.4 ft Initial Depth to Water: 82.09 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 102.4 ft Estimated Total Volume Pumped: 3840 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.69 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/16/2022 11:09 AM	00:00	6.46 pH	20.11 °C	225.37 µS/cm	3.10 mg/L	1.13 NTU	27.0 mV	82.39 ft	120.00 ml/min
8/16/2022 11:13 AM	04:00	6.69 pH	19.00 °C	270.20 µS/cm	0.55 mg/L	1.38 NTU	22.3 mV	82.42 ft	120.00 ml/min
8/16/2022 11:17 AM	08:00	6.84 pH	19.60 °C	281.87 µS/cm	0.24 mg/L	1.69 NTU	1.8 mV	82.46 ft	120.00 ml/min
8/16/2022 11:21 AM	12:00	6.96 pH	19.46 °C	285.52 µS/cm	0.17 mg/L	1.21 NTU	-14.6 mV	82.54 ft	120.00 ml/min
8/16/2022 11:25 AM	16:00	7.04 pH	19.20 °C	287.34 µS/cm	0.14 mg/L	1.17 NTU	-25.2 mV	82.63 ft	120.00 ml/min
8/16/2022 11:29 AM	20:00	7.08 pH	19.09 °C	286.29 µS/cm	0.12 mg/L	1.10 NTU	-29.1 mV	82.67 ft	120.00 ml/min
8/16/2022 11:33 AM	24:00	7.10 pH	19.16 °C	285.92 µS/cm	0.12 mg/L	0.97 NTU	-31.4 mV	82.70 ft	120.00 ml/min
8/16/2022 11:37 AM	28:00	7.11 pH	18.85 °C	282.85 µS/cm	0.12 mg/L	1.64 NTU	-32.1 mV	82.75 ft	120.00 ml/min
8/16/2022 11:41 AM	32:00	7.11 pH	18.75 °C	281.64 µS/cm	0.12 mg/L	1.43 NTU	-31.6 mV	82.78 ft	120.00 ml/min

Samples

Sample ID:	Description:
GWA-2R	Metals, Inorganics, TDS
DUP-1	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/16/2022 11:36:28 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Kevin Stephenson

Location Name: GWA-3A Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 130.27 ft Total Depth: 140.27 ft Initial Depth to Water: 78.57 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 135.27 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 2 liters.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/16/2022 11:36 AM	00:00	7.49 pH	21.00 °C	212.39 µS/cm	6.62 mg/L	0.99 NTU	76.2 mV	78.57 ft	0.10 PSU	140.00 ml/min
8/16/2022 11:40 AM	04:00	7.54 pH	20.14 °C	204.87 µS/cm	6.70 mg/L	0.97 NTU	76.6 mV	78.57 ft	0.10 PSU	140.00 ml/min
8/16/2022 11:44 AM	08:00	7.65 pH	18.51 °C	209.53 µS/cm	7.25 mg/L	0.95 NTU	74.9 mV	78.57 ft	0.10 PSU	140.00 ml/min
8/16/2022 11:48 AM	12:00	7.71 pH	18.51 °C	210.90 µS/cm	7.44 mg/L	0.94 NTU	74.7 mV	78.57 ft	0.10 PSU	140.00 ml/min
8/16/2022 11:52 AM	16:00	7.72 pH	18.84 °C	211.26 µS/cm	7.62 mg/L	1.44 NTU	75.3 mV	78.57 ft	0.10 PSU	140.00 ml/min
8/16/2022 11:56 AM	20:00	7.75 pH	19.14 °C	211.37 µS/cm	7.73 mg/L	1.30 NTU	75.3 mV	78.57 ft	0.10 PSU	140.00 ml/min
8/16/2022 12:00 PM	24:00	7.74 pH	19.27 °C	209.82 µS/cm	7.78 mg/L	1.74 NTU	76.6 mV	78.57 ft	0.10 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWA-3A	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/16/2022 12:37:00 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWA-2 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 144.25 ft Total Depth: 154.25 ft Initial Depth to Water: 81.21 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 149.25 ft Estimated Total Volume Pumped: 14400 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 4L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/16/2022 12:37 PM	00:00	6.25 pH	18.13 °C	48.77 µS/cm	4.96 mg/L	2.20 NTU	122.2 mV	81.21 ft	200.00 ml/min
8/16/2022 12:41 PM	04:00	5.96 pH	18.00 °C	38.97 µS/cm	5.00 mg/L	1.45 NTU	131.3 mV	81.21 ft	200.00 ml/min
8/16/2022 12:45 PM	08:00	5.83 pH	17.90 °C	34.30 µS/cm	5.04 mg/L	2.05 NTU	134.6 mV	81.21 ft	200.00 ml/min
8/16/2022 12:49 PM	12:00	5.75 pH	17.82 °C	35.37 µS/cm	5.06 mg/L	1.71 NTU	135.0 mV	81.21 ft	200.00 ml/min
8/16/2022 12:53 PM	16:00	5.74 pH	18.00 °C	45.66 µS/cm	5.06 mg/L	2.26 NTU	131.1 mV	81.21 ft	200.00 ml/min
8/16/2022 12:57 PM	20:00	5.83 pH	17.99 °C	63.49 µS/cm	5.08 mg/L	1.66 NTU	121.7 mV	81.21 ft	200.00 ml/min
8/16/2022 1:01 PM	24:00	5.91 pH	18.06 °C	89.70 µS/cm	5.14 mg/L	1.74 NTU	113.8 mV	81.21 ft	200.00 ml/min
8/16/2022 1:05 PM	28:00	6.03 pH	18.21 °C	124.19 µS/cm	5.28 mg/L	1.62 NTU	109.1 mV	81.21 ft	200.00 ml/min
8/16/2022 1:09 PM	32:00	6.14 pH	18.22 °C	159.22 µS/cm	5.37 mg/L	1.81 NTU	108.3 mV	81.21 ft	200.00 ml/min
8/16/2022 1:13 PM	36:00	6.24 pH	18.33 °C	191.77 µS/cm	5.51 mg/L	1.50 NTU	109.0 mV	81.21 ft	200.00 ml/min
8/16/2022 1:17 PM	40:00	6.33 pH	18.13 °C	218.16 µS/cm	5.53 mg/L	1.92 NTU	109.6 mV	81.21 ft	200.00 ml/min
8/16/2022 1:21 PM	44:00	6.40 pH	18.20 °C	239.64 µS/cm	5.59 mg/L	1.59 NTU	110.6 mV	81.21 ft	200.00 ml/min
8/16/2022 1:25 PM	48:00	6.45 pH	18.04 °C	256.90 µS/cm	5.72 mg/L	2.01 NTU	113.1 mV	81.21 ft	200.00 ml/min
8/16/2022 1:29 PM	52:00	6.50 pH	18.00 °C	267.83 µS/cm	5.73 mg/L	1.57 NTU	112.9 mV	81.21 ft	200.00 ml/min
8/16/2022 1:33 PM	56:00	6.54 pH	17.96 °C	275.65 µS/cm	5.71 mg/L	2.18 NTU	113.5 mV	81.21 ft	200.00 ml/min

8/16/2022 1:37 PM	01:00:00	6.57 pH	18.00 °C	284.94 µS/cm	5.72 mg/L	1.57 NTU	114.5 mV	81.21 ft	200.00 ml/min
8/16/2022 1:41 PM	01:04:00	6.59 pH	17.99 °C	287.94 µS/cm	5.72 mg/L	1.54 NTU	113.8 mV	81.21 ft	200.00 ml/min
8/16/2022 1:45 PM	01:08:00	6.61 pH	17.90 °C	293.59 µS/cm	5.80 mg/L	1.57 NTU	113.1 mV	81.21 ft	200.00 ml/min
8/16/2022 1:49 PM	01:12:00	6.63 pH	17.79 °C	297.07 µS/cm	5.81 mg/L	1.44 NTU	112.6 mV	81.21 ft	200.00 ml/min

Samples

Sample ID:	Description:
GWA-2	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/16/2022 12:49:03 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: William Laaker

Location Name: GWA-50 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 86.73 ft Total Depth: 96.73 ft Initial Depth to Water: 60.6 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 91.73 ft Estimated Total Volume Pumped: 11880 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 12.5 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

At 32:00, lowered pump rate to 110 mL/min to stabilize drawdown.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/16/2022 12:49 PM	00:00	7.26 pH	18.96 °C	20.52 µS/cm	7.30 mg/L	0.18 NTU	109.4 mV	62.30 ft	0.01 PSU	220.00 ml/min
8/16/2022 12:53 PM	04:00	6.58 pH	18.25 °C	20.66 µS/cm	6.99 mg/L	0.08 NTU	115.6 mV	63.21 ft	0.01 PSU	220.00 ml/min
8/16/2022 12:57 PM	08:00	6.08 pH	18.07 °C	18.57 µS/cm	7.56 mg/L	0.22 NTU	119.3 mV	64.50 ft	0.01 PSU	220.00 ml/min
8/16/2022 1:01 PM	12:00	5.67 pH	17.98 °C	17.85 µS/cm	7.75 mg/L	0.21 NTU	121.6 mV	65.72 ft	0.01 PSU	220.00 ml/min
8/16/2022 1:05 PM	16:00	5.44 pH	17.86 °C	17.66 µS/cm	7.85 mg/L	0.27 NTU	121.8 mV	66.98 ft	0.01 PSU	220.00 ml/min
8/16/2022 1:09 PM	20:00	5.30 pH	17.98 °C	17.73 µS/cm	7.82 mg/L	0.13 NTU	121.0 mV	68.11 ft	0.01 PSU	220.00 ml/min
8/16/2022 1:13 PM	24:00	5.22 pH	17.80 °C	17.92 µS/cm	7.75 mg/L	0.20 NTU	121.6 mV	69.18 ft	0.01 PSU	220.00 ml/min
8/16/2022 1:17 PM	28:00	5.20 pH	17.81 °C	18.15 µS/cm	7.68 mg/L	0.12 NTU	120.4 mV	70.21 ft	0.01 PSU	220.00 ml/min
8/16/2022 1:21 PM	32:00	5.20 pH	18.81 °C	18.47 µS/cm	7.72 mg/L	0.27 NTU	119.9 mV	70.77 ft	0.01 PSU	110.00 ml/min
8/16/2022 1:25 PM	36:00	5.19 pH	19.08 °C	18.48 µS/cm	7.61 mg/L	0.22 NTU	119.8 mV	70.99 ft	0.01 PSU	110.00 ml/min
8/16/2022 1:29 PM	40:00	5.19 pH	19.06 °C	18.60 µS/cm	7.50 mg/L	0.24 NTU	120.3 mV	71.24 ft	0.01 PSU	110.00 ml/min
8/16/2022 1:33 PM	44:00	5.21 pH	19.19 °C	19.21 µS/cm	7.42 mg/L	0.17 NTU	118.8 mV	71.54 ft	0.01 PSU	110.00 ml/min
8/16/2022 1:37 PM	48:00	5.25 pH	18.99 °C	19.81 µS/cm	7.27 mg/L	0.22 NTU	118.5 mV	71.83 ft	0.01 PSU	110.00 ml/min
8/16/2022 1:41 PM	52:00	5.26 pH	19.00 °C	20.23 µS/cm	7.21 mg/L	0.21 NTU	116.9 mV	72.08 ft	0.01 PSU	110.00 ml/min
8/16/2022 1:45 PM	56:00	5.27 pH	19.24 °C	20.38 µS/cm	7.18 mg/L	0.23 NTU	118.2 mV	72.32 ft	0.01 PSU	110.00 ml/min

8/16/2022 1:49 PM	01:00:00	5.27 pH	19.15 °C	20.44 µS/cm	7.16 mg/L	0.27 NTU	118.6 mV	72.55 ft	0.01 PSU	110.00 ml/min
8/16/2022 1:53 PM	01:04:00	5.28 pH	19.42 °C	20.60 µS/cm	7.17 mg/L	0.24 NTU	118.4 mV	72.72 ft	0.01 PSU	110.00 ml/min
8/16/2022 1:57 PM	01:08:00	5.28 pH	19.57 °C	20.69 µS/cm	7.14 mg/L	0.28 NTU	118.5 mV	72.85 ft	0.01 PSU	110.00 ml/min
8/16/2022 2:01 PM	01:12:00	5.29 pH	19.66 °C	20.77 µS/cm	7.13 mg/L	0.31 NTU	118.4 mV	72.98 ft	0.01 PSU	110.00 ml/min
8/16/2022 2:05 PM	01:16:00	5.29 pH	19.67 °C	20.89 µS/cm	7.06 mg/L	0.28 NTU	117.9 mV	73.10 ft	0.01 PSU	110.00 ml/min

Samples

Sample ID:	Description:
GWA-50	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/16/2022 1:34:33 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Kevin Stephenson

Location Name: GWC-5 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 103.75 ft Total Depth: 113.75 ft Initial Depth to Water: 79.09 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 108.75 ft Estimated Total Volume Pumped: 8960 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 4.21 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 2 liters.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/16/2022 1:34 PM	00:00	7.72 pH	31.06 °C	0.00 µS/cm	7.23 mg/L	2.71 NTU	78.3 mV	81.22 ft	0.00 PSU	140.00 ml/min
8/16/2022 1:38 PM	04:00	7.13 pH	21.41 °C	46.74 µS/cm	7.27 mg/L	2.82 NTU	124.1 mV	81.31 ft	0.02 PSU	140.00 ml/min
8/16/2022 1:42 PM	08:00	6.69 pH	20.09 °C	48.43 µS/cm	7.59 mg/L	2.43 NTU	129.0 mV	81.54 ft	0.02 PSU	140.00 ml/min
8/16/2022 1:46 PM	12:00	6.44 pH	19.98 °C	49.16 µS/cm	7.64 mg/L	2.61 NTU	128.2 mV	81.61 ft	0.02 PSU	140.00 ml/min
8/16/2022 1:50 PM	16:00	6.28 pH	20.15 °C	48.69 µS/cm	7.72 mg/L	2.06 NTU	127.6 mV	81.87 ft	0.02 PSU	140.00 ml/min
8/16/2022 1:54 PM	20:00	6.17 pH	20.20 °C	48.17 µS/cm	7.82 mg/L	22.70 NTU	127.5 mV	81.96 ft	0.02 PSU	140.00 ml/min
8/16/2022 1:58 PM	24:00	6.11 pH	20.20 °C	47.17 µS/cm	7.90 mg/L	1.75 NTU	127.4 mV	82.17 ft	0.02 PSU	140.00 ml/min
8/16/2022 2:02 PM	28:00	6.06 pH	19.99 °C	46.30 µS/cm	7.96 mg/L	2.43 NTU	127.0 mV	82.27 ft	0.02 PSU	140.00 ml/min
8/16/2022 2:06 PM	32:00	6.01 pH	19.85 °C	45.15 µS/cm	8.08 mg/L	1.60 NTU	127.4 mV	82.39 ft	0.02 PSU	140.00 ml/min
8/16/2022 2:10 PM	36:00	5.95 pH	19.91 °C	43.80 µS/cm	8.23 mg/L	1.80 NTU	128.9 mV	82.51 ft	0.02 PSU	140.00 ml/min
8/16/2022 2:14 PM	40:00	5.92 pH	19.85 °C	42.58 µS/cm	8.28 mg/L	1.85 NTU	129.2 mV	82.62 ft	0.02 PSU	140.00 ml/min
8/16/2022 2:18 PM	44:00	5.90 pH	19.67 °C	41.83 µS/cm	8.39 mg/L	2.28 NTU	129.0 mV	82.76 ft	0.02 PSU	140.00 ml/min
8/16/2022 2:22 PM	48:00	5.89 pH	19.67 °C	40.52 µS/cm	8.54 mg/L	2.22 NTU	128.8 mV	82.90 ft	0.02 PSU	140.00 ml/min
8/16/2022 2:26 PM	52:00	5.91 pH	19.80 °C	39.49 µS/cm	8.62 mg/L	2.03 NTU	128.5 mV	83.06 ft	0.02 PSU	140.00 ml/min
8/16/2022 2:30 PM	56:00	5.89 pH	19.76 °C	38.70 µS/cm	8.70 mg/L	2.20 NTU	128.6 mV	83.11 ft	0.02 PSU	140.00 ml/min

8/16/2022 2:34 PM	01:00:00	5.87 pH	19.80 °C	37.95 µS/cm	8.72 mg/L	2.25 NTU	128.8 mV	83.19 ft	0.02 PSU	140.00 ml/min
8/16/2022 2:38 PM	01:04:00	5.84 pH	19.89 °C	37.38 µS/cm	8.80 mg/L	2.21 NTU	129.4 mV	83.30 ft	0.02 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWC-5	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/16/2022 2:30:11 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: William Laaker

Location Name: GWA-50R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 135.53 ft Total Depth: 145.53 ft Initial Depth to Water: 75.73 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 140.53 ft Estimated Total Volume Pumped: 12000 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

pH stabilized out of range so continued pumping additional time. pH rose into range but specific conductivity did not stabilize when pH did. Will return on 8/17/22.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/16/2022 2:30 PM	00:00	5.41 pH	19.71 °C	14.84 µS/cm	8.27 mg/L	0.28 NTU	134.4 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 2:34 PM	04:00	5.15 pH	19.37 °C	15.31 µS/cm	8.64 mg/L	0.31 NTU	130.0 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 2:38 PM	08:00	4.94 pH	19.19 °C	15.33 µS/cm	9.86 mg/L	0.38 NTU	131.0 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 2:42 PM	12:00	4.83 pH	19.11 °C	15.35 µS/cm	10.26 mg/L	0.29 NTU	129.9 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 2:46 PM	16:00	4.80 pH	18.97 °C	15.27 µS/cm	10.39 mg/L	0.41 NTU	128.6 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 2:50 PM	20:00	4.79 pH	19.06 °C	15.28 µS/cm	10.47 mg/L	0.41 NTU	128.4 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 2:54 PM	24:00	4.79 pH	19.06 °C	15.25 µS/cm	10.43 mg/L	0.40 NTU	127.4 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 2:58 PM	28:00	4.80 pH	19.02 °C	15.31 µS/cm	10.46 mg/L	0.28 NTU	126.5 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:02 PM	32:00	4.80 pH	19.06 °C	15.36 µS/cm	10.52 mg/L	0.39 NTU	127.0 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:06 PM	36:00	4.82 pH	18.88 °C	15.43 µS/cm	10.60 mg/L	0.28 NTU	126.1 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:10 PM	40:00	4.83 pH	18.76 °C	15.48 µS/cm	10.67 mg/L	0.34 NTU	125.6 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:14 PM	44:00	4.85 pH	18.73 °C	15.61 µS/cm	10.69 mg/L	0.26 NTU	125.3 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:18 PM	48:00	4.88 pH	18.70 °C	15.93 µS/cm	10.71 mg/L	0.32 NTU	125.1 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:22 PM	52:00	4.93 pH	18.70 °C	16.38 µS/cm	10.68 mg/L	0.17 NTU	124.3 mV	75.78 ft	0.01 PSU	120.00 ml/min

8/16/2022 3:26 PM	56:00	4.97 pH	18.65 °C	16.93 µS/cm	10.66 mg/L	0.04 NTU	124.2 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:30 PM	01:00:00	5.03 pH	18.61 °C	17.68 µS/cm	10.70 mg/L	0.05 NTU	123.7 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:34 PM	01:04:00	5.09 pH	18.61 °C	18.93 µS/cm	10.73 mg/L	0.17 NTU	122.9 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:38 PM	01:08:00	5.18 pH	18.60 °C	20.82 µS/cm	10.71 mg/L	0.12 NTU	122.0 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:42 PM	01:12:00	5.28 pH	18.69 °C	23.21 µS/cm	10.74 mg/L	0.21 NTU	120.5 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:46 PM	01:16:00	5.37 pH	18.75 °C	26.19 µS/cm	10.64 mg/L	0.28 NTU	119.1 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:50 PM	01:20:00	5.45 pH	18.73 °C	28.65 µS/cm	10.62 mg/L	0.51 NTU	117.5 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:54 PM	01:24:00	5.51 pH	18.67 °C	30.51 µS/cm	10.57 mg/L	0.67 NTU	116.9 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 3:58 PM	01:28:00	5.56 pH	18.70 °C	31.70 µS/cm	10.57 mg/L	0.57 NTU	116.6 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 4:02 PM	01:32:00	5.59 pH	18.64 °C	33.01 µS/cm	10.70 mg/L	0.57 NTU	115.6 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 4:06 PM	01:36:00	5.62 pH	18.61 °C	34.19 µS/cm	10.70 mg/L	0.57 NTU	115.1 mV	75.78 ft	0.01 PSU	120.00 ml/min
8/16/2022 4:10 PM	01:40:00	5.63 pH	18.53 °C	35.15 µS/cm	10.76 mg/L	0.43 NTU	115.1 mV	75.78 ft	0.02 PSU	120.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/17/2022 9:39:24 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-7Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 107 ft Total Depth: 117 ft Initial Depth to Water: 58.66 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 112 ft Estimated Total Volume Pumped: 7700 ml Flow Cell Volume: 90 ml Final Flow Rate: 125 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/17/2022 9:39 AM	00:00	6.91 pH	17.33 °C	231.33 µS/cm	0.62 mg/L	1.70 NTU	-1.7 mV	58.66 ft	210.00 ml/min
8/17/2022 9:43 AM	04:00	6.98 pH	17.10 °C	231.50 µS/cm	0.19 mg/L	2.90 NTU	-13.8 mV	58.72 ft	210.00 ml/min
8/17/2022 9:47 AM	08:00	7.05 pH	17.08 °C	231.65 µS/cm	0.17 mg/L	6.26 NTU	-20.3 mV	58.72 ft	210.00 ml/min
8/17/2022 9:51 AM	12:00	7.11 pH	17.43 °C	233.35 µS/cm	0.22 mg/L	6.10 NTU	-24.7 mV	58.68 ft	140.00 ml/min
8/17/2022 9:55 AM	16:00	7.16 pH	17.55 °C	232.91 µS/cm	0.32 mg/L	6.02 NTU	-23.8 mV	58.68 ft	140.00 ml/min
8/17/2022 9:59 AM	20:00	7.20 pH	17.55 °C	232.70 µS/cm	0.51 mg/L	6.05 NTU	-22.0 mV	58.68 ft	140.00 ml/min
8/17/2022 10:03 AM	24:00	7.24 pH	17.58 °C	231.37 µS/cm	0.76 mg/L	6.28 NTU	-19.6 mV	58.68 ft	125.00 ml/min
8/17/2022 10:07 AM	28:00	7.26 pH	17.82 °C	231.79 µS/cm	0.89 mg/L	4.88 NTU	-19.7 mV	58.67 ft	125.00 ml/min
8/17/2022 10:11 AM	32:00	7.27 pH	17.82 °C	231.23 µS/cm	0.99 mg/L	4.30 NTU	-18.4 mV	58.66 ft	125.00 ml/min
8/17/2022 10:15 AM	36:00	7.30 pH	17.82 °C	230.81 µS/cm	1.12 mg/L	3.71 NTU	-16.5 mV	58.66 ft	125.00 ml/min
8/17/2022 10:19 AM	40:00	7.30 pH	17.83 °C	230.34 µS/cm	1.24 mg/L	3.41 NTU	-15.5 mV	58.66 ft	125.00 ml/min
8/17/2022 10:23 AM	44:00	7.32 pH	17.82 °C	230.27 µS/cm	1.31 mg/L	2.94 NTU	-16.0 mV	58.66 ft	125.00 ml/min
8/17/2022 10:27 AM	48:00	7.33 pH	17.90 °C	230.35 µS/cm	1.39 mg/L	2.59 NTU	-15.4 mV	58.66 ft	125.00 ml/min
8/17/2022 10:31 AM	52:00	7.34 pH	17.91 °C	229.99 µS/cm	1.49 mg/L	2.50 NTU	-13.5 mV	58.66 ft	125.00 ml/min

Samples

Sample ID:	Description:
GWC-7Z	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/17/2022 10:54:46 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Kevin Stephenson

Location Name: GWC-6RZ Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 102.8 ft Total Depth: 112.8 ft Initial Depth to Water: 77.32 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 107.8 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 3 liters.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/17/2022 10:54 AM	00:00	6.59 pH	19.01 °C	103.73 µS/cm	6.32 mg/L	7.33 NTU	79.0 mV	77.34 ft	0.05 PSU	140.00 ml/min
8/17/2022 10:58 AM	04:00	6.59 pH	18.90 °C	102.11 µS/cm	6.52 mg/L	7.19 NTU	76.3 mV	77.34 ft	0.05 PSU	140.00 ml/min
8/17/2022 11:02 AM	08:00	6.61 pH	18.84 °C	100.16 µS/cm	6.68 mg/L	6.34 NTU	76.5 mV	77.34 ft	0.05 PSU	140.00 ml/min
8/17/2022 11:06 AM	12:00	6.61 pH	18.87 °C	99.29 µS/cm	6.82 mg/L	4.11 NTU	77.3 mV	77.34 ft	0.05 PSU	140.00 ml/min
8/17/2022 11:10 AM	16:00	6.64 pH	18.86 °C	98.06 µS/cm	6.88 mg/L	3.72 NTU	77.7 mV	77.34 ft	0.05 PSU	140.00 ml/min
8/17/2022 11:14 AM	20:00	6.63 pH	18.78 °C	97.60 µS/cm	6.93 mg/L	3.21 NTU	78.8 mV	77.34 ft	0.05 PSU	140.00 ml/min
8/17/2022 11:18 AM	24:00	6.64 pH	18.78 °C	97.07 µS/cm	6.98 mg/L	2.85 NTU	79.2 mV	77.34 ft	0.05 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWC-6RZ	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/17/2022 11:05:05 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: William Laaker

Location Name: GWA-50R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 135.53 ft Total Depth: 145.53 ft Initial Depth to Water: 75.87 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 140.53 ft Estimated Total Volume Pumped: 2400 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 9.5 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/17/2022 11:05 AM	00:00	5.60 pH	18.34 °C	34.21 µS/cm	10.64 mg/L	0.81 NTU	126.9 mV	75.92 ft	0.01 PSU	120.00 ml/min
8/17/2022 11:09 AM	04:00	5.66 pH	18.39 °C	36.47 µS/cm	10.79 mg/L	0.81 NTU	118.8 mV	75.92 ft	0.02 PSU	120.00 ml/min
8/17/2022 11:13 AM	08:00	5.66 pH	18.36 °C	37.81 µS/cm	10.88 mg/L	0.91 NTU	116.8 mV	75.92 ft	0.02 PSU	120.00 ml/min
8/17/2022 11:17 AM	12:00	5.66 pH	18.52 °C	37.59 µS/cm	10.81 mg/L	1.33 NTU	116.9 mV	75.92 ft	0.02 PSU	120.00 ml/min
8/17/2022 11:21 AM	16:00	5.67 pH	18.36 °C	38.02 µS/cm	10.80 mg/L	0.99 NTU	116.2 mV	75.92 ft	0.02 PSU	120.00 ml/min
8/17/2022 11:25 AM	20:00	5.70 pH	18.34 °C	38.87 µS/cm	10.73 mg/L	0.95 NTU	115.3 mV	75.92 ft	0.02 PSU	120.00 ml/min

Samples

Sample ID:	Description:
GWA-50R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/17/2022 11:32:23 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-8RR Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 101.83 ft Total Depth: 111.83 ft Initial Depth to Water: 48.03 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 106.83 ft Estimated Total Volume Pumped: 3080 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/17/2022 11:32 AM	00:00	7.29 pH	18.88 °C	199.49 µS/cm	2.52 mg/L	1.68 NTU	45.7 mV	48.03 ft	110.00 ml/min
8/17/2022 11:36 AM	04:00	7.49 pH	18.56 °C	198.36 µS/cm	5.24 mg/L	2.15 NTU	69.1 mV	48.03 ft	110.00 ml/min
8/17/2022 11:40 AM	08:00	7.69 pH	18.44 °C	197.10 µS/cm	7.10 mg/L	2.19 NTU	82.0 mV	48.03 ft	110.00 ml/min
8/17/2022 11:44 AM	12:00	7.80 pH	18.32 °C	197.04 µS/cm	7.64 mg/L	2.07 NTU	87.9 mV	48.03 ft	110.00 ml/min
8/17/2022 11:48 AM	16:00	7.84 pH	18.46 °C	197.23 µS/cm	7.72 mg/L	2.16 NTU	90.7 mV	48.03 ft	110.00 ml/min
8/17/2022 11:52 AM	20:00	7.85 pH	18.54 °C	196.94 µS/cm	7.76 mg/L	1.80 NTU	91.8 mV	48.03 ft	110.00 ml/min
8/17/2022 11:56 AM	24:00	7.86 pH	18.42 °C	197.06 µS/cm	7.72 mg/L	1.89 NTU	92.8 mV	48.03 ft	110.00 ml/min
8/17/2022 12:00 PM	28:00	7.87 pH	18.44 °C	196.62 µS/cm	7.61 mg/L	1.80 NTU	94.4 mV	48.03 ft	110.00 ml/min

Samples

Sample ID:	Description:
GWC-8RR	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/17/2022 12:21:51 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: William Laaker

Location Name: GWC-9 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 67.16 ft Total Depth: 77.16 ft Initial Depth to Water: 42.27 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 72.16 ft Estimated Total Volume Pumped: 6400 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Historically out of pH range. Pumped an additional half hour after initial stabilization with no effect.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/17/2022 12:21 PM	00:00	4.59 pH	18.79 °C	40.97 µS/cm	6.24 mg/L	0.35 NTU	127.3 mV	42.28 ft	0.02 PSU	160.00 ml/min
8/17/2022 12:25 PM	04:00	4.56 pH	18.40 °C	41.07 µS/cm	6.20 mg/L	0.35 NTU	115.3 mV	42.28 ft	0.02 PSU	160.00 ml/min
8/17/2022 12:29 PM	08:00	4.55 pH	18.26 °C	41.20 µS/cm	6.16 mg/L	0.26 NTU	112.7 mV	42.28 ft	0.02 PSU	160.00 ml/min
8/17/2022 12:33 PM	12:00	4.55 pH	18.26 °C	41.31 µS/cm	6.14 mg/L	0.20 NTU	111.0 mV	42.28 ft	0.02 PSU	160.00 ml/min
8/17/2022 12:37 PM	16:00	4.56 pH	18.26 °C	41.32 µS/cm	6.13 mg/L	0.20 NTU	110.2 mV	42.28 ft	0.02 PSU	160.00 ml/min
8/17/2022 12:41 PM	20:00	4.56 pH	18.21 °C	41.39 µS/cm	6.13 mg/L	0.43 NTU	109.8 mV	42.28 ft	0.02 PSU	160.00 ml/min
8/17/2022 12:45 PM	24:00	4.56 pH	18.20 °C	41.28 µS/cm	6.08 mg/L	0.30 NTU	109.5 mV	42.28 ft	0.02 PSU	160.00 ml/min
8/17/2022 12:49 PM	28:00	4.56 pH	18.34 °C	41.54 µS/cm	6.15 mg/L	0.22 NTU	109.6 mV	42.28 ft	0.02 PSU	160.00 ml/min
8/17/2022 12:53 PM	32:00	4.57 pH	18.41 °C	41.34 µS/cm	6.10 mg/L	0.14 NTU	109.1 mV	42.28 ft	0.02 PSU	160.00 ml/min
8/17/2022 12:57 PM	36:00	4.57 pH	18.52 °C	41.42 µS/cm	6.12 mg/L	0.04 NTU	108.8 mV	42.28 ft	0.02 PSU	160.00 ml/min
8/17/2022 1:01 PM	40:00	4.57 pH	18.39 °C	41.29 µS/cm	6.09 mg/L	0.02 NTU	108.7 mV	42.28 ft	0.02 PSU	160.00 ml/min

Samples

Sample ID:	Description:
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GWC-9

Metals, Inorganics, TDS

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/17/2022 12:40:32 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Kevin Stephenson

Location Name: GWC-6 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 101.37 ft Total Depth: 111.37 ft Initial Depth to Water: 73.67 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 106.37 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.2 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Pre-purged 3 liters

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/17/2022 12:40 PM	00:00	7.09 pH	20.76 °C	142.68 µS/cm	7.25 mg/L	1.60 NTU	80.3 mV	73.87 ft	0.07 PSU	140.00 ml/min
8/17/2022 12:44 PM	04:00	7.17 pH	20.39 °C	142.19 µS/cm	7.18 mg/L	1.54 NTU	79.0 mV	73.87 ft	0.07 PSU	140.00 ml/min
8/17/2022 12:48 PM	08:00	7.23 pH	20.05 °C	143.05 µS/cm	7.26 mg/L	2.02 NTU	78.3 mV	73.87 ft	0.07 PSU	140.00 ml/min
8/17/2022 12:52 PM	12:00	7.27 pH	19.72 °C	143.22 µS/cm	7.29 mg/L	1.82 NTU	78.2 mV	73.87 ft	0.07 PSU	140.00 ml/min
8/17/2022 12:56 PM	16:00	7.29 pH	19.54 °C	142.39 µS/cm	7.30 mg/L	1.78 NTU	78.3 mV	73.87 ft	0.07 PSU	140.00 ml/min
8/17/2022 1:00 PM	20:00	7.28 pH	19.58 °C	141.78 µS/cm	7.34 mg/L	1.82 NTU	78.8 mV	73.87 ft	0.07 PSU	140.00 ml/min
8/17/2022 1:04 PM	24:00	7.30 pH	19.45 °C	141.63 µS/cm	7.37 mg/L	1.56 NTU	78.6 mV	73.87 ft	0.07 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWC-6	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/17/2022 12:54:24 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-8Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 66.4 ft Total Depth: 76.4 ft Initial Depth to Water: 48.48 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 71.4 ft Estimated Total Volume Pumped: 3080 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.12 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:
Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/17/2022 12:54 PM	00:00	7.15 pH	19.60 °C	95.84 µS/cm	7.37 mg/L	2.34 NTU	95.7 mV	48.48 ft	110.00 ml/min
8/17/2022 12:58 PM	04:00	6.75 pH	18.56 °C	82.42 µS/cm	7.72 mg/L	2.01 NTU	110.6 mV	48.53 ft	110.00 ml/min
8/17/2022 1:02 PM	08:00	6.55 pH	18.34 °C	83.12 µS/cm	7.68 mg/L	2.24 NTU	113.1 mV	48.57 ft	110.00 ml/min
8/17/2022 1:06 PM	12:00	6.46 pH	18.28 °C	83.01 µS/cm	7.56 mg/L	1.97 NTU	112.8 mV	48.59 ft	110.00 ml/min
8/17/2022 1:10 PM	16:00	6.41 pH	18.28 °C	83.23 µS/cm	7.48 mg/L	1.81 NTU	112.9 mV	48.59 ft	110.00 ml/min
8/17/2022 1:14 PM	20:00	6.39 pH	18.17 °C	83.55 µS/cm	7.40 mg/L	1.85 NTU	114.3 mV	48.59 ft	110.00 ml/min
8/17/2022 1:18 PM	24:00	6.36 pH	18.14 °C	83.47 µS/cm	7.34 mg/L	1.79 NTU	114.8 mV	48.59 ft	110.00 ml/min
8/17/2022 1:22 PM	28:00	6.36 pH	18.19 °C	84.70 µS/cm	7.28 mg/L	2.07 NTU	113.8 mV	48.60 ft	110.00 ml/min

Samples

Sample ID:	Description:
GWC-8Z	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/17/2022 2:20:52 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-10 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 61.81 ft Total Depth: 71.81 ft Initial Depth to Water: 35.55 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 66.81 ft Estimated Total Volume Pumped: 6920 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/17/2022 2:20 PM	00:00	6.41 pH	18.00 °C	131.94 µS/cm	6.41 mg/L	1.35 NTU	109.6 mV	35.55 ft	200.00 ml/min
8/17/2022 2:24 PM	04:00	6.42 pH	17.51 °C	177.29 µS/cm	6.60 mg/L	1.06 NTU	110.8 mV	35.55 ft	200.00 ml/min
8/17/2022 2:28 PM	08:00	6.51 pH	17.46 °C	202.75 µS/cm	6.63 mg/L	1.29 NTU	109.2 mV	35.55 ft	200.00 ml/min
8/17/2022 2:32 PM	12:00	6.60 pH	17.37 °C	239.25 µS/cm	6.76 mg/L	0.93 NTU	107.7 mV	35.55 ft	200.00 ml/min
8/17/2022 2:36 PM	16:00	6.73 pH	17.37 °C	263.30 µS/cm	6.83 mg/L	1.78 NTU	107.1 mV	35.55 ft	200.00 ml/min
8/17/2022 2:40 PM	20:00	6.81 pH	17.47 °C	280.23 µS/cm	6.78 mg/L	2.79 NTU	105.6 mV	35.55 ft	170.00 ml/min
8/17/2022 2:44 PM	24:00	6.88 pH	17.66 °C	287.02 µS/cm	6.72 mg/L	3.27 NTU	104.0 mV	35.55 ft	140.00 ml/min
8/17/2022 2:48 PM	28:00	6.93 pH	17.85 °C	290.84 µS/cm	6.73 mg/L	3.18 NTU	104.6 mV	35.55 ft	140.00 ml/min
8/17/2022 2:52 PM	32:00	6.96 pH	17.99 °C	291.43 µS/cm	6.82 mg/L	3.19 NTU	105.2 mV	35.55 ft	140.00 ml/min
8/17/2022 2:56 PM	36:00	6.99 pH	18.02 °C	288.86 µS/cm	6.84 mg/L	2.94 NTU	103.4 mV	35.55 ft	140.00 ml/min
8/17/2022 3:00 PM	40:00	7.01 pH	18.00 °C	288.04 µS/cm	6.90 mg/L	2.77 NTU	104.0 mV	35.55 ft	140.00 ml/min

Samples

Sample ID:	Description:
GWC-10	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/18/2022 9:09:48 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-10R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 90.2 ft Total Depth: 100.2 ft Initial Depth to Water: 35.7 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 95.2 ft Estimated Total Volume Pumped: 8960 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/18/2022 9:09 AM	00:00	7.10 pH	19.24 °C	278.36 µS/cm	4.41 mg/L	1.16 NTU	93.2 mV	35.70 ft	160.00 ml/min
8/18/2022 9:13 AM	04:00	7.05 pH	17.37 °C	297.51 µS/cm	0.68 mg/L	2.05 NTU	25.9 mV	35.70 ft	160.00 ml/min
8/18/2022 9:17 AM	08:00	7.18 pH	17.19 °C	299.45 µS/cm	1.00 mg/L	1.85 NTU	42.4 mV	35.70 ft	160.00 ml/min
8/18/2022 9:21 AM	12:00	7.26 pH	17.21 °C	298.08 µS/cm	1.90 mg/L	1.69 NTU	53.8 mV	35.70 ft	160.00 ml/min
8/18/2022 9:25 AM	16:00	7.32 pH	17.24 °C	294.72 µS/cm	2.58 mg/L	1.44 NTU	53.1 mV	35.70 ft	160.00 ml/min
8/18/2022 9:29 AM	20:00	7.36 pH	17.03 °C	293.48 µS/cm	3.15 mg/L	1.42 NTU	54.8 mV	35.70 ft	160.00 ml/min
8/18/2022 9:33 AM	24:00	7.40 pH	17.03 °C	291.94 µS/cm	3.73 mg/L	1.44 NTU	58.1 mV	35.70 ft	160.00 ml/min
8/18/2022 9:37 AM	28:00	7.43 pH	17.10 °C	290.27 µS/cm	4.24 mg/L	1.39 NTU	60.6 mV	35.70 ft	160.00 ml/min
8/18/2022 9:41 AM	32:00	7.45 pH	17.13 °C	288.56 µS/cm	4.71 mg/L	1.91 NTU	62.7 mV	35.70 ft	160.00 ml/min
8/18/2022 9:45 AM	36:00	7.47 pH	17.16 °C	287.19 µS/cm	5.12 mg/L	1.35 NTU	64.7 mV	35.70 ft	160.00 ml/min
8/18/2022 9:49 AM	40:00	7.48 pH	17.21 °C	285.65 µS/cm	5.43 mg/L	1.49 NTU	66.5 mV	35.70 ft	160.00 ml/min
8/18/2022 9:53 AM	44:00	7.50 pH	17.08 °C	284.55 µS/cm	5.71 mg/L	1.69 NTU	67.3 mV	35.70 ft	160.00 ml/min
8/18/2022 9:57 AM	48:00	7.51 pH	17.19 °C	283.95 µS/cm	5.96 mg/L	1.19 NTU	68.1 mV	35.70 ft	160.00 ml/min
8/18/2022 10:01 AM	52:00	7.52 pH	17.13 °C	282.71 µS/cm	6.12 mg/L	1.66 NTU	69.9 mV	35.70 ft	160.00 ml/min
8/18/2022 10:05 AM	56:00	7.52 pH	17.09 °C	282.11 µS/cm	6.29 mg/L	1.20 NTU	70.0 mV	35.70 ft	160.00 ml/min

Samples

Sample ID:	Description:
GWC-10R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/18/2022 10:07:57 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: William Laaker

Location Name: GWC-13RZ Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 94.3 ft Total Depth: 104.3 ft Initial Depth to Water: 61.03 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 99.3 ft Estimated Total Volume Pumped: 18720 ml Flow Cell Volume: 90 ml Final Flow Rate: 180 ml/min Final Draw Down: 33.5 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 7 L

Historical full evac. Water level fell into screen interval. Full evac complete.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/18/2022 10:07 AM	00:00	7.40 pH	18.58 °C	445.07 µS/cm	2.71 mg/L	0.93 NTU	116.2 mV	70.77 ft	0.22 PSU	180.00 ml/min
8/18/2022 10:11 AM	04:00	7.39 pH	18.63 °C	445.86 µS/cm	2.77 mg/L	0.94 NTU	103.7 mV	71.37 ft	0.22 PSU	180.00 ml/min
8/18/2022 10:15 AM	08:00	7.38 pH	18.70 °C	445.81 µS/cm	2.86 mg/L	1.08 NTU	100.0 mV	72.34 ft	0.22 PSU	180.00 ml/min
8/18/2022 10:19 AM	12:00	7.37 pH	18.70 °C	444.96 µS/cm	2.93 mg/L	1.02 NTU	98.8 mV	73.32 ft	0.22 PSU	180.00 ml/min
8/18/2022 10:23 AM	16:00	7.36 pH	18.67 °C	443.93 µS/cm	2.98 mg/L	1.26 NTU	98.0 mV	74.28 ft	0.22 PSU	180.00 ml/min
8/18/2022 10:27 AM	20:00	7.35 pH	18.79 °C	442.62 µS/cm	3.04 mg/L	1.37 NTU	97.8 mV	75.30 ft	0.21 PSU	180.00 ml/min
8/18/2022 10:31 AM	24:00	7.35 pH	18.67 °C	441.17 µS/cm	3.10 mg/L	1.26 NTU	97.1 mV	76.27 ft	0.21 PSU	180.00 ml/min
8/18/2022 10:35 AM	28:00	7.34 pH	18.70 °C	440.73 µS/cm	3.20 mg/L	1.44 NTU	96.7 mV	77.22 ft	0.21 PSU	180.00 ml/min
8/18/2022 10:39 AM	32:00	7.32 pH	18.71 °C	439.44 µS/cm	3.28 mg/L	0.99 NTU	96.5 mV	78.17 ft	0.21 PSU	180.00 ml/min
8/18/2022 10:43 AM	36:00	7.31 pH	18.71 °C	439.29 µS/cm	3.44 mg/L	0.81 NTU	96.6 mV	79.11 ft	0.21 PSU	180.00 ml/min
8/18/2022 10:47 AM	40:00	7.29 pH	18.75 °C	438.82 µS/cm	3.61 mg/L	1.12 NTU	96.4 mV	80.04 ft	0.21 PSU	180.00 ml/min
8/18/2022 10:51 AM	44:00	7.27 pH	18.79 °C	436.80 µS/cm	3.72 mg/L	0.84 NTU	96.3 mV	80.97 ft	0.21 PSU	180.00 ml/min
8/18/2022 10:55 AM	48:00	7.26 pH	18.79 °C	437.66 µS/cm	3.86 mg/L	0.72 NTU	96.1 mV	81.94 ft	0.21 PSU	180.00 ml/min
8/18/2022 10:59 AM	52:00	7.26 pH	18.72 °C	436.46 µS/cm	3.96 mg/L	0.58 NTU	96.0 mV	82.85 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:03 AM	56:00	7.25 pH	18.61 °C	436.82 µS/cm	4.04 mg/L	0.51 NTU	96.0 mV	83.82 ft	0.21 PSU	180.00 ml/min

8/18/2022 11:07 AM	01:00:00	7.25 pH	18.70 °C	436.51 µS/cm	4.10 mg/L	0.39 NTU	96.0 mV	84.78 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:11 AM	01:04:00	7.24 pH	18.70 °C	437.16 µS/cm	4.16 mg/L	0.39 NTU	96.0 mV	85.71 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:15 AM	01:08:00	7.24 pH	18.62 °C	437.40 µS/cm	4.20 mg/L	0.28 NTU	96.0 mV	86.71 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:19 AM	01:12:00	7.24 pH	18.76 °C	438.31 µS/cm	4.26 mg/L	0.34 NTU	95.8 mV	87.62 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:23 AM	01:16:00	7.23 pH	18.92 °C	437.94 µS/cm	4.28 mg/L	0.15 NTU	95.8 mV	88.53 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:27 AM	01:20:00	7.23 pH	19.10 °C	437.85 µS/cm	4.31 mg/L	0.47 NTU	95.8 mV	89.42 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:31 AM	01:24:00	7.23 pH	19.26 °C	438.09 µS/cm	4.34 mg/L	0.25 NTU	95.9 mV	90.30 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:35 AM	01:28:00	7.22 pH	19.18 °C	438.24 µS/cm	4.37 mg/L	0.05 NTU	96.0 mV	91.18 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:39 AM	01:32:00	7.22 pH	19.26 °C	439.12 µS/cm	4.40 mg/L	0.07 NTU	96.1 mV	92.05 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:43 AM	01:36:00	7.22 pH	19.50 °C	439.37 µS/cm	4.43 mg/L	0.09 NTU	96.4 mV	92.90 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:47 AM	01:40:00	7.22 pH	19.69 °C	439.02 µS/cm	4.43 mg/L	0.31 NTU	96.6 mV	93.72 ft	0.21 PSU	180.00 ml/min
8/18/2022 11:51 AM	01:44:00	7.23 pH	19.18 °C	438.96 µS/cm	4.47 mg/L	0.02 NTU	96.8 mV	94.53 ft	0.21 PSU	180.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/18/2022 10:59:44 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-11 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 37.25 ft Total Depth: 47.35 ft Initial Depth to Water: 25.43 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 42.35 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/18/2022 10:59 AM	00:00	6.56 pH	20.27 °C	106.28 µS/cm	4.48 mg/L	1.82 NTU	127.2 mV	25.43 ft	140.00 ml/min
8/18/2022 11:03 AM	04:00	6.24 pH	20.08 °C	94.15 µS/cm	4.42 mg/L	1.74 NTU	135.2 mV	25.43 ft	140.00 ml/min
8/18/2022 11:07 AM	08:00	6.11 pH	20.24 °C	91.04 µS/cm	4.32 mg/L	1.82 NTU	141.2 mV	25.43 ft	140.00 ml/min
8/18/2022 11:11 AM	12:00	6.06 pH	20.40 °C	90.03 µS/cm	4.27 mg/L	1.55 NTU	145.2 mV	25.43 ft	140.00 ml/min
8/18/2022 11:15 AM	16:00	6.06 pH	19.64 °C	90.44 µS/cm	4.27 mg/L	1.63 NTU	147.2 mV	25.43 ft	140.00 ml/min
8/18/2022 11:19 AM	20:00	6.06 pH	19.52 °C	92.10 µS/cm	4.26 mg/L	1.74 NTU	145.3 mV	25.43 ft	140.00 ml/min
8/18/2022 11:23 AM	24:00	6.08 pH	19.47 °C	94.26 µS/cm	4.20 mg/L	2.14 NTU	138.7 mV	25.43 ft	140.00 ml/min

Samples

Sample ID:	Description:
GWC-11	Metals, Inorganics, TDS
DUP-2	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/18/2022 12:05:24 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-11R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 73.2 ft Total Depth: 83.2 ft Initial Depth to Water: 25.39 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 78.2 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/18/2022 12:05 PM	00:00	7.14 pH	23.72 °C	273.43 µS/cm	3.91 mg/L	1.15 NTU	119.5 mV	25.39 ft	140.00 ml/min
8/18/2022 12:09 PM	04:00	7.28 pH	19.70 °C	286.56 µS/cm	3.59 mg/L	1.37 NTU	118.1 mV	25.40 ft	140.00 ml/min
8/18/2022 12:13 PM	08:00	7.49 pH	19.11 °C	288.51 µS/cm	5.05 mg/L	1.26 NTU	123.1 mV	25.40 ft	140.00 ml/min
8/18/2022 12:17 PM	12:00	7.55 pH	18.93 °C	291.16 µS/cm	5.28 mg/L	1.54 NTU	122.3 mV	25.40 ft	140.00 ml/min
8/18/2022 12:21 PM	16:00	7.56 pH	18.89 °C	291.42 µS/cm	5.33 mg/L	1.82 NTU	121.1 mV	25.40 ft	140.00 ml/min
8/18/2022 12:25 PM	20:00	7.57 pH	19.04 °C	292.51 µS/cm	5.36 mg/L	1.38 NTU	121.6 mV	25.40 ft	140.00 ml/min
8/18/2022 12:29 PM	24:00	7.57 pH	19.13 °C	292.85 µS/cm	5.40 mg/L	1.60 NTU	120.8 mV	25.40 ft	140.00 ml/min

Samples

Sample ID:	Description:
GWC-11R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/18/2022 12:58:44 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: William Laaker

Location Name: GWC-13 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 74.8 ft Total Depth: 84.8 ft Initial Depth to Water: 33.76 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 79.8 ft Estimated Total Volume Pumped: 2100 ml Flow Cell Volume: 90 ml Final Flow Rate: 105 ml/min Final Draw Down: 0.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 2 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/18/2022 12:58 PM	00:00	7.08 pH	23.02 °C	246.37 µS/cm	3.81 mg/L	6.48 NTU	80.5 mV	33.80 ft	0.12 PSU	105.00 ml/min
8/18/2022 1:02 PM	04:00	7.01 pH	22.44 °C	247.72 µS/cm	3.89 mg/L	5.60 NTU	84.0 mV	33.80 ft	0.12 PSU	105.00 ml/min
8/18/2022 1:06 PM	08:00	6.97 pH	22.40 °C	246.48 µS/cm	3.86 mg/L	4.69 NTU	85.1 mV	33.80 ft	0.12 PSU	105.00 ml/min
8/18/2022 1:10 PM	12:00	6.95 pH	22.44 °C	247.84 µS/cm	3.92 mg/L	3.88 NTU	85.6 mV	33.80 ft	0.12 PSU	105.00 ml/min
8/18/2022 1:14 PM	16:00	6.95 pH	22.27 °C	247.68 µS/cm	3.96 mg/L	2.79 NTU	86.6 mV	33.80 ft	0.12 PSU	105.00 ml/min
8/18/2022 1:18 PM	20:00	6.95 pH	22.09 °C	246.64 µS/cm	3.95 mg/L	2.45 NTU	87.4 mV	33.80 ft	0.12 PSU	105.00 ml/min

Samples

Sample ID:	Description:
GWC-13	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/18/2022 2:09:51 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-14Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 66.34 ft Total Depth: 76.34 ft Initial Depth to Water: 34.15 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 71.34 ft Estimated Total Volume Pumped: 4840 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 1.08 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/18/2022 2:09 PM	00:00	6.02 pH	21.48 °C	122.61 µS/cm	3.36 mg/L	1.42 NTU	120.1 mV	34.15 ft	110.00 ml/min
8/18/2022 2:13 PM	04:00	5.83 pH	21.67 °C	110.99 µS/cm	3.69 mg/L	1.78 NTU	138.9 mV	34.40 ft	110.00 ml/min
8/18/2022 2:17 PM	08:00	5.71 pH	21.66 °C	105.93 µS/cm	3.87 mg/L	1.48 NTU	145.8 mV	34.57 ft	110.00 ml/min
8/18/2022 2:21 PM	12:00	5.69 pH	21.65 °C	105.41 µS/cm	3.94 mg/L	1.82 NTU	147.6 mV	34.72 ft	110.00 ml/min
8/18/2022 2:25 PM	16:00	5.73 pH	21.64 °C	107.35 µS/cm	4.01 mg/L	1.80 NTU	148.8 mV	34.85 ft	110.00 ml/min
8/18/2022 2:29 PM	20:00	5.78 pH	21.56 °C	110.17 µS/cm	4.00 mg/L	1.55 NTU	150.4 mV	34.95 ft	110.00 ml/min
8/18/2022 2:33 PM	24:00	5.83 pH	21.49 °C	113.57 µS/cm	3.99 mg/L	1.39 NTU	150.6 mV	34.99 ft	110.00 ml/min
8/18/2022 2:37 PM	28:00	5.81 pH	21.61 °C	116.76 µS/cm	3.96 mg/L	1.19 NTU	148.9 mV	35.08 ft	110.00 ml/min
8/18/2022 2:41 PM	32:00	5.85 pH	21.69 °C	119.68 µS/cm	4.00 mg/L	1.62 NTU	151.3 mV	35.12 ft	110.00 ml/min
8/18/2022 2:45 PM	36:00	5.89 pH	21.63 °C	122.42 µS/cm	4.00 mg/L	1.05 NTU	149.9 mV	35.17 ft	110.00 ml/min
8/18/2022 2:49 PM	40:00	5.92 pH	21.74 °C	124.61 µS/cm	3.95 mg/L	0.96 NTU	152.6 mV	35.21 ft	110.00 ml/min
8/18/2022 2:53 PM	44:00	5.95 pH	21.83 °C	126.80 µS/cm	3.99 mg/L	1.19 NTU	151.2 mV	35.23 ft	110.00 ml/min

Samples

Sample ID:	Description:
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GWC-14Z

Metals, Inorganics, TDS

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/18/2022 2:24:39 PM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: William Laaker

Location Name: GWC-12 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 44.03 ft Total Depth: 54.03 ft Initial Depth to Water: 24.45 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 49.03 ft Estimated Total Volume Pumped: 2800 ml Flow Cell Volume: 90 ml Final Flow Rate: 140 ml/min Final Draw Down: 0.64 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/18/2022 2:24 PM	00:00	6.23 pH	20.66 °C	109.51 µS/cm	0.88 mg/L	0.61 NTU	59.4 mV	24.96 ft	0.05 PSU	140.00 ml/min
8/18/2022 2:28 PM	04:00	6.10 pH	20.08 °C	111.34 µS/cm	0.50 mg/L	1.44 NTU	64.0 mV	25.01 ft	0.05 PSU	140.00 ml/min
8/18/2022 2:32 PM	08:00	6.07 pH	19.81 °C	111.66 µS/cm	0.43 mg/L	1.97 NTU	66.1 mV	25.04 ft	0.05 PSU	140.00 ml/min
8/18/2022 2:36 PM	12:00	6.05 pH	19.95 °C	111.63 µS/cm	0.44 mg/L	1.99 NTU	65.5 mV	25.05 ft	0.05 PSU	140.00 ml/min
8/18/2022 2:40 PM	16:00	6.04 pH	19.71 °C	111.91 µS/cm	0.39 mg/L	1.42 NTU	65.6 mV	25.07 ft	0.05 PSU	140.00 ml/min
8/18/2022 2:44 PM	20:00	6.03 pH	19.68 °C	112.30 µS/cm	0.45 mg/L	1.19 NTU	64.4 mV	25.09 ft	0.05 PSU	140.00 ml/min

Samples

Sample ID:	Description:
GWC-12	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/19/2022 9:31:25 AM

Project: Plant Bowen LF Cells 1&2 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-15R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 87.5 ft Total Depth: 97.5 ft Initial Depth to Water: 42.53 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 92.5 ft Estimated Total Volume Pumped: 9040 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/19/2022 9:31 AM	00:00	7.09 pH	20.86 °C	318.56 µS/cm	2.18 mg/L	0.75 NTU	25.5 mV	42.51 ft	120.00 ml/min
8/19/2022 9:35 AM	04:00	7.18 pH	20.53 °C	307.86 µS/cm	3.00 mg/L	1.28 NTU	57.6 mV	42.51 ft	120.00 ml/min
8/19/2022 9:39 AM	08:00	7.31 pH	20.49 °C	302.06 µS/cm	3.61 mg/L	1.41 NTU	80.6 mV	42.51 ft	120.00 ml/min
8/19/2022 9:43 AM	12:00	7.33 pH	20.81 °C	301.61 µS/cm	3.53 mg/L	6.01 NTU	97.7 mV	42.51 ft	100.00 ml/min
8/19/2022 9:47 AM	16:00	7.34 pH	20.94 °C	303.25 µS/cm	3.54 mg/L	11.20 NTU	104.7 mV	42.48 ft	100.00 ml/min
8/19/2022 9:51 AM	20:00	7.36 pH	20.94 °C	303.37 µS/cm	3.61 mg/L	12.40 NTU	109.3 mV	42.48 ft	100.00 ml/min
8/19/2022 9:55 AM	24:00	7.39 pH	20.70 °C	303.72 µS/cm	3.72 mg/L	11.90 NTU	112.0 mV	42.49 ft	100.00 ml/min
8/19/2022 9:59 AM	28:00	7.41 pH	20.58 °C	304.03 µS/cm	3.77 mg/L	12.01 NTU	111.9 mV	42.49 ft	100.00 ml/min
8/19/2022 10:03 AM	32:00	7.43 pH	20.80 °C	304.82 µS/cm	3.84 mg/L	11.41 NTU	113.9 mV	42.49 ft	100.00 ml/min
8/19/2022 10:07 AM	36:00	7.44 pH	21.11 °C	304.09 µS/cm	3.85 mg/L	10.73 NTU	113.7 mV	42.50 ft	100.00 ml/min
8/19/2022 10:11 AM	40:00	7.44 pH	21.46 °C	305.02 µS/cm	3.84 mg/L	9.66 NTU	113.1 mV	42.50 ft	100.00 ml/min
8/19/2022 10:15 AM	44:00	7.45 pH	21.49 °C	305.68 µS/cm	3.84 mg/L	9.27 NTU	115.6 mV	42.50 ft	100.00 ml/min
8/19/2022 10:19 AM	48:00	7.46 pH	21.69 °C	307.08 µS/cm	3.82 mg/L	8.65 NTU	116.5 mV	42.50 ft	100.00 ml/min
8/19/2022 10:23 AM	52:00	7.46 pH	21.58 °C	307.61 µS/cm	3.82 mg/L	8.32 NTU	118.0 mV	42.50 ft	100.00 ml/min
8/19/2022 10:27 AM	56:00	7.47 pH	21.63 °C	306.96 µS/cm	3.78 mg/L	7.86 NTU	118.5 mV	42.50 ft	100.00 ml/min

8/19/2022 10:31 AM	01:00:00	7.47 pH	21.38 °C	307.23 µS/cm	3.77 mg/L	7.16 NTU	118.8 mV	42.50 ft	100.00 ml/min
8/19/2022 10:35 AM	01:04:00	7.48 pH	21.56 °C	307.28 µS/cm	3.73 mg/L	6.52 NTU	119.6 mV	42.50 ft	100.00 ml/min
8/19/2022 10:39 AM	01:08:00	7.48 pH	21.56 °C	307.42 µS/cm	3.68 mg/L	5.78 NTU	117.9 mV	42.50 ft	100.00 ml/min
8/19/2022 10:43 AM	01:12:00	7.48 pH	21.68 °C	306.02 µS/cm	3.63 mg/L	5.30 NTU	119.0 mV	42.50 ft	100.00 ml/min
8/19/2022 10:47 AM	01:16:00	7.48 pH	21.54 °C	305.37 µS/cm	3.59 mg/L	5.08 NTU	119.2 mV	42.50 ft	100.00 ml/min
8/19/2022 10:51 AM	01:20:00	7.49 pH	21.38 °C	305.63 µS/cm	3.58 mg/L	4.90 NTU	117.9 mV	42.50 ft	100.00 ml/min
8/19/2022 10:55 AM	01:24:00	7.49 pH	21.42 °C	304.88 µS/cm	3.53 mg/L	4.79 NTU	118.6 mV	42.50 ft	100.00 ml/min
8/19/2022 10:59 AM	01:28:00	7.50 pH	21.31 °C	303.83 µS/cm	3.49 mg/L	4.53 NTU	118.2 mV	42.50 ft	100.00 ml/min

Samples

Sample ID:	Description:
GWC-15R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/19/2022 10:21:53 AM
Project: Plant Bowen LF Cells 1&2 August 2022
Operator Name: William Laaker

Location Name: GWC-15Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 64.9 ft Total Depth: 74.9 ft Initial Depth to Water: 41.94 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 69.9 ft Estimated Total Volume Pumped: 3640 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.64 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:
Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/19/2022 10:21 AM	00:00	7.35 pH	21.09 °C	229.72 µS/cm	7.62 mg/L	0.04 NTU	96.1 mV	42.51 ft	0.11 PSU	130.00 ml/min
8/19/2022 10:25 AM	04:00	7.46 pH	20.84 °C	229.72 µS/cm	7.77 mg/L	0.04 NTU	94.7 mV	42.54 ft	0.11 PSU	130.00 ml/min
8/19/2022 10:29 AM	08:00	7.52 pH	20.75 °C	229.69 µS/cm	7.74 mg/L	0.02 NTU	94.7 mV	42.56 ft	0.11 PSU	130.00 ml/min
8/19/2022 10:33 AM	12:00	7.56 pH	20.75 °C	230.68 µS/cm	7.73 mg/L	0.24 NTU	94.8 mV	42.57 ft	0.11 PSU	130.00 ml/min
8/19/2022 10:37 AM	16:00	7.58 pH	20.66 °C	231.51 µS/cm	7.74 mg/L	0.50 NTU	94.7 mV	42.58 ft	0.11 PSU	130.00 ml/min
8/19/2022 10:41 AM	20:00	7.58 pH	20.79 °C	231.57 µS/cm	7.72 mg/L	0.71 NTU	94.7 mV	42.58 ft	0.11 PSU	130.00 ml/min
8/19/2022 10:45 AM	24:00	7.59 pH	20.79 °C	232.18 µS/cm	7.67 mg/L	0.92 NTU	94.6 mV	42.58 ft	0.11 PSU	130.00 ml/min
8/19/2022 10:49 AM	28:00	7.60 pH	20.74 °C	233.56 µS/cm	7.61 mg/L	0.88 NTU	94.5 mV	42.58 ft	0.11 PSU	130.00 ml/min

Samples

Sample ID:	Description:
GWC-15Z	Metals, Inorganics, TDS
DUP-3	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/5/2022 9:03:59 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Meredith Duncan

Location Name: GWA-38 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 59.35 ft Total Depth: 69.35 ft Initial Depth to Water: 53.1 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 64.35 ft Estimated Total Volume Pumped: 3780 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.89 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/5/2022 9:03 AM	00:00	5.06 pH	20.54 °C	37.24 µS/cm	7.20 mg/L	0.83 NTU	133.5 mV	53.10 ft	165.00 ml/min
8/5/2022 9:07 AM	04:00	5.03 pH	20.27 °C	36.48 µS/cm	7.18 mg/L	0.79 NTU	150.2 mV	53.36 ft	130.00 ml/min
8/5/2022 9:11 AM	08:00	5.00 pH	20.45 °C	35.09 µS/cm	7.19 mg/L	0.47 NTU	150.7 mV	53.52 ft	130.00 ml/min
8/5/2022 9:15 AM	12:00	4.97 pH	20.67 °C	33.69 µS/cm	7.17 mg/L	0.94 NTU	149.2 mV	53.65 ft	130.00 ml/min
8/5/2022 9:19 AM	16:00	4.98 pH	20.52 °C	33.93 µS/cm	7.15 mg/L	0.37 NTU	147.2 mV	53.73 ft	130.00 ml/min
8/5/2022 9:23 AM	20:00	4.97 pH	20.55 °C	33.91 µS/cm	7.15 mg/L	0.60 NTU	146.8 mV	53.83 ft	130.00 ml/min
8/5/2022 9:27 AM	24:00	4.98 pH	20.54 °C	33.62 µS/cm	7.08 mg/L	0.58 NTU	144.7 mV	53.91 ft	130.00 ml/min
8/5/2022 9:31 AM	28:00	4.98 pH	20.59 °C	33.45 µS/cm	7.12 mg/L	0.45 NTU	144.6 mV	53.99 ft	130.00 ml/min

Samples

Sample ID:	Description:
GWA-38	Metals, Inorganics, TDS
DUP-1	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/5/2022 9:43:05 AM
Project: Plant Bowen LF Cells 3&4 August 2022
Operator Name: Robert Mull

Location Name: GWA-52 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 73.96 ft Total Depth: 83.96 ft Initial Depth to Water: 57.38 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 78.96 ft Estimated Total Volume Pumped: 4500 ml Flow Cell Volume: 90 ml Final Flow Rate: 125 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:
Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
8/5/2022 9:43 AM	00:00	7.11 pH	24.22 °C	267.60 µS/cm	8.83 mg/L	1.22 NTU	79.2 mV	57.38 ft	125.00 ml/min
8/5/2022 9:47 AM	04:00	6.90 pH	21.67 °C	240.73 µS/cm	8.99 mg/L	1.09 NTU	67.7 mV	57.39 ft	125.00 ml/min
8/5/2022 9:51 AM	08:00	6.96 pH	21.36 °C	255.16 µS/cm	8.87 mg/L	0.80 NTU	60.9 mV	57.39 ft	125.00 ml/min
8/5/2022 9:55 AM	12:00	7.08 pH	21.58 °C	258.30 µS/cm	8.81 mg/L	0.92 NTU	58.0 mV	57.39 ft	125.00 ml/min
8/5/2022 9:59 AM	16:00	7.18 pH	21.60 °C	254.86 µS/cm	8.69 mg/L	0.96 NTU	55.8 mV	57.39 ft	125.00 ml/min
8/5/2022 10:03 AM	20:00	7.24 pH	21.61 °C	254.25 µS/cm	8.66 mg/L	1.24 NTU	55.0 mV	57.39 ft	125.00 ml/min
8/5/2022 10:07 AM	24:00	7.28 pH	21.54 °C	254.24 µS/cm	8.58 mg/L	1.28 NTU	54.7 mV	57.39 ft	125.00 ml/min
8/5/2022 10:11 AM	28:00	7.31 pH	21.76 °C	255.10 µS/cm	8.53 mg/L	1.21 NTU	53.8 mV	57.39 ft	125.00 ml/min
8/5/2022 10:15 AM	32:00	7.33 pH	21.59 °C	254.31 µS/cm	8.51 mg/L	1.27 NTU	53.7 mV	57.39 ft	125.00 ml/min
8/5/2022 10:19 AM	36:00	7.35 pH	21.76 °C	254.91 µS/cm	8.48 mg/L	1.13 NTU	53.3 mV	57.39 ft	125.00 ml/min

Samples

Sample ID:	Description:
GWA-52	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/5/2022 10:32:35 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Meredith Duncan

Location Name: GWA-54 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 66.11 ft Total Depth: 76.11 ft Initial Depth to Water: 51.59 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 71.11 ft Estimated Total Volume Pumped: 4680 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/5/2022 10:32 AM	00:00	6.53 pH	21.76 °C	149.85 µS/cm	7.10 mg/L	0.46 NTU	124.7 mV	51.59 ft	130.00 ml/min
8/5/2022 10:36 AM	04:00	6.56 pH	21.47 °C	156.75 µS/cm	6.73 mg/L	0.49 NTU	132.2 mV	51.61 ft	130.00 ml/min
8/5/2022 10:40 AM	08:00	6.81 pH	21.47 °C	193.97 µS/cm	6.41 mg/L	0.45 NTU	132.1 mV	51.61 ft	130.00 ml/min
8/5/2022 10:44 AM	12:00	7.00 pH	21.43 °C	209.11 µS/cm	5.45 mg/L	0.58 NTU	133.3 mV	51.61 ft	130.00 ml/min
8/5/2022 10:48 AM	16:00	7.13 pH	21.47 °C	215.76 µS/cm	4.14 mg/L	0.40 NTU	137.2 mV	51.61 ft	130.00 ml/min
8/5/2022 10:52 AM	20:00	7.21 pH	21.33 °C	218.02 µS/cm	3.73 mg/L	0.49 NTU	137.5 mV	51.61 ft	130.00 ml/min
8/5/2022 10:56 AM	24:00	7.25 pH	21.56 °C	218.65 µS/cm	3.68 mg/L	0.58 NTU	140.3 mV	51.61 ft	130.00 ml/min
8/5/2022 11:00 AM	28:00	7.28 pH	21.59 °C	218.85 µS/cm	3.72 mg/L	0.46 NTU	139.7 mV	51.61 ft	130.00 ml/min
8/5/2022 11:04 AM	32:00	7.31 pH	21.47 °C	219.57 µS/cm	3.76 mg/L	0.50 NTU	142.2 mV	51.61 ft	130.00 ml/min
8/5/2022 11:08 AM	36:00	7.32 pH	21.67 °C	220.15 µS/cm	3.79 mg/L	0.54 NTU	142.8 mV	51.61 ft	130.00 ml/min

Samples

Sample ID:	Description:
GWA-54	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/5/2022 11:20:12 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: William Laaker

Location Name: GWA-56 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 75.87 ft Total Depth: 85.87 ft Initial Depth to Water: 39.53 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 80.87 ft Estimated Total Volume Pumped: 10240 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0.58 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/5/2022 11:20 AM	00:00	7.57 pH	21.89 °C	503.76 µS/cm	1.24 mg/L	0.33 NTU	141.3 mV	40.11 ft	0.25 PSU	160.00 ml/min
8/5/2022 11:24 AM	04:00	7.72 pH	21.28 °C	541.75 µS/cm	1.12 mg/L	0.79 NTU	118.2 mV	40.11 ft	0.26 PSU	160.00 ml/min
8/5/2022 11:28 AM	08:00	7.73 pH	21.33 °C	544.88 µS/cm	0.80 mg/L	0.76 NTU	108.9 mV	40.11 ft	0.27 PSU	160.00 ml/min
8/5/2022 11:32 AM	12:00	7.73 pH	20.91 °C	544.63 µS/cm	0.70 mg/L	0.57 NTU	103.6 mV	40.11 ft	0.27 PSU	160.00 ml/min
8/5/2022 11:36 AM	16:00	7.73 pH	21.04 °C	541.82 µS/cm	0.73 mg/L	0.76 NTU	96.5 mV	40.11 ft	0.26 PSU	160.00 ml/min
8/5/2022 11:40 AM	20:00	7.71 pH	21.02 °C	541.03 µS/cm	0.86 mg/L	0.65 NTU	87.2 mV	40.11 ft	0.26 PSU	160.00 ml/min
8/5/2022 11:44 AM	24:00	7.70 pH	20.97 °C	538.03 µS/cm	1.01 mg/L	0.38 NTU	78.5 mV	40.11 ft	0.26 PSU	160.00 ml/min
8/5/2022 11:48 AM	28:00	7.70 pH	20.73 °C	531.12 µS/cm	1.17 mg/L	0.46 NTU	73.2 mV	40.11 ft	0.26 PSU	160.00 ml/min
8/5/2022 11:52 AM	32:00	7.68 pH	21.06 °C	530.39 µS/cm	1.34 mg/L	0.27 NTU	68.8 mV	40.11 ft	0.26 PSU	160.00 ml/min
8/5/2022 11:56 AM	36:00	7.66 pH	21.24 °C	525.83 µS/cm	1.53 mg/L	0.18 NTU	64.9 mV	40.11 ft	0.26 PSU	160.00 ml/min
8/5/2022 12:00 PM	40:00	7.65 pH	21.33 °C	520.06 µS/cm	1.71 mg/L	0.22 NTU	63.8 mV	40.11 ft	0.25 PSU	160.00 ml/min
8/5/2022 12:04 PM	44:00	7.64 pH	21.20 °C	516.87 µS/cm	1.94 mg/L	0.19 NTU	64.9 mV	40.11 ft	0.25 PSU	160.00 ml/min
8/5/2022 12:08 PM	48:00	7.62 pH	21.24 °C	515.36 µS/cm	2.09 mg/L	0.11 NTU	62.4 mV	40.11 ft	0.25 PSU	160.00 ml/min
8/5/2022 12:12 PM	52:00	7.61 pH	21.11 °C	512.48 µS/cm	2.20 mg/L	0.02 NTU	61.4 mV	40.11 ft	0.25 PSU	160.00 ml/min
8/5/2022 12:16 PM	56:00	7.60 pH	21.32 °C	508.09 µS/cm	2.29 mg/L	0.09 NTU	59.8 mV	40.11 ft	0.25 PSU	160.00 ml/min

8/5/2022 12:20 PM	01:00:00	7.60 pH	21.06 °C	508.23 µS/cm	2.39 mg/L	0.08 NTU	59.8 mV	40.11 ft	0.25 PSU	160.00 ml/min
8/5/2022 12:24 PM	01:04:00	7.60 pH	21.19 °C	504.11 µS/cm	2.44 mg/L	0.01 NTU	59.4 mV	40.11 ft	0.25 PSU	160.00 ml/min

Samples

Sample ID:	Description:
GWA-56	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/8/2022 9:50:03 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Meredith Duncan

Location Name: GWA-51RZ Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 84.23 ft Total Depth: 94.23 ft Initial Depth to Water: 70.75 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 89.23 ft Estimated Total Volume Pumped: 15000 ml Flow Cell Volume: 90 ml Final Flow Rate: 250 ml/min Final Draw Down: 14.6 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 11L

Full Evacuation

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/8/2022 9:50 AM	00:00	7.41 pH	18.98 °C	363.29 µS/cm	5.79 mg/L	0.25 NTU	54.3 mV	70.75 ft	250.00 ml/min
8/8/2022 9:54 AM	04:00	7.42 pH	19.02 °C	362.70 µS/cm	5.75 mg/L	0.23 NTU	62.9 mV	71.88 ft	250.00 ml/min
8/8/2022 9:58 AM	08:00	7.42 pH	19.04 °C	362.53 µS/cm	5.83 mg/L	0.57 NTU	63.8 mV	73.26 ft	250.00 ml/min
8/8/2022 10:02 AM	12:00	7.43 pH	19.02 °C	360.98 µS/cm	5.77 mg/L	0.24 NTU	65.0 mV	74.53 ft	250.00 ml/min
8/8/2022 10:06 AM	16:00	7.43 pH	19.26 °C	361.48 µS/cm	5.74 mg/L	0.43 NTU	65.4 mV	75.62 ft	250.00 ml/min
8/8/2022 10:10 AM	20:00	7.44 pH	19.15 °C	361.22 µS/cm	5.72 mg/L	0.23 NTU	66.0 mV	76.67 ft	250.00 ml/min
8/8/2022 10:14 AM	24:00	7.44 pH	19.18 °C	367.31 µS/cm	5.75 mg/L	0.25 NTU	66.6 mV	77.88 ft	250.00 ml/min
8/8/2022 10:18 AM	28:00	7.44 pH	19.20 °C	366.65 µS/cm	5.79 mg/L	0.24 NTU	67.6 mV	79.07 ft	250.00 ml/min
8/8/2022 10:22 AM	32:00	7.44 pH	19.35 °C	368.94 µS/cm	5.76 mg/L	0.21 NTU	67.9 mV	80.10 ft	250.00 ml/min
8/8/2022 10:26 AM	36:00	7.45 pH	19.22 °C	369.44 µS/cm	5.79 mg/L	0.21 NTU	68.7 mV	81.25 ft	250.00 ml/min
8/8/2022 10:30 AM	40:00	7.46 pH	19.11 °C	368.65 µS/cm	5.75 mg/L	0.24 NTU	69.5 mV	82.24 ft	250.00 ml/min
8/8/2022 10:34 AM	44:00	7.46 pH	19.26 °C	369.73 µS/cm	5.72 mg/L	0.34 NTU	70.2 mV	83.35 ft	250.00 ml/min
8/8/2022 10:38 AM	48:00	7.47 pH	19.15 °C	368.81 µS/cm	5.72 mg/L	0.23 NTU	70.9 mV	84.32 ft	250.00 ml/min
8/8/2022 10:42 AM	52:00	7.47 pH	19.29 °C	369.34 µS/cm	5.69 mg/L	0.68 NTU	71.4 mV	84.65 ft	250.00 ml/min
8/8/2022 10:46 AM	56:00	7.47 pH	19.68 °C	368.43 µS/cm	5.69 mg/L	0.35 NTU	72.2 mV	84.95 ft	250.00 ml/min

8/8/2022 10:50 AM	01:00:00	7.47 pH	19.53 °C	369.75 µS/cm	5.66 mg/L	0.66 NTU	73.7 mV	85.35 ft	250.00 ml/min
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Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/8/2022 9:53:41 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: William Laaker

Location Name: GWA-36A Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 95.1 ft Total Depth: 105.1 ft Initial Depth to Water: 32.72 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 100.1 ft Estimated Total Volume Pumped: 9380 ml Flow Cell Volume: 90 ml Final Flow Rate: 105 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 2 L

At 52:00, lowered pump rate to 105 mL/min to stabilize turbidity.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/8/2022 9:53 AM	00:00	6.89 pH	20.26 °C	439.59 µS/cm	2.96 mg/L	4.39 NTU	112.7 mV	32.74 ft	0.21 PSU	140.00 ml/min
8/8/2022 9:57 AM	04:00	6.87 pH	20.16 °C	440.74 µS/cm	3.02 mg/L	4.15 NTU	103.1 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:01 AM	08:00	6.85 pH	20.25 °C	441.98 µS/cm	3.02 mg/L	3.25 NTU	100.1 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:05 AM	12:00	6.84 pH	20.45 °C	440.77 µS/cm	3.00 mg/L	3.48 NTU	99.0 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:09 AM	16:00	6.84 pH	20.48 °C	439.56 µS/cm	3.04 mg/L	5.17 NTU	98.1 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:13 AM	20:00	6.82 pH	20.56 °C	439.51 µS/cm	3.10 mg/L	7.89 NTU	97.7 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:17 AM	24:00	6.82 pH	20.44 °C	439.88 µS/cm	3.15 mg/L	9.99 NTU	97.3 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:21 AM	28:00	6.81 pH	20.47 °C	442.14 µS/cm	3.20 mg/L	9.83 NTU	97.1 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:25 AM	32:00	6.81 pH	20.61 °C	442.52 µS/cm	3.21 mg/L	9.29 NTU	96.8 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:29 AM	36:00	6.81 pH	20.48 °C	441.09 µS/cm	3.20 mg/L	9.06 NTU	96.6 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:33 AM	40:00	6.81 pH	20.51 °C	442.43 µS/cm	3.23 mg/L	7.53 NTU	96.3 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:37 AM	44:00	6.80 pH	20.67 °C	442.83 µS/cm	3.24 mg/L	6.50 NTU	96.2 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:41 AM	48:00	6.80 pH	20.75 °C	441.91 µS/cm	3.22 mg/L	6.50 NTU	96.1 mV	32.75 ft	0.21 PSU	140.00 ml/min
8/8/2022 10:45 AM	52:00	6.79 pH	21.06 °C	444.64 µS/cm	3.28 mg/L	6.27 NTU	95.9 mV	32.75 ft	0.22 PSU	105.00 ml/min
8/8/2022 10:49 AM	56:00	6.78 pH	21.70 °C	445.28 µS/cm	3.28 mg/L	5.73 NTU	95.9 mV	32.75 ft	0.22 PSU	105.00 ml/min

8/8/2022 10:53 AM	01:00:00	6.78 pH	21.89 °C	443.30 µS/cm	3.23 mg/L	5.16 NTU	95.9 mV	32.75 ft	0.22 PSU	105.00 ml/min
8/8/2022 10:57 AM	01:04:00	6.79 pH	21.73 °C	442.58 µS/cm	3.23 mg/L	3.82 NTU	95.8 mV	32.75 ft	0.21 PSU	105.00 ml/min
8/8/2022 11:01 AM	01:08:00	6.79 pH	21.57 °C	443.06 µS/cm	3.24 mg/L	3.69 NTU	95.7 mV	32.75 ft	0.22 PSU	105.00 ml/min
8/8/2022 11:05 AM	01:12:00	6.79 pH	21.39 °C	444.01 µS/cm	3.28 mg/L	3.50 NTU	95.5 mV	32.75 ft	0.22 PSU	105.00 ml/min

Samples

Sample ID:	Description:
GWA-36A	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/8/2022 11:42:02 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Meredith Duncan

Location Name: GWA-53R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 158.48 ft Total Depth: 168.48 ft Initial Depth to Water: 59.3 ft	Pump Type: Solinst Model 408 Tubing Type: LDPE Pump Intake From TOC: 163.48 ft Estimated Total Volume Pumped: 4320 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Brown water at start of pumping

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/8/2022 11:42 AM	00:00	7.56 pH	21.70 °C	277.13 µS/cm	5.82 mg/L	1,297.0 NTU	56.7 mV	59.30 ft	120.00 ml/min
8/8/2022 11:46 AM	04:00	7.60 pH	21.82 °C	276.25 µS/cm	6.11 mg/L	60.00 NTU	77.3 mV	59.30 ft	120.00 ml/min
8/8/2022 11:50 AM	08:00	7.61 pH	21.67 °C	276.31 µS/cm	6.15 mg/L	35.20 NTU	82.1 mV	59.30 ft	120.00 ml/min
8/8/2022 11:54 AM	12:00	7.61 pH	21.69 °C	276.80 µS/cm	6.16 mg/L	14.50 NTU	84.9 mV	59.30 ft	120.00 ml/min
8/8/2022 11:58 AM	16:00	7.61 pH	21.65 °C	276.19 µS/cm	6.13 mg/L	9.95 NTU	87.2 mV	59.30 ft	120.00 ml/min
8/8/2022 12:02 PM	20:00	7.61 pH	21.65 °C	276.57 µS/cm	6.14 mg/L	9.97 NTU	88.1 mV	59.30 ft	120.00 ml/min
8/8/2022 12:06 PM	24:00	7.61 pH	21.47 °C	275.71 µS/cm	6.12 mg/L	7.85 NTU	88.7 mV	59.30 ft	120.00 ml/min
8/8/2022 12:10 PM	28:00	7.61 pH	21.50 °C	275.69 µS/cm	6.09 mg/L	4.76 NTU	88.8 mV	59.30 ft	120.00 ml/min
8/8/2022 12:14 PM	32:00	7.62 pH	21.33 °C	275.43 µS/cm	6.13 mg/L	3.18 NTU	89.2 mV	59.30 ft	120.00 ml/min
8/8/2022 12:18 PM	36:00	7.61 pH	21.29 °C	275.43 µS/cm	6.11 mg/L	4.41 NTU	88.8 mV	59.30 ft	120.00 ml/min

Samples

Sample ID:	Description:
GWA-53R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/8/2022 11:44:34 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: William Laaker

Location Name: GWA-36RA Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 100.28 ft Total Depth: 110.28 ft Initial Depth to Water: 34.22 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 105.28 ft Estimated Total Volume Pumped: 8360 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/8/2022 11:44 AM	00:00	7.16 pH	21.99 °C	428.21 µS/cm	2.58 mg/L	3.25 NTU	84.8 mV	34.24 ft	0.21 PSU	110.00 ml/min
8/8/2022 11:48 AM	04:00	7.15 pH	22.00 °C	440.49 µS/cm	2.73 mg/L	7.74 NTU	91.4 mV	34.24 ft	0.21 PSU	110.00 ml/min
8/8/2022 11:52 AM	08:00	7.15 pH	22.05 °C	444.34 µS/cm	2.76 mg/L	9.83 NTU	93.1 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 11:56 AM	12:00	7.15 pH	22.07 °C	446.92 µS/cm	2.79 mg/L	11.05 NTU	94.0 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:00 PM	16:00	7.16 pH	21.76 °C	446.37 µS/cm	2.80 mg/L	10.55 NTU	94.6 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:04 PM	20:00	7.15 pH	22.00 °C	449.98 µS/cm	2.84 mg/L	9.75 NTU	94.8 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:08 PM	24:00	7.16 pH	21.82 °C	448.31 µS/cm	2.86 mg/L	8.86 NTU	95.2 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:12 PM	28:00	7.16 pH	21.64 °C	448.63 µS/cm	2.89 mg/L	7.63 NTU	95.3 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:16 PM	32:00	7.15 pH	21.57 °C	451.46 µS/cm	2.94 mg/L	7.49 NTU	95.3 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:20 PM	36:00	7.15 pH	21.82 °C	450.03 µS/cm	2.96 mg/L	7.05 NTU	95.4 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:24 PM	40:00	7.15 pH	21.73 °C	449.88 µS/cm	2.99 mg/L	6.74 NTU	95.3 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:28 PM	44:00	7.14 pH	21.91 °C	450.93 µS/cm	3.03 mg/L	7.13 NTU	95.5 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:32 PM	48:00	7.13 pH	22.20 °C	454.12 µS/cm	3.08 mg/L	7.10 NTU	95.5 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:36 PM	52:00	7.13 pH	22.29 °C	453.38 µS/cm	3.09 mg/L	6.78 NTU	95.7 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:40 PM	56:00	7.12 pH	22.53 °C	453.31 µS/cm	3.09 mg/L	6.26 NTU	95.8 mV	34.24 ft	0.22 PSU	110.00 ml/min

8/8/2022 12:44 PM	01:00:00	7.12 pH	22.44 °C	453.07 µS/cm	3.11 mg/L	5.76 NTU	96.0 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:48 PM	01:04:00	7.11 pH	22.65 °C	453.84 µS/cm	3.13 mg/L	5.30 NTU	96.2 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:52 PM	01:08:00	7.11 pH	22.80 °C	452.31 µS/cm	3.11 mg/L	4.62 NTU	96.3 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 12:56 PM	01:12:00	7.11 pH	22.77 °C	452.81 µS/cm	3.12 mg/L	4.16 NTU	96.7 mV	34.24 ft	0.22 PSU	110.00 ml/min
8/8/2022 1:00 PM	01:16:00	7.11 pH	22.74 °C	453.80 µS/cm	3.14 mg/L	3.78 NTU	96.8 mV	34.24 ft	0.22 PSU	110.00 ml/min

Samples

Sample ID:	Description:
GWA-36RA	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/8/2022 1:11:53 PM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Meredith Duncan

Location Name: GWA-53 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 110.92 ft Total Depth: 120.92 ft Initial Depth to Water: 58.65 ft	Pump Type: Solinst Model 408 Tubing Type: LDPE Pump Intake From TOC: 115.92 ft Estimated Total Volume Pumped: 9880 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Brown water at start of pumping

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/8/2022 1:11 PM	00:00	7.65 pH	23.26 °C	256.67 µS/cm	6.28 mg/L	1,216.0 NTU	68.5 mV	58.65 ft	130.00 ml/min
8/8/2022 1:15 PM	04:00	7.68 pH	22.10 °C	260.69 µS/cm	6.53 mg/L	75.00 NTU	122.7 mV	58.65 ft	130.00 ml/min
8/8/2022 1:19 PM	08:00	7.69 pH	21.93 °C	260.00 µS/cm	6.43 mg/L	60.70 NTU	130.8 mV	58.65 ft	130.00 ml/min
8/8/2022 1:23 PM	12:00	7.69 pH	21.95 °C	261.57 µS/cm	6.43 mg/L	29.10 NTU	134.7 mV	58.65 ft	130.00 ml/min
8/8/2022 1:27 PM	16:00	7.70 pH	21.93 °C	260.45 µS/cm	6.37 mg/L	16.60 NTU	136.4 mV	58.65 ft	130.00 ml/min
8/8/2022 1:31 PM	20:00	7.70 pH	21.89 °C	262.97 µS/cm	6.36 mg/L	12.20 NTU	140.1 mV	58.65 ft	130.00 ml/min
8/8/2022 1:35 PM	24:00	7.70 pH	21.69 °C	262.36 µS/cm	6.39 mg/L	10.35 NTU	139.7 mV	58.65 ft	130.00 ml/min
8/8/2022 1:39 PM	28:00	7.70 pH	21.74 °C	261.96 µS/cm	6.34 mg/L	8.90 NTU	138.9 mV	58.65 ft	130.00 ml/min
8/8/2022 1:43 PM	32:00	7.70 pH	21.42 °C	262.25 µS/cm	6.39 mg/L	7.01 NTU	138.5 mV	58.65 ft	130.00 ml/min
8/8/2022 1:47 PM	36:00	7.70 pH	21.38 °C	262.02 µS/cm	6.39 mg/L	8.63 NTU	138.1 mV	58.65 ft	130.00 ml/min
8/8/2022 1:51 PM	40:00	7.70 pH	21.20 °C	262.05 µS/cm	6.41 mg/L	6.88 NTU	134.9 mV	58.65 ft	130.00 ml/min
8/8/2022 1:55 PM	44:00	7.70 pH	21.42 °C	262.12 µS/cm	6.36 mg/L	4.41 NTU	134.9 mV	58.65 ft	130.00 ml/min
8/8/2022 1:59 PM	48:00	7.69 pH	21.43 °C	262.12 µS/cm	6.38 mg/L	6.82 NTU	135.5 mV	58.65 ft	130.00 ml/min
8/8/2022 2:03 PM	52:00	7.68 pH	21.59 °C	262.10 µS/cm	6.38 mg/L	5.29 NTU	133.2 mV	58.65 ft	130.00 ml/min
8/8/2022 2:07 PM	56:00	7.68 pH	21.42 °C	260.96 µS/cm	6.41 mg/L	5.01 NTU	131.9 mV	58.65 ft	130.00 ml/min

8/8/2022 2:11 PM	01:00:00	7.68 pH	21.15 °C	261.22 µS/cm	6.47 mg/L	3.77 NTU	132.1 mV	58.65 ft	130.00 ml/min
8/8/2022 2:15 PM	01:04:00	7.68 pH	21.07 °C	260.05 µS/cm	6.59 mg/L	5.55 NTU	130.0 mV	58.65 ft	130.00 ml/min
8/8/2022 2:19 PM	01:08:00	7.68 pH	20.98 °C	261.45 µS/cm	6.89 mg/L	3.23 NTU	127.9 mV	58.65 ft	130.00 ml/min
8/8/2022 2:23 PM	01:12:00	7.67 pH	21.35 °C	261.02 µS/cm	6.86 mg/L	2.67 NTU	129.2 mV	58.65 ft	130.00 ml/min
8/8/2022 2:27 PM	01:16:00	7.66 pH	21.37 °C	261.33 µS/cm	6.85 mg/L	3.60 NTU	128.1 mV	58.65 ft	130.00 ml/min

Samples

Sample ID:	Description:
GWA-53	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/8/2022 1:56:37 PM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: William Laaker

Location Name: GWA-37 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 97.52 ft Total Depth: 107.52 ft Initial Depth to Water: 50.89 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 102.52 ft Estimated Total Volume Pumped: 11440 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 14.95 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 3 L

At 44:00 lowered pump rate to 110 mL/min to stabilize drawdown

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/8/2022 1:56 PM	00:00	5.35 pH	20.81 °C	19.89 µS/cm	6.14 mg/L	1.38 NTU	171.8 mV	55.53 ft	0.01 PSU	200.00 ml/min
8/8/2022 2:00 PM	04:00	5.21 pH	20.86 °C	19.42 µS/cm	6.41 mg/L	0.35 NTU	158.6 mV	56.33 ft	0.01 PSU	200.00 ml/min
8/8/2022 2:04 PM	08:00	5.15 pH	20.93 °C	19.16 µS/cm	6.38 mg/L	0.74 NTU	154.7 mV	57.40 ft	0.01 PSU	200.00 ml/min
8/8/2022 2:08 PM	12:00	5.12 pH	20.50 °C	19.21 µS/cm	6.34 mg/L	0.23 NTU	152.5 mV	58.45 ft	0.01 PSU	200.00 ml/min
8/8/2022 2:12 PM	16:00	5.12 pH	20.35 °C	19.31 µS/cm	6.25 mg/L	0.03 NTU	150.6 mV	59.50 ft	0.01 PSU	200.00 ml/min
8/8/2022 2:16 PM	20:00	5.13 pH	20.14 °C	19.50 µS/cm	6.18 mg/L	0.02 NTU	147.9 mV	60.55 ft	0.01 PSU	200.00 ml/min
8/8/2022 2:20 PM	24:00	5.13 pH	20.39 °C	19.63 µS/cm	6.10 mg/L	0.02 NTU	146.2 mV	61.37 ft	0.01 PSU	200.00 ml/min
8/8/2022 2:24 PM	28:00	5.13 pH	20.44 °C	19.77 µS/cm	6.03 mg/L	0.03 NTU	145.6 mV	62.22 ft	0.01 PSU	200.00 ml/min
8/8/2022 2:28 PM	32:00	5.14 pH	20.44 °C	19.95 µS/cm	5.99 mg/L	0.03 NTU	144.6 mV	63.06 ft	0.01 PSU	200.00 ml/min
8/8/2022 2:32 PM	36:00	5.14 pH	20.75 °C	20.07 µS/cm	5.92 mg/L	0.19 NTU	144.1 mV	63.82 ft	0.01 PSU	200.00 ml/min
8/8/2022 2:36 PM	40:00	5.14 pH	20.48 °C	20.16 µS/cm	5.85 mg/L	0.22 NTU	143.0 mV	64.60 ft	0.01 PSU	200.00 ml/min
8/8/2022 2:40 PM	44:00	5.13 pH	21.61 °C	20.64 µS/cm	5.93 mg/L	0.03 NTU	143.9 mV	64.92 ft	0.01 PSU	110.00 ml/min
8/8/2022 2:44 PM	48:00	5.13 pH	21.77 °C	20.44 µS/cm	5.80 mg/L	0.10 NTU	143.4 mV	65.10 ft	0.01 PSU	110.00 ml/min
8/8/2022 2:48 PM	52:00	5.14 pH	21.64 °C	20.72 µS/cm	5.79 mg/L	0.19 NTU	143.0 mV	65.28 ft	0.01 PSU	110.00 ml/min
8/8/2022 2:52 PM	56:00	5.13 pH	21.78 °C	20.93 µS/cm	5.79 mg/L	0.27 NTU	142.8 mV	65.41 ft	0.01 PSU	110.00 ml/min

8/8/2022 2:56 PM	01:00:00	5.14 pH	21.81 °C	21.20 µS/cm	5.87 mg/L	0.16 NTU	142.7 mV	65.57 ft	0.01 PSU	110.00 ml/min
8/8/2022 3:00 PM	01:04:00	5.14 pH	22.00 °C	21.32 µS/cm	5.86 mg/L	0.30 NTU	143.6 mV	65.70 ft	0.01 PSU	110.00 ml/min
8/8/2022 3:04 PM	01:08:00	5.16 pH	21.95 °C	21.44 µS/cm	5.91 mg/L	0.24 NTU	143.7 mV	65.84 ft	0.01 PSU	110.00 ml/min

Samples

Sample ID:	Description:
GWA-37	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/8/2022 2:06:03 PM
Project: Plant Bowen LF Cells 3&4 August 2022
Operator Name: Robert Mull

Location Name: GWA-55R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 95.7 ft Total Depth: 105.7 ft Initial Depth to Water: 44.06 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 100.7 ft Estimated Total Volume Pumped: 3840 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:
Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
8/8/2022 2:06 PM	00:00	7.14 pH	24.52 °C	388.76 µS/cm	2.52 mg/L	0.85 NTU	40.4 mV	44.10 ft	160.00 ml/min
8/8/2022 2:10 PM	04:00	7.12 pH	21.62 °C	399.72 µS/cm	3.25 mg/L	1.42 NTU	39.1 mV	44.10 ft	160.00 ml/min
8/8/2022 2:14 PM	08:00	7.21 pH	21.09 °C	398.05 µS/cm	4.94 mg/L	2.43 NTU	43.3 mV	44.09 ft	160.00 ml/min
8/8/2022 2:18 PM	12:00	7.24 pH	20.91 °C	399.45 µS/cm	5.14 mg/L	2.12 NTU	45.3 mV	44.07 ft	160.00 ml/min
8/8/2022 2:22 PM	16:00	7.25 pH	21.13 °C	400.17 µS/cm	5.19 mg/L	1.55 NTU	45.5 mV	44.07 ft	160.00 ml/min
8/8/2022 2:26 PM	20:00	7.26 pH	21.35 °C	399.40 µS/cm	5.23 mg/L	1.18 NTU	45.4 mV	44.07 ft	160.00 ml/min
8/8/2022 2:30 PM	24:00	7.26 pH	21.45 °C	399.38 µS/cm	5.24 mg/L	1.06 NTU	45.5 mV	44.08 ft	160.00 ml/min

Samples

Sample ID:	Description:
GWA-55R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/8/2022 3:14:23 PM
Project: Plant Bowen LF Cells 3&4 August 2022
Operator Name: Robert Mull

Location Name: GWA-55 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 55.24 ft Total Depth: 65.24 ft Initial Depth to Water: 44.22 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 60.24 ft Estimated Total Volume Pumped: 2500 ml Flow Cell Volume: 90 ml Final Flow Rate: 125 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:
Prepurged 0.5L

Weather Conditions:
Starting to rain

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
8/8/2022 3:14 PM	00:00	7.26 pH	24.35 °C	435.60 µS/cm	4.94 mg/L	0.71 NTU	53.1 mV	44.23 ft	125.00 ml/min
8/8/2022 3:18 PM	04:00	7.14 pH	21.96 °C	454.40 µS/cm	3.62 mg/L	0.57 NTU	51.9 mV	44.23 ft	125.00 ml/min
8/8/2022 3:22 PM	08:00	7.10 pH	21.64 °C	458.54 µS/cm	3.62 mg/L	0.60 NTU	51.1 mV	44.23 ft	125.00 ml/min
8/8/2022 3:26 PM	12:00	7.10 pH	21.34 °C	462.19 µS/cm	3.75 mg/L	0.75 NTU	51.1 mV	44.23 ft	125.00 ml/min
8/8/2022 3:30 PM	16:00	7.11 pH	21.18 °C	465.90 µS/cm	3.79 mg/L	0.61 NTU	50.9 mV	44.23 ft	125.00 ml/min
8/8/2022 3:34 PM	20:00	7.10 pH	21.18 °C	466.87 µS/cm	3.76 mg/L	0.77 NTU	51.0 mV	44.23 ft	125.00 ml/min

Samples

Sample ID:	Description:
GWA-55	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/9/2022 10:02:52 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Robert Mull

Location Name: GWC-19R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 136.6 ft Total Depth: 146.6 ft Initial Depth to Water: 77.56 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 141.6 ft Estimated Total Volume Pumped: 3000 ml Flow Cell Volume: 90 ml Final Flow Rate: 125 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
8/9/2022 10:02 AM	00:00	7.62 pH	23.55 °C	301.76 µS/cm	6.65 mg/L	0.78 NTU	65.7 mV	77.57 ft	125.00 ml/min
8/9/2022 10:06 AM	04:00	7.71 pH	21.71 °C	303.13 µS/cm	6.81 mg/L	1.61 NTU	57.7 mV	77.57 ft	125.00 ml/min
8/9/2022 10:10 AM	08:00	7.74 pH	21.63 °C	303.57 µS/cm	6.95 mg/L	1.46 NTU	53.8 mV	77.57 ft	125.00 ml/min
8/9/2022 10:14 AM	12:00	7.75 pH	21.58 °C	303.63 µS/cm	6.95 mg/L	1.54 NTU	52.0 mV	77.57 ft	125.00 ml/min
8/9/2022 10:18 AM	16:00	7.76 pH	21.58 °C	301.66 µS/cm	6.87 mg/L	1.27 NTU	50.9 mV	77.58 ft	125.00 ml/min
8/9/2022 10:22 AM	20:00	7.77 pH	21.45 °C	301.72 µS/cm	6.89 mg/L	1.37 NTU	50.2 mV	77.58 ft	125.00 ml/min
8/9/2022 10:26 AM	24:00	7.77 pH	21.66 °C	301.58 µS/cm	6.87 mg/L	1.38 NTU	49.3 mV	77.58 ft	125.00 ml/min

Samples

Sample ID:	Description:
GWC-19R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/9/2022 10:16:09 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-25R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 89.97 ft Total Depth: 99.97 ft Initial Depth to Water: 24.55 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 94.97 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/9/2022 10:16 AM	00:00	7.16 pH	20.98 °C	315.78 µS/cm	2.83 mg/L	1.95 NTU	150.5 mV	24.55 ft	120.00 ml/min
8/9/2022 10:20 AM	04:00	7.20 pH	19.40 °C	321.77 µS/cm	3.24 mg/L	0.44 NTU	145.1 mV	24.55 ft	120.00 ml/min
8/9/2022 10:24 AM	08:00	7.43 pH	19.05 °C	321.48 µS/cm	5.45 mg/L	0.50 NTU	140.7 mV	24.55 ft	120.00 ml/min
8/9/2022 10:28 AM	12:00	7.55 pH	19.07 °C	323.27 µS/cm	5.98 mg/L	0.51 NTU	134.9 mV	24.55 ft	120.00 ml/min
8/9/2022 10:32 AM	16:00	7.59 pH	18.97 °C	322.97 µS/cm	6.08 mg/L	0.50 NTU	129.9 mV	24.55 ft	120.00 ml/min
8/9/2022 10:36 AM	20:00	7.60 pH	18.85 °C	322.95 µS/cm	6.14 mg/L	0.38 NTU	127.7 mV	24.55 ft	120.00 ml/min
8/9/2022 10:40 AM	24:00	7.60 pH	18.89 °C	324.37 µS/cm	6.18 mg/L	0.57 NTU	128.5 mV	24.55 ft	120.00 ml/min
8/9/2022 10:44 AM	28:00	7.60 pH	18.83 °C	324.07 µS/cm	6.22 mg/L	0.50 NTU	126.1 mV	24.55 ft	120.00 ml/min

Samples

Sample ID:	Description:
GWC-25R	Metals, Inorganics, TDS
DUP-2	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/9/2022 11:05:24 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Robert Mull

Location Name: GWC-20R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 77.47 ft Total Depth: 87.47 ft Initial Depth to Water: 71.35 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 82.47 ft Estimated Total Volume Pumped: 2832 ml Flow Cell Volume: 90 ml Final Flow Rate: 118 ml/min Final Draw Down: 0.15 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
8/9/2022 11:05 AM	00:00	7.61 pH	22.87 °C	344.73 µS/cm	8.28 mg/L	0.92 NTU	47.8 mV	71.48 ft	118.00 ml/min
8/9/2022 11:09 AM	04:00	7.67 pH	21.32 °C	329.99 µS/cm	7.88 mg/L	0.90 NTU	45.5 mV	71.46 ft	118.00 ml/min
8/9/2022 11:13 AM	08:00	7.74 pH	21.07 °C	325.09 µS/cm	7.71 mg/L	0.51 NTU	44.8 mV	71.48 ft	118.00 ml/min
8/9/2022 11:17 AM	12:00	7.79 pH	20.83 °C	322.31 µS/cm	7.59 mg/L	0.58 NTU	44.7 mV	71.49 ft	118.00 ml/min
8/9/2022 11:21 AM	16:00	7.80 pH	20.79 °C	321.11 µS/cm	7.54 mg/L	0.57 NTU	44.7 mV	71.49 ft	118.00 ml/min
8/9/2022 11:25 AM	20:00	7.81 pH	20.91 °C	322.08 µS/cm	7.49 mg/L	0.65 NTU	44.7 mV	71.49 ft	118.00 ml/min
8/9/2022 11:29 AM	24:00	7.81 pH	20.82 °C	326.48 µS/cm	7.40 mg/L	0.55 NTU	45.0 mV	71.50 ft	118.00 ml/min

Samples

Sample ID:	Description:
GWC-20R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/9/2022 11:55:09 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-24R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 30.11 ft Total Depth: 40.11 ft Initial Depth to Water: 25.92 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 35.11 ft Estimated Total Volume Pumped: 5720 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.73 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Missing reading due to lightning

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/9/2022 11:55 AM	00:00	6.99 pH	20.85 °C	310.02 µS/cm	2.01 mg/L	1.10 NTU	50.9 mV	25.92 ft	110.00 ml/min
8/9/2022 11:59 AM	04:00	7.07 pH	20.35 °C	305.26 µS/cm	1.52 mg/L	1.59 NTU	82.7 mV	25.94 ft	110.00 ml/min
8/9/2022 12:03 PM	08:00	7.21 pH	19.17 °C	300.42 µS/cm	1.71 mg/L	0.84 NTU	87.1 mV	26.16 ft	110.00 ml/min
8/9/2022 12:07 PM	12:00	7.29 pH	18.52 °C	301.92 µS/cm	1.79 mg/L	0.63 NTU	87.2 mV	26.40 ft	110.00 ml/min
8/9/2022 12:11 PM	16:00	7.37 pH	18.23 °C	299.42 µS/cm	2.26 mg/L		74.3 mV		110.00 ml/min
8/9/2022 12:15 PM	20:00	7.42 pH	18.20 °C	297.53 µS/cm	2.70 mg/L		60.7 mV		110.00 ml/min
8/9/2022 12:19 PM	24:00	7.45 pH	18.15 °C	296.15 µS/cm	3.05 mg/L		52.5 mV		110.00 ml/min
8/9/2022 12:23 PM	28:00	7.46 pH	18.18 °C	295.32 µS/cm	3.29 mg/L		45.8 mV		110.00 ml/min
8/9/2022 12:27 PM	32:00	7.46 pH	18.09 °C	294.83 µS/cm	3.40 mg/L		38.9 mV		110.00 ml/min
8/9/2022 12:31 PM	36:00	7.47 pH	18.11 °C	293.53 µS/cm	3.53 mg/L		34.2 mV		110.00 ml/min
8/9/2022 12:35 PM	40:00	7.47 pH	18.08 °C	293.44 µS/cm	3.60 mg/L		32.0 mV		110.00 ml/min
8/9/2022 12:39 PM	44:00	7.47 pH	18.05 °C	293.68 µS/cm	3.65 mg/L	0.26 NTU	27.5 mV	26.60 ft	110.00 ml/min
8/9/2022 12:43 PM	48:00	7.47 pH	18.35 °C	292.84 µS/cm	3.72 mg/L	0.25 NTU	27.4 mV	26.63 ft	110.00 ml/min
8/9/2022 12:47 PM	52:00	7.48 pH	18.35 °C	291.09 µS/cm	3.78 mg/L	0.16 NTU	26.8 mV	26.65 ft	110.00 ml/min

Samples

Sample ID:	Description:
GWC-24R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/10/2022 9:27:05 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-21R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 80.59 ft Total Depth: 90.59 ft Initial Depth to Water: 73.01 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 85.59 ft Estimated Total Volume Pumped: 8000 ml Flow Cell Volume: 90 ml Final Flow Rate: 100 ml/min Final Draw Down: 3.99 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:
Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/10/2022 9:27 AM	00:00	7.27 pH	21.02 °C	554.64 µS/cm	7.89 mg/L	0.45 NTU	130.3 mV	73.01 ft	100.00 ml/min
8/10/2022 9:31 AM	04:00	6.93 pH	19.68 °C	558.54 µS/cm	3.79 mg/L	0.48 NTU	17.8 mV	73.53 ft	100.00 ml/min
8/10/2022 9:35 AM	08:00	6.85 pH	19.43 °C	558.14 µS/cm	1.58 mg/L	0.43 NTU	7.0 mV	73.89 ft	100.00 ml/min
8/10/2022 9:39 AM	12:00	6.89 pH	19.34 °C	554.97 µS/cm	0.85 mg/L	0.58 NTU	16.7 mV	74.16 ft	100.00 ml/min
8/10/2022 9:43 AM	16:00	6.92 pH	19.18 °C	551.80 µS/cm	0.66 mg/L	0.33 NTU	26.9 mV	74.43 ft	100.00 ml/min
8/10/2022 9:47 AM	20:00	6.94 pH	19.16 °C	551.33 µS/cm	0.57 mg/L	0.21 NTU	36.4 mV	74.68 ft	100.00 ml/min
8/10/2022 9:51 AM	24:00	6.94 pH	19.17 °C	549.66 µS/cm	0.50 mg/L	0.20 NTU	44.9 mV	74.91 ft	100.00 ml/min
8/10/2022 9:55 AM	28:00	6.94 pH	19.24 °C	546.05 µS/cm	0.55 mg/L	0.23 NTU	50.5 mV	75.13 ft	100.00 ml/min
8/10/2022 9:59 AM	32:00	6.95 pH	19.42 °C	541.51 µS/cm	0.76 mg/L	0.19 NTU	56.0 mV	75.31 ft	100.00 ml/min
8/10/2022 10:03 AM	36:00	6.94 pH	19.44 °C	539.47 µS/cm	1.11 mg/L	0.25 NTU	60.5 mV	75.46 ft	100.00 ml/min
8/10/2022 10:07 AM	40:00	6.94 pH	19.51 °C	539.50 µS/cm	1.49 mg/L	0.05 NTU	63.7 mV	75.65 ft	100.00 ml/min
8/10/2022 10:11 AM	44:00	6.95 pH	19.51 °C	540.07 µS/cm	1.75 mg/L	0.10 NTU	65.0 mV	75.78 ft	100.00 ml/min
8/10/2022 10:15 AM	48:00	6.95 pH	19.41 °C	540.96 µS/cm	1.98 mg/L	0.37 NTU	66.3 mV	75.93 ft	100.00 ml/min
8/10/2022 10:19 AM	52:00	6.96 pH	19.40 °C	542.79 µS/cm	2.17 mg/L	0.20 NTU	66.8 mV	76.11 ft	100.00 ml/min
8/10/2022 10:23 AM	56:00	6.96 pH	19.42 °C	544.40 µS/cm	2.31 mg/L	0.19 NTU	66.6 mV	76.25 ft	100.00 ml/min

8/10/2022 10:27 AM	01:00:00	6.96 pH	19.47 °C	545.43 µS/cm	2.39 mg/L	0.28 NTU	66.4 mV	76.37 ft	100.00 ml/min
8/10/2022 10:31 AM	01:04:00	6.96 pH	19.45 °C	547.28 µS/cm	2.47 mg/L	0.26 NTU	66.1 mV	76.51 ft	100.00 ml/min
8/10/2022 10:35 AM	01:08:00	6.97 pH	19.60 °C	548.56 µS/cm	2.55 mg/L	0.07 NTU	66.1 mV	76.65 ft	100.00 ml/min
8/10/2022 10:39 AM	01:12:00	6.97 pH	19.59 °C	549.69 µS/cm	2.64 mg/L	0.15 NTU	65.3 mV	76.75 ft	100.00 ml/min
8/10/2022 10:43 AM	01:16:00	6.97 pH	19.73 °C	551.01 µS/cm	2.70 mg/L	0.05 NTU	64.9 mV	76.86 ft	100.00 ml/min
8/10/2022 10:47 AM	01:20:00	6.98 pH	19.72 °C	552.52 µS/cm	2.77 mg/L	0.07 NTU	64.8 mV	77.00 ft	100.00 ml/min

Samples

Sample ID:	Description:
GWC-21R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/10/2022 9:48:52 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Robert Mull

Location Name: GWC-18R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 130.1 ft Total Depth: 140.1 ft Initial Depth to Water: 73.7 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 135.1 ft Estimated Total Volume Pumped: 4200 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
8/10/2022 9:48 AM	00:00	7.13 pH	18.67 °C	289.98 µS/cm	6.48 mg/L	6.55 NTU	78.5 mV	73.70 ft	150.00 ml/min
8/10/2022 9:52 AM	04:00	7.23 pH	18.40 °C	284.14 µS/cm	5.81 mg/L	1.61 NTU	69.3 mV	73.71 ft	150.00 ml/min
8/10/2022 9:56 AM	08:00	7.38 pH	18.33 °C	284.37 µS/cm	6.75 mg/L	2.47 NTU	66.2 mV	73.72 ft	150.00 ml/min
8/10/2022 10:00 AM	12:00	7.48 pH	18.43 °C	284.61 µS/cm	6.99 mg/L	5.30 NTU	64.3 mV	73.73 ft	150.00 ml/min
8/10/2022 10:04 AM	16:00	7.53 pH	18.39 °C	284.15 µS/cm	7.06 mg/L	4.30 NTU	63.7 mV	73.73 ft	150.00 ml/min
8/10/2022 10:08 AM	20:00	7.57 pH	18.42 °C	283.97 µS/cm	7.11 mg/L	3.04 NTU	63.0 mV	73.71 ft	150.00 ml/min
8/10/2022 10:12 AM	24:00	7.59 pH	18.24 °C	283.65 µS/cm	7.14 mg/L	2.10 NTU	62.6 mV	73.72 ft	150.00 ml/min
8/10/2022 10:16 AM	28:00	7.59 pH	18.28 °C	284.10 µS/cm	7.17 mg/L	2.03 NTU	62.4 mV	73.72 ft	150.00 ml/min

Samples

Sample ID:	Description:
GWC-18R	Metals, Inorganics, TDS
DUP-3	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/10/2022 9:51:32 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: William Laaker

Location Name: GWC-16R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 88.12 ft Total Depth: 98.12 ft Initial Depth to Water: 78.66 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 93.12 ft Estimated Total Volume Pumped: 9600 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 9.78 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 0.5 L

Historically drawdown does not stabilize. At 16:00 increased pump rate to 160 mL/min. DTW fell into screen interval. Full evac performed.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/10/2022 9:51 AM	00:00	7.18 pH	19.15 °C	582.14 µS/cm	5.44 mg/L	0.32 NTU	139.2 mV	79.78 ft	0.28 PSU	120.00 ml/min
8/10/2022 9:55 AM	04:00	7.10 pH	18.79 °C	582.45 µS/cm	3.49 mg/L	0.50 NTU	113.9 mV	80.15 ft	0.28 PSU	120.00 ml/min
8/10/2022 9:59 AM	08:00	7.05 pH	18.62 °C	572.64 µS/cm	3.54 mg/L	0.54 NTU	106.4 mV	80.67 ft	0.28 PSU	120.00 ml/min
8/10/2022 10:03 AM	12:00	7.03 pH	18.57 °C	565.58 µS/cm	3.63 mg/L	0.13 NTU	102.8 mV	81.15 ft	0.28 PSU	120.00 ml/min
8/10/2022 10:07 AM	16:00	7.02 pH	18.26 °C	558.11 µS/cm	3.64 mg/L	0.18 NTU	100.7 mV	81.71 ft	0.27 PSU	160.00 ml/min
8/10/2022 10:11 AM	20:00	7.00 pH	18.03 °C	557.48 µS/cm	3.67 mg/L	0.24 NTU	99.0 mV	82.26 ft	0.27 PSU	160.00 ml/min
8/10/2022 10:15 AM	24:00	6.99 pH	18.03 °C	553.85 µS/cm	3.72 mg/L	0.23 NTU	98.0 mV	82.70 ft	0.27 PSU	160.00 ml/min
8/10/2022 10:19 AM	28:00	6.98 pH	18.03 °C	549.75 µS/cm	3.81 mg/L	0.37 NTU	97.1 mV	83.31 ft	0.27 PSU	160.00 ml/min
8/10/2022 10:23 AM	32:00	6.97 pH	18.03 °C	544.80 µS/cm	3.90 mg/L	0.60 NTU	96.6 mV	83.90 ft	0.27 PSU	160.00 ml/min
8/10/2022 10:27 AM	36:00	6.95 pH	17.99 °C	540.69 µS/cm	3.97 mg/L	0.64 NTU	96.1 mV	84.49 ft	0.26 PSU	160.00 ml/min
8/10/2022 10:31 AM	40:00	6.95 pH	17.99 °C	538.94 µS/cm	4.03 mg/L	0.61 NTU	95.9 mV	85.05 ft	0.26 PSU	160.00 ml/min
8/10/2022 10:35 AM	44:00	6.94 pH	17.99 °C	536.72 µS/cm	4.10 mg/L	0.42 NTU	95.6 mV	85.62 ft	0.26 PSU	160.00 ml/min
8/10/2022 10:39 AM	48:00	6.94 pH	18.08 °C	535.99 µS/cm	4.16 mg/L	0.51 NTU	95.3 mV	86.17 ft	0.26 PSU	160.00 ml/min
8/10/2022 10:43 AM	52:00	6.93 pH	18.07 °C	533.10 µS/cm	4.21 mg/L	0.54 NTU	95.1 mV	86.72 ft	0.26 PSU	160.00 ml/min

8/10/2022 10:47 AM	56:00	6.93 pH	18.08 °C	533.67 µS/cm	4.26 mg/L	0.52 NTU	94.8 mV	87.30 ft	0.26 PSU	160.00 ml/min
8/10/2022 10:51 AM	01:00:00	6.93 pH	18.12 °C	533.37 µS/cm	4.29 mg/L	0.52 NTU	94.6 mV	87.91 ft	0.26 PSU	160.00 ml/min
8/10/2022 10:55 AM	01:04:00	6.92 pH	18.12 °C	532.09 µS/cm	4.31 mg/L	0.58 NTU	94.3 mV	88.44 ft	0.26 PSU	160.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/10/2022 11:02:16 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Robert Mull

Location Name: GWC-18 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 70.31 ft Total Depth: 80.31 ft Initial Depth to Water: 73.95 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 79.31 ft Estimated Total Volume Pumped: 11200 ml Flow Cell Volume: 90 ml Final Flow Rate: 225 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 1L. Purging 3 well volumes prior to sampling because water level is starting in the screened interval. 3 well volumes= 11.81L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
8/10/2022 11:02 AM	00:00	7.28 pH	17.71 °C	159.23 µS/cm	8.37 mg/L	6.02 NTU	73.2 mV	73.96 ft	325.00 ml/min
8/10/2022 11:06 AM	04:00	6.88 pH	17.48 °C	153.51 µS/cm	8.24 mg/L	6.42 NTU	75.4 mV	73.97 ft	225.00 ml/min
8/10/2022 11:10 AM	08:00	6.68 pH	17.48 °C	155.59 µS/cm	8.21 mg/L	8.70 NTU	75.5 mV	73.97 ft	225.00 ml/min
8/10/2022 11:14 AM	12:00	6.58 pH	17.37 °C	157.56 µS/cm	8.20 mg/L	6.62 NTU	75.7 mV	73.97 ft	225.00 ml/min
8/10/2022 11:18 AM	16:00	6.53 pH	17.42 °C	159.33 µS/cm	8.19 mg/L	5.20 NTU	75.5 mV	73.97 ft	225.00 ml/min
8/10/2022 11:22 AM	20:00	6.49 pH	17.39 °C	161.04 µS/cm	8.17 mg/L	3.72 NTU	75.9 mV	73.97 ft	225.00 ml/min
8/10/2022 11:26 AM	24:00	6.49 pH	17.38 °C	163.14 µS/cm	8.18 mg/L	3.58 NTU	75.6 mV	73.97 ft	225.00 ml/min
8/10/2022 11:30 AM	28:00	6.49 pH	17.37 °C	165.36 µS/cm	8.15 mg/L	2.65 NTU	75.5 mV	73.98 ft	225.00 ml/min
8/10/2022 11:34 AM	32:00	6.50 pH	17.30 °C	167.35 µS/cm	8.12 mg/L	2.05 NTU	75.3 mV	73.98 ft	225.00 ml/min
8/10/2022 11:38 AM	36:00	6.51 pH	17.30 °C	169.74 µS/cm	8.09 mg/L	2.22 NTU	75.0 mV	73.98 ft	225.00 ml/min
8/10/2022 11:42 AM	40:00	6.50 pH	17.30 °C	172.07 µS/cm	8.08 mg/L	1.76 NTU	75.3 mV	73.98 ft	225.00 ml/min
8/10/2022 11:46 AM	44:00	6.51 pH	17.38 °C	174.30 µS/cm	8.07 mg/L	0.86 NTU	74.9 mV	73.98 ft	225.00 ml/min
8/10/2022 11:50 AM	48:00	6.53 pH	17.35 °C	176.08 µS/cm	8.02 mg/L	0.96 NTU	74.7 mV	73.98 ft	225.00 ml/min

Samples

Sample ID:	Description:
GWC-18	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/10/2022 11:38:14 AM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: William Laaker

Location Name: GWC-17R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 82.93 ft Total Depth: 92.93 ft Initial Depth to Water: 83.37 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 87.93 ft Estimated Total Volume Pumped: 1760 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.6 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 0.5 L

Historically water level falls into screen interval. DTW fell into screen interval and below top of pump. Full evac performed.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/10/2022 11:38 AM	00:00	7.09 pH	19.91 °C	570.94 µS/cm	7.58 mg/L	0.13 NTU	90.9 mV	83.97 ft	0.28 PSU	110.00 ml/min
8/10/2022 11:42 AM	04:00	7.05 pH	19.62 °C	574.63 µS/cm	7.72 mg/L	0.32 NTU	89.3 mV		0.28 PSU	110.00 ml/min
8/10/2022 11:46 AM	08:00	7.03 pH	19.94 °C	577.51 µS/cm	7.71 mg/L	0.37 NTU	88.9 mV		0.28 PSU	110.00 ml/min
8/10/2022 11:50 AM	12:00	7.01 pH	20.22 °C	575.35 µS/cm	7.67 mg/L	0.36 NTU	88.9 mV		0.28 PSU	110.00 ml/min
8/10/2022 11:54 AM	16:00	7.01 pH	20.27 °C	574.84 µS/cm	7.66 mg/L	0.39 NTU	88.8 mV		0.28 PSU	110.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/10/2022 12:03:14 PM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-22R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 109.6 ft Total Depth: 119.6 ft Initial Depth to Water: 64.5 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 114.6 ft Estimated Total Volume Pumped: 8320 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/10/2022 12:03 PM	00:00	6.83 pH	20.16 °C	339.63 µS/cm	2.43 mg/L	1.07 NTU	16.6 mV	64.50 ft	130.00 ml/min
8/10/2022 12:07 PM	04:00	6.98 pH	19.23 °C	396.72 µS/cm	0.45 mg/L	0.99 NTU	-31.4 mV	64.50 ft	130.00 ml/min
8/10/2022 12:11 PM	08:00	7.03 pH	18.98 °C	397.82 µS/cm	0.29 mg/L	2.67 NTU	-30.4 mV	64.50 ft	130.00 ml/min
8/10/2022 12:15 PM	12:00	7.02 pH	19.02 °C	393.37 µS/cm	0.19 mg/L	1.63 NTU	-30.0 mV	64.50 ft	130.00 ml/min
8/10/2022 12:19 PM	16:00	7.04 pH	18.97 °C	386.76 µS/cm	0.16 mg/L	3.76 NTU	-32.4 mV	64.50 ft	130.00 ml/min
8/10/2022 12:23 PM	20:00	7.05 pH	18.89 °C	373.85 µS/cm	0.29 mg/L	1.61 NTU	-32.0 mV	64.51 ft	130.00 ml/min
8/10/2022 12:27 PM	24:00	7.06 pH	18.98 °C	359.47 µS/cm	0.65 mg/L	1.63 NTU	-27.5 mV	64.51 ft	130.00 ml/min
8/10/2022 12:31 PM	28:00	7.06 pH	18.85 °C	348.41 µS/cm	1.13 mg/L	1.49 NTU	-22.3 mV	64.51 ft	130.00 ml/min
8/10/2022 12:35 PM	32:00	7.07 pH	18.84 °C	341.16 µS/cm	1.56 mg/L	1.45 NTU	-19.3 mV	64.51 ft	130.00 ml/min
8/10/2022 12:39 PM	36:00	7.09 pH	18.80 °C	335.44 µS/cm	2.00 mg/L	1.39 NTU	-17.0 mV	64.51 ft	130.00 ml/min
8/10/2022 12:43 PM	40:00	7.09 pH	18.80 °C	331.96 µS/cm	2.30 mg/L	1.53 NTU	-14.1 mV	64.51 ft	130.00 ml/min
8/10/2022 12:47 PM	44:00	7.10 pH	18.89 °C	329.30 µS/cm	2.53 mg/L	1.11 NTU	-13.2 mV	64.51 ft	130.00 ml/min
8/10/2022 12:51 PM	48:00	7.11 pH	18.81 °C	327.72 µS/cm	2.95 mg/L	1.41 NTU	-11.6 mV	64.51 ft	130.00 ml/min
8/10/2022 12:55 PM	52:00	7.11 pH	18.91 °C	326.07 µS/cm	3.15 mg/L	1.06 NTU	-9.9 mV	64.51 ft	130.00 ml/min
8/10/2022 12:59 PM	56:00	7.10 pH	18.96 °C	325.65 µS/cm	3.21 mg/L	1.23 NTU	-8.3 mV	64.51 ft	130.00 ml/min

8/10/2022 1:03 PM	01:00:00	7.10 pH	18.97 °C	324.90 µS/cm	3.25 mg/L	0.97 NTU	-7.9 mV	64.51 ft	130.00 ml/min
8/10/2022 1:07 PM	01:04:00	7.10 pH	18.98 °C	324.72 µS/cm	3.39 mg/L	0.90 NTU	-6.0 mV	64.51 ft	130.00 ml/min

Samples

Sample ID:	Description:
GWC-22R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/10/2022 12:46:55 PM

Project: Plant Bowen LF Cells 3&4 August 2022

Operator Name: William Laaker

Location Name: GWC-23R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 39.57 ft Total Depth: 49.57 ft Initial Depth to Water: 39.85 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 44.57 ft Estimated Total Volume Pumped: 2200 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 1.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 0.25 L

DTW started in screen interval. Water level fell below top of pump. Full evac performed.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/10/2022 12:46 PM	00:00	7.34 pH	21.59 °C	793.29 µS/cm	6.84 mg/L	0.78 NTU	85.9 mV	40.16 ft	0.39 PSU	110.00 ml/min
8/10/2022 12:50 PM	04:00	7.22 pH	19.71 °C	926.23 µS/cm	4.57 mg/L	0.40 NTU	88.8 mV	40.32 ft	0.46 PSU	110.00 ml/min
8/10/2022 12:54 PM	08:00	7.18 pH	19.23 °C	938.10 µS/cm	4.37 mg/L	0.63 NTU	89.1 mV	40.51 ft	0.47 PSU	110.00 ml/min
8/10/2022 12:58 PM	12:00	7.20 pH	19.15 °C	937.35 µS/cm	5.20 mg/L	0.32 NTU	88.8 mV	40.73 ft	0.47 PSU	110.00 ml/min
8/10/2022 1:02 PM	16:00	7.21 pH	19.15 °C	953.90 µS/cm	5.26 mg/L	0.27 NTU	88.7 mV	40.90 ft	0.48 PSU	110.00 ml/min
8/10/2022 1:06 PM	20:00	7.20 pH	19.13 °C	954.55 µS/cm	5.13 mg/L	0.33 NTU	88.7 mV		0.48 PSU	110.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/10/2022 1:58:41 PM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Robert Mull

Location Name: GWA-39Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 107.54 ft Total Depth: 117.54 ft Initial Depth to Water: 67.32 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 112.54 ft Estimated Total Volume Pumped: 5472 ml Flow Cell Volume: 90 ml Final Flow Rate: 114 ml/min Final Draw Down: 0.22 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
8/10/2022 1:58 PM	00:00	6.85 pH	19.77 °C	120.64 µS/cm	7.34 mg/L	1.72 NTU	76.4 mV	67.52 ft	114.00 ml/min
8/10/2022 2:02 PM	04:00	6.49 pH	18.72 °C	137.24 µS/cm	4.47 mg/L	1.69 NTU	77.0 mV	67.52 ft	114.00 ml/min
8/10/2022 2:06 PM	08:00	6.42 pH	18.42 °C	145.68 µS/cm	5.47 mg/L	3.10 NTU	77.4 mV	67.54 ft	114.00 ml/min
8/10/2022 2:10 PM	12:00	6.37 pH	18.37 °C	138.00 µS/cm	6.62 mg/L	5.08 NTU	78.0 mV	67.54 ft	114.00 ml/min
8/10/2022 2:14 PM	16:00	6.33 pH	18.69 °C	127.87 µS/cm	7.29 mg/L	6.05 NTU	77.4 mV	67.54 ft	114.00 ml/min
8/10/2022 2:18 PM	20:00	6.27 pH	18.46 °C	118.71 µS/cm	7.83 mg/L	4.92 NTU	77.4 mV	67.54 ft	114.00 ml/min
8/10/2022 2:22 PM	24:00	6.21 pH	18.60 °C	111.81 µS/cm	8.12 mg/L	4.34 NTU	77.8 mV	67.54 ft	114.00 ml/min
8/10/2022 2:26 PM	28:00	6.18 pH	18.51 °C	105.51 µS/cm	8.27 mg/L	3.37 NTU	78.1 mV	67.54 ft	114.00 ml/min
8/10/2022 2:30 PM	32:00	6.13 pH	18.54 °C	101.29 µS/cm	8.39 mg/L	2.79 NTU	78.5 mV	67.54 ft	114.00 ml/min
8/10/2022 2:34 PM	36:00	6.11 pH	18.64 °C	99.25 µS/cm	8.46 mg/L	3.85 NTU	78.2 mV	67.54 ft	114.00 ml/min
8/10/2022 2:38 PM	40:00	6.08 pH	18.68 °C	97.92 µS/cm	8.53 mg/L	2.26 NTU	78.8 mV	67.54 ft	114.00 ml/min
8/10/2022 2:42 PM	44:00	6.08 pH	18.59 °C	97.37 µS/cm	8.53 mg/L	1.67 NTU	78.7 mV	67.54 ft	114.00 ml/min
8/10/2022 2:46 PM	48:00	6.07 pH	18.60 °C	97.04 µS/cm	8.60 mg/L	1.54 NTU	79.2 mV	67.54 ft	114.00 ml/min

Samples

Sample ID:	Description:
GWA-39Z	Metals, Inorganics, TDS

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/10/2022 2:32:53 PM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Meredith Duncan

Location Name: GWA-43R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 104.58 ft Total Depth: 114.58 ft Initial Depth to Water: 53.7 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 109.58 ft Estimated Total Volume Pumped: 1920 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/10/2022 2:32 PM	00:00	7.67 pH	19.34 °C	274.82 µS/cm	6.68 mg/L	12.10 NTU	96.4 mV	53.70 ft	120.00 ml/min
8/10/2022 2:36 PM	04:00	7.70 pH	18.72 °C	275.14 µS/cm	6.77 mg/L	3.02 NTU	105.9 mV	53.70 ft	120.00 ml/min
8/10/2022 2:40 PM	08:00	7.71 pH	18.71 °C	275.35 µS/cm	6.78 mg/L	1.34 NTU	107.5 mV	53.70 ft	120.00 ml/min
8/10/2022 2:44 PM	12:00	7.72 pH	18.68 °C	275.22 µS/cm	6.76 mg/L	1.76 NTU	107.7 mV	53.70 ft	120.00 ml/min
8/10/2022 2:48 PM	16:00	7.72 pH	18.55 °C	274.64 µS/cm	6.84 mg/L	2.08 NTU	108.8 mV	53.70 ft	120.00 ml/min

Samples

Sample ID:	Description:
GWA-43R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/10/2022 3:17:46 PM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: William Laaker

Location Name: GWA-42 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 74.36 ft Total Depth: 84.36 ft Initial Depth to Water: 77.1 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 79.36 ft Estimated Total Volume Pumped: 2720 ml Flow Cell Volume: 90 ml Final Flow Rate: 170 ml/min Final Draw Down: 0.04 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 13.5 L

Water level started in screen and historically does not draw down. Three well volume method used.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/10/2022 3:17 PM	00:00	7.24 pH	19.47 °C	281.24 µS/cm	4.81 mg/L	0.02 NTU	79.9 mV	77.14 ft	0.13 PSU	170.00 ml/min
8/10/2022 3:21 PM	04:00	7.26 pH	19.47 °C	282.15 µS/cm	4.79 mg/L	0.08 NTU	86.2 mV	77.14 ft	0.14 PSU	170.00 ml/min
8/10/2022 3:25 PM	08:00	7.26 pH	19.28 °C	282.69 µS/cm	4.81 mg/L	0.22 NTU	87.5 mV	77.14 ft	0.14 PSU	170.00 ml/min
8/10/2022 3:29 PM	12:00	7.26 pH	19.19 °C	281.87 µS/cm	4.80 mg/L	0.15 NTU	88.1 mV	77.14 ft	0.14 PSU	170.00 ml/min
8/10/2022 3:33 PM	16:00	7.26 pH	19.16 °C	281.96 µS/cm	4.81 mg/L	0.13 NTU	88.4 mV	77.14 ft	0.14 PSU	170.00 ml/min

Samples

Sample ID:	Description:
GWA-42	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/11/2022 12:51:29 PM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Robert Mull

Location Name: GWA-41R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 121.05 ft Total Depth: 131.05 ft Initial Depth to Water: 80.4 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 126.05 ft Estimated Total Volume Pumped: 6000 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.24 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
8/11/2022 12:51 PM	00:00	7.52 pH	21.33 °C	366.73 µS/cm	8.75 mg/L	4.59 NTU	44.5 mV	80.68 ft	150.00 ml/min
8/11/2022 12:55 PM	04:00	7.09 pH	19.41 °C	337.36 µS/cm	2.16 mg/L	5.82 NTU	40.5 mV	80.68 ft	150.00 ml/min
8/11/2022 12:59 PM	08:00	6.91 pH	19.07 °C	303.51 µS/cm	0.73 mg/L	2.64 NTU	39.1 mV	80.68 ft	150.00 ml/min
8/11/2022 1:03 PM	12:00	6.85 pH	18.89 °C	297.09 µS/cm	0.41 mg/L	1.63 NTU	39.9 mV	80.68 ft	150.00 ml/min
8/11/2022 1:07 PM	16:00	6.83 pH	18.82 °C	299.17 µS/cm	0.32 mg/L	1.65 NTU	39.7 mV	80.67 ft	150.00 ml/min
8/11/2022 1:11 PM	20:00	6.91 pH	18.86 °C	308.10 µS/cm	0.28 mg/L	1.35 NTU	37.4 mV	80.67 ft	150.00 ml/min
8/11/2022 1:15 PM	24:00	6.99 pH	18.75 °C	311.93 µS/cm	0.26 mg/L	1.45 NTU	36.3 mV	80.67 ft	150.00 ml/min
8/11/2022 1:19 PM	28:00	7.05 pH	18.84 °C	314.03 µS/cm	0.25 mg/L	2.59 NTU	35.1 mV	80.66 ft	150.00 ml/min
8/11/2022 1:23 PM	32:00	7.08 pH	18.74 °C	315.19 µS/cm	0.25 mg/L	3.26 NTU	34.4 mV	80.64 ft	150.00 ml/min
8/11/2022 1:27 PM	36:00	7.11 pH	18.82 °C	317.62 µS/cm	0.24 mg/L	3.48 NTU	33.5 mV	80.64 ft	150.00 ml/min
8/11/2022 1:31 PM	40:00	7.12 pH	18.86 °C	321.22 µS/cm	0.25 mg/L	3.04 NTU	32.6 mV	80.64 ft	150.00 ml/min

Samples

Sample ID:	Description:
GWA-41R	Metals, Inorganics, TDS

DUP-1

Metals, Inorganics, TDS

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/11/2022 2:00:04 PM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Meredith Duncan

Location Name: GWA-43 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 82.53 ft Total Depth: 92.53 ft Initial Depth to Water: 54.9 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 87.53 ft Estimated Total Volume Pumped: 23720 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/11/2022 2:00 PM	00:00	5.00 pH	18.67 °C	27.28 µS/cm	6.02 mg/L	2.69 NTU	149.7 mV	54.90 ft	175.00 ml/min
8/11/2022 2:04 PM	04:00	5.05 pH	18.23 °C	25.78 µS/cm	6.38 mg/L	2.50 NTU	157.3 mV	54.90 ft	175.00 ml/min
8/11/2022 2:08 PM	08:00	5.10 pH	18.26 °C	24.85 µS/cm	6.39 mg/L	3.16 NTU	155.4 mV	54.90 ft	175.00 ml/min
8/11/2022 2:12 PM	12:00	5.12 pH	18.18 °C	23.88 µS/cm	6.45 mg/L	2.07 NTU	153.2 mV	54.90 ft	175.00 ml/min
8/11/2022 2:16 PM	16:00	5.11 pH	17.86 °C	24.06 µS/cm	6.70 mg/L	2.07 NTU	153.6 mV	54.90 ft	175.00 ml/min
8/11/2022 2:20 PM	20:00	5.12 pH	17.79 °C	23.39 µS/cm	6.85 mg/L	2.00 NTU	151.0 mV	54.90 ft	175.00 ml/min
8/11/2022 2:24 PM	24:00	5.12 pH	18.11 °C	23.72 µS/cm	6.76 mg/L	1.51 NTU	151.6 mV	54.90 ft	200.00 ml/min
8/11/2022 2:28 PM	28:00	5.13 pH	17.95 °C	23.05 µS/cm	6.86 mg/L	1.19 NTU	149.7 mV	54.90 ft	200.00 ml/min
8/11/2022 2:32 PM	32:00	5.15 pH	18.04 °C	23.15 µS/cm	6.79 mg/L	1.14 NTU	150.5 mV	54.90 ft	200.00 ml/min
8/11/2022 2:36 PM	36:00	5.16 pH	18.00 °C	23.30 µS/cm	6.96 mg/L	1.08 NTU	148.4 mV	54.90 ft	200.00 ml/min
8/11/2022 2:40 PM	40:00	5.18 pH	17.91 °C	23.50 µS/cm	6.96 mg/L	0.98 NTU	146.2 mV	54.90 ft	200.00 ml/min
8/11/2022 2:44 PM	44:00	5.21 pH	17.87 °C	23.96 µS/cm	6.84 mg/L	1.12 NTU	147.0 mV	54.90 ft	200.00 ml/min
8/11/2022 2:48 PM	48:00	5.24 pH	17.88 °C	24.70 µS/cm	6.85 mg/L	1.28 NTU	146.3 mV	54.90 ft	220.00 ml/min
8/11/2022 2:52 PM	52:00	5.26 pH	17.82 °C	25.87 µS/cm	7.21 mg/L	1.34 NTU	146.3 mV	54.90 ft	220.00 ml/min
8/11/2022 2:56 PM	56:00	5.29 pH	17.77 °C	26.91 µS/cm	7.21 mg/L	1.98 NTU	143.8 mV	54.90 ft	220.00 ml/min

8/11/2022 3:00 PM	01:00:00	5.32 pH	17.73 °C	28.38 µS/cm	7.03 mg/L	2.86 NTU	144.9 mV	54.90 ft	230.00 ml/min
8/11/2022 3:04 PM	01:04:00	5.40 pH	17.67 °C	30.83 µS/cm	7.16 mg/L	2.07 NTU	142.7 mV	54.90 ft	230.00 ml/min
8/11/2022 3:08 PM	01:08:00	5.43 pH	17.82 °C	31.49 µS/cm	7.23 mg/L	2.68 NTU	139.8 mV	54.90 ft	250.00 ml/min
8/11/2022 3:12 PM	01:12:00	5.44 pH	17.72 °C	32.28 µS/cm	7.34 mg/L	2.70 NTU	139.5 mV	54.91 ft	250.00 ml/min
8/11/2022 3:16 PM	01:16:00	5.48 pH	17.69 °C	33.66 µS/cm	7.35 mg/L	2.92 NTU	138.9 mV	54.92 ft	250.00 ml/min
8/11/2022 3:20 PM	01:20:00	5.50 pH	17.64 °C	34.89 µS/cm	7.44 mg/L	3.57 NTU	137.1 mV	54.92 ft	250.00 ml/min
8/11/2022 3:24 PM	01:24:00	5.55 pH	17.87 °C	36.61 µS/cm	7.22 mg/L	4.72 NTU	137.6 mV	54.92 ft	250.00 ml/min
8/11/2022 3:28 PM	01:28:00	5.57 pH	19.24 °C	38.30 µS/cm	6.93 mg/L	4.80 NTU	136.2 mV	54.92 ft	250.00 ml/min
8/11/2022 3:32 PM	01:32:00	5.60 pH	19.33 °C	39.53 µS/cm	6.84 mg/L	4.92 NTU	135.2 mV	54.85 ft	130.00 ml/min
8/11/2022 3:36 PM	01:36:00	5.55 pH	19.36 °C	35.75 µS/cm	6.74 mg/L	3.90 NTU	137.9 mV	54.85 ft	130.00 ml/min
8/11/2022 3:40 PM	01:40:00	5.47 pH	18.13 °C	30.87 µS/cm	6.85 mg/L	2.77 NTU	140.0 mV	54.86 ft	200.00 ml/min
8/11/2022 3:44 PM	01:44:00	5.54 pH	17.86 °C	36.15 µS/cm	6.87 mg/L	3.97 NTU	134.9 mV	54.86 ft	200.00 ml/min
8/11/2022 3:48 PM	01:48:00	5.61 pH	18.05 °C	40.24 µS/cm	6.75 mg/L	3.45 NTU	132.1 mV	54.86 ft	200.00 ml/min
8/11/2022 3:52 PM	01:52:00	5.63 pH	18.26 °C	40.21 µS/cm	7.09 mg/L	3.54 NTU	135.1 mV	54.86 ft	200.00 ml/min
8/11/2022 3:56 PM	01:56:00	5.64 pH	18.27 °C	40.27 µS/cm	6.86 mg/L	3.91 NTU	133.6 mV	54.86 ft	200.00 ml/min

Samples

Sample ID:	Description:
GWA-43	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/11/2022 2:16:59 PM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Robert Mull

Location Name: GWA-41 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 92.5 ft Total Depth: 102.5 ft Initial Depth to Water: 79.7 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 97.5 ft Estimated Total Volume Pumped: 13800 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: -0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
8/11/2022 2:16 PM	00:00	7.14 pH	21.34 °C	137.87 µS/cm	8.70 mg/L	0.79 NTU	48.3 mV	79.72 ft	150.00 ml/min
8/11/2022 2:20 PM	04:00	6.56 pH	20.06 °C	64.98 µS/cm	8.23 mg/L	4.02 NTU	64.7 mV	79.72 ft	150.00 ml/min
8/11/2022 2:24 PM	08:00	6.06 pH	19.67 °C	41.99 µS/cm	8.12 mg/L	1.48 NTU	78.6 mV	79.72 ft	150.00 ml/min
8/11/2022 2:28 PM	12:00	5.75 pH	19.58 °C	35.02 µS/cm	8.14 mg/L	2.10 NTU	86.6 mV	79.72 ft	150.00 ml/min
8/11/2022 2:32 PM	16:00	5.52 pH	19.67 °C	29.91 µS/cm	8.11 mg/L	2.28 NTU	91.1 mV	79.72 ft	150.00 ml/min
8/11/2022 2:36 PM	20:00	5.35 pH	19.44 °C	27.42 µS/cm	8.11 mg/L	2.39 NTU	92.9 mV	79.72 ft	150.00 ml/min
8/11/2022 2:40 PM	24:00	5.29 pH	19.31 °C	27.36 µS/cm	8.15 mg/L	2.62 NTU	90.0 mV	79.72 ft	150.00 ml/min
8/11/2022 2:44 PM	28:00	5.39 pH	19.26 °C	34.93 µS/cm	8.09 mg/L	1.87 NTU	83.7 mV	79.72 ft	150.00 ml/min
8/11/2022 2:48 PM	32:00	5.57 pH	19.27 °C	48.26 µS/cm	7.90 mg/L	1.94 NTU	78.1 mV	79.72 ft	150.00 ml/min
8/11/2022 2:52 PM	36:00	5.70 pH	19.51 °C	59.55 µS/cm	7.78 mg/L	1.73 NTU	74.4 mV	79.72 ft	150.00 ml/min
8/11/2022 2:56 PM	40:00	5.78 pH	19.49 °C	70.52 µS/cm	7.72 mg/L	1.64 NTU	72.7 mV	79.71 ft	150.00 ml/min
8/11/2022 3:00 PM	44:00	5.87 pH	19.58 °C	81.70 µS/cm	7.66 mg/L	1.50 NTU	70.7 mV	79.71 ft	150.00 ml/min
8/11/2022 3:04 PM	48:00	5.93 pH	19.67 °C	89.88 µS/cm	7.65 mg/L	1.92 NTU	69.3 mV	79.70 ft	150.00 ml/min
8/11/2022 3:08 PM	52:00	5.99 pH	19.67 °C	98.78 µS/cm	7.60 mg/L	1.21 NTU	68.7 mV	79.70 ft	150.00 ml/min
8/11/2022 3:12 PM	56:00	6.04 pH	19.66 °C	105.86 µS/cm	7.66 mg/L	1.34 NTU	68.4 mV	79.70 ft	150.00 ml/min

8/11/2022 3:16 PM	01:00:00	6.07 pH	20.07 °C	112.05 µS/cm	7.72 mg/L	1.17 NTU	67.8 mV	79.70 ft	150.00 ml/min
8/11/2022 3:20 PM	01:04:00	6.12 pH	20.60 °C	118.81 µS/cm	7.56 mg/L	1.10 NTU	67.1 mV	79.70 ft	150.00 ml/min
8/11/2022 3:24 PM	01:08:00	6.16 pH	20.11 °C	121.49 µS/cm	7.55 mg/L	1.20 NTU	67.4 mV	79.70 ft	150.00 ml/min
8/11/2022 3:28 PM	01:12:00	6.18 pH	19.91 °C	123.90 µS/cm	7.60 mg/L	1.15 NTU	67.6 mV	79.70 ft	150.00 ml/min
8/11/2022 3:32 PM	01:16:00	6.21 pH	19.77 °C	127.60 µS/cm	7.69 mg/L	1.11 NTU	67.6 mV	79.70 ft	150.00 ml/min
8/11/2022 3:36 PM	01:20:00	6.22 pH	19.57 °C	132.17 µS/cm	7.67 mg/L	1.10 NTU	68.0 mV	79.70 ft	150.00 ml/min
8/11/2022 3:40 PM	01:24:00	6.25 pH	19.66 °C	134.62 µS/cm	7.68 mg/L	0.96 NTU	67.8 mV	79.69 ft	150.00 ml/min
8/11/2022 3:44 PM	01:28:00	6.27 pH	19.57 °C	136.86 µS/cm	7.64 mg/L	1.04 NTU	68.2 mV	79.69 ft	150.00 ml/min
8/11/2022 3:48 PM	01:32:00	6.29 pH	19.49 °C	139.47 µS/cm	7.62 mg/L	1.01 NTU	68.2 mV	79.69 ft	150.00 ml/min

Samples

Sample ID:	Description:
GWA-41	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/12/2022 9:12:50 AM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-45R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 120.12 ft Total Depth: 130.12 ft Initial Depth to Water: 51.77 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 125.12 ft Estimated Total Volume Pumped: 3360 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/12/2022 9:12 AM	00:00	6.91 pH	20.87 °C	386.41 µS/cm	2.89 mg/L	1.17 NTU	54.9 mV	51.77 ft	120.00 ml/min
8/12/2022 9:16 AM	04:00	6.81 pH	20.32 °C	378.42 µS/cm	1.17 mg/L	0.51 NTU	34.1 mV	51.78 ft	120.00 ml/min
8/12/2022 9:20 AM	08:00	6.94 pH	20.37 °C	365.70 µS/cm	2.66 mg/L	0.39 NTU	60.7 mV	51.78 ft	120.00 ml/min
8/12/2022 9:24 AM	12:00	7.02 pH	20.38 °C	361.55 µS/cm	3.30 mg/L	0.41 NTU	90.1 mV	51.78 ft	120.00 ml/min
8/12/2022 9:28 AM	16:00	7.05 pH	20.70 °C	359.72 µS/cm	3.44 mg/L	0.47 NTU	108.3 mV	51.78 ft	120.00 ml/min
8/12/2022 9:32 AM	20:00	7.07 pH	20.54 °C	359.79 µS/cm	3.49 mg/L	0.72 NTU	117.0 mV	51.79 ft	120.00 ml/min
8/12/2022 9:36 AM	24:00	7.07 pH	20.38 °C	359.72 µS/cm	3.53 mg/L	0.33 NTU	121.2 mV	51.79 ft	120.00 ml/min
8/12/2022 9:40 AM	28:00	7.08 pH	20.28 °C	360.58 µS/cm	3.56 mg/L	1.13 NTU	124.8 mV	51.79 ft	120.00 ml/min

Samples

Sample ID:	Description:
GWC-45R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/12/2022 9:36:58 AM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Robert Mull

Location Name: GWA-40 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 145.02 ft Total Depth: 155.02 ft Initial Depth to Water: 69.8 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 150.02 ft Estimated Total Volume Pumped: 4200 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.02 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789310
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Test Notes:

Prepurged 0.5L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth To Water	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	
8/12/2022 9:36 AM	00:00	7.21 pH	23.18 °C	170.82 µS/cm	9.45 mg/L	1.02 NTU	115.6 mV	69.82 ft	150.00 ml/min
8/12/2022 9:40 AM	04:00	6.96 pH	20.76 °C	170.00 µS/cm	6.39 mg/L	2.66 NTU	94.5 mV	69.82 ft	150.00 ml/min
8/12/2022 9:44 AM	08:00	6.83 pH	20.12 °C	166.80 µS/cm	8.09 mg/L	1.22 NTU	90.0 mV	69.82 ft	150.00 ml/min
8/12/2022 9:48 AM	12:00	6.80 pH	20.20 °C	165.32 µS/cm	9.60 mg/L	1.11 NTU	88.2 mV	69.82 ft	150.00 ml/min
8/12/2022 9:52 AM	16:00	6.81 pH	20.38 °C	165.66 µS/cm	9.72 mg/L	1.52 NTU	86.5 mV	69.82 ft	150.00 ml/min
8/12/2022 9:56 AM	20:00	6.82 pH	20.34 °C	166.14 µS/cm	9.66 mg/L	1.02 NTU	85.1 mV	69.82 ft	150.00 ml/min
8/12/2022 10:00 AM	24:00	6.83 pH	20.35 °C	167.02 µS/cm	9.67 mg/L	1.01 NTU	84.3 mV	69.82 ft	150.00 ml/min
8/12/2022 10:04 AM	28:00	6.83 pH	19.98 °C	167.10 µS/cm	9.56 mg/L	1.09 NTU	84.7 mV	69.82 ft	150.00 ml/min

Samples

Sample ID:	Description:
GWA-40	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/12/2022 10:18:57 AM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-45 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.55 ft Total Depth: 67.55 ft Initial Depth to Water: 45.59 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 62.55 ft Estimated Total Volume Pumped: 7200 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 3.05 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Pumped for an hour In an attempt to get pH into range, to no effect

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/12/2022 10:18 AM	00:00	5.64 pH	21.26 °C	22.76 µS/cm	5.68 mg/L	0.67 NTU	158.1 mV	45.59 ft	120.00 ml/min
8/12/2022 10:22 AM	04:00	4.80 pH	20.23 °C	25.73 µS/cm	5.69 mg/L	0.81 NTU	158.7 mV	46.21 ft	120.00 ml/min
8/12/2022 10:26 AM	08:00	4.78 pH	20.29 °C	25.63 µS/cm	5.69 mg/L	0.63 NTU	154.6 mV	46.55 ft	120.00 ml/min
8/12/2022 10:30 AM	12:00	4.75 pH	20.41 °C	25.22 µS/cm	5.55 mg/L	0.79 NTU	151.8 mV	46.85 ft	120.00 ml/min
8/12/2022 10:34 AM	16:00	4.75 pH	20.66 °C	24.99 µS/cm	5.40 mg/L	0.54 NTU	150.4 mV	47.10 ft	120.00 ml/min
8/12/2022 10:38 AM	20:00	4.74 pH	20.73 °C	24.92 µS/cm	5.28 mg/L	0.70 NTU	150.8 mV	47.35 ft	120.00 ml/min
8/12/2022 10:42 AM	24:00	4.72 pH	20.76 °C	24.92 µS/cm	5.21 mg/L	0.66 NTU	152.0 mV	47.52 ft	120.00 ml/min
8/12/2022 10:46 AM	28:00	4.72 pH	20.40 °C	24.92 µS/cm	5.21 mg/L	0.41 NTU	151.0 mV	47.74 ft	120.00 ml/min
8/12/2022 10:50 AM	32:00	4.72 pH	20.26 °C	24.92 µS/cm	5.22 mg/L	0.45 NTU	148.6 mV	47.90 ft	120.00 ml/min
8/12/2022 10:54 AM	36:00	4.72 pH	20.47 °C	25.06 µS/cm	5.25 mg/L	0.39 NTU	151.1 mV	48.07 ft	120.00 ml/min
8/12/2022 10:58 AM	40:00	4.73 pH	20.71 °C	25.06 µS/cm	5.25 mg/L	0.39 NTU	151.1 mV	48.21 ft	120.00 ml/min
8/12/2022 11:02 AM	44:00	4.70 pH	21.11 °C	25.03 µS/cm	5.20 mg/L	0.38 NTU	152.8 mV	48.31 ft	120.00 ml/min
8/12/2022 11:06 AM	48:00	4.70 pH	21.24 °C	25.08 µS/cm	5.18 mg/L	0.42 NTU	153.8 mV	48.39 ft	120.00 ml/min
8/12/2022 11:10 AM	52:00	4.71 pH	20.86 °C	25.19 µS/cm	5.26 mg/L	0.51 NTU	155.1 mV	48.51 ft	120.00 ml/min
8/12/2022 11:14 AM	56:00	4.71 pH	21.49 °C	25.10 µS/cm	5.18 mg/L	0.22 NTU	154.1 mV	48.57 ft	120.00 ml/min

8/12/2022 11:18 AM	01:00:00	4.70 pH	21.12 °C	25.18 µS/cm	5.25 mg/L	0.31 NTU	155.3 mV	48.64 ft	120.00 ml/min
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Samples

Sample ID:	Description:
GWC-45	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/15/2022 9:35:11 AM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-44 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 81.1 ft Total Depth: 91.1 ft Initial Depth to Water: 52.69 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 86.1 ft Estimated Total Volume Pumped: 10960 ml Flow Cell Volume: 90 ml Final Flow Rate: 200 ml/min Final Draw Down: 0.39 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 2L

Pumped for an hour in an attempt to get pH into range, to no effect

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/15/2022 9:35 AM	00:00	4.30 pH	20.50 °C	118.20 µS/cm	3.98 mg/L	3.88 NTU	181.6 mV	52.69 ft	135.00 ml/min
8/15/2022 9:39 AM	04:00	4.26 pH	20.00 °C	119.15 µS/cm	3.49 mg/L	4.69 NTU	176.6 mV	52.71 ft	135.00 ml/min
8/15/2022 9:43 AM	08:00	4.25 pH	20.00 °C	119.35 µS/cm	3.39 mg/L	3.34 NTU	173.8 mV	52.72 ft	135.00 ml/min
8/15/2022 9:47 AM	12:00	4.26 pH	19.90 °C	118.70 µS/cm	3.32 mg/L	2.39 NTU	168.7 mV	52.74 ft	135.00 ml/min
8/15/2022 9:51 AM	16:00	4.28 pH	19.26 °C	118.22 µS/cm	3.31 mg/L	1.93 NTU	163.6 mV	52.81 ft	200.00 ml/min
8/15/2022 9:55 AM	20:00	4.28 pH	19.23 °C	117.68 µS/cm	3.28 mg/L	1.58 NTU	161.8 mV	52.85 ft	200.00 ml/min
8/15/2022 9:59 AM	24:00	4.28 pH	19.20 °C	117.37 µS/cm	3.27 mg/L	1.52 NTU	161.0 mV	52.88 ft	200.00 ml/min
8/15/2022 10:03 AM	28:00	4.28 pH	19.12 °C	116.92 µS/cm	3.27 mg/L	1.33 NTU	158.5 mV	52.90 ft	200.00 ml/min
8/15/2022 10:07 AM	32:00	4.29 pH	19.38 °C	116.88 µS/cm	3.26 mg/L	1.43 NTU	158.8 mV	52.93 ft	200.00 ml/min
8/15/2022 10:11 AM	36:00	4.29 pH	19.36 °C	116.74 µS/cm	3.27 mg/L	0.99 NTU	158.3 mV	52.95 ft	200.00 ml/min
8/15/2022 10:15 AM	40:00	4.29 pH	19.36 °C	116.37 µS/cm	3.26 mg/L	0.93 NTU	157.3 mV	52.98 ft	200.00 ml/min
8/15/2022 10:19 AM	44:00	4.29 pH	19.42 °C	116.12 µS/cm	3.26 mg/L	0.99 NTU	158.4 mV	52.99 ft	200.00 ml/min
8/15/2022 10:23 AM	48:00	4.29 pH	19.51 °C	115.62 µS/cm	3.25 mg/L	1.07 NTU	158.5 mV	53.01 ft	200.00 ml/min
8/15/2022 10:27 AM	52:00	4.29 pH	19.55 °C	116.15 µS/cm	3.25 mg/L	1.24 NTU	159.1 mV	53.02 ft	200.00 ml/min
8/15/2022 10:31 AM	56:00	4.30 pH	19.62 °C	116.01 µS/cm	3.24 mg/L	1.41 NTU	158.9 mV	53.05 ft	200.00 ml/min

8/15/2022 10:35 AM	01:00:00	4.30 pH	19.61 °C	115.92 µS/cm	3.25 mg/L	1.00 NTU	160.5 mV	53.08 ft	200.00 ml/min
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Samples

Sample ID:	Description:
GWC-44	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/15/2022 10:16:03 AM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: William Laaker

Location Name: GWC-46R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 49.01 ft Total Depth: 59.01 ft Initial Depth to Water: 40.03 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 54.01 ft Estimated Total Volume Pumped: 2080 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 1.36 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/15/2022 10:16 AM	00:00	7.55 pH	20.15 °C	399.84 µS/cm	7.34 mg/L	0.07 NTU	128.8 mV	41.09 ft	0.19 PSU	130.00 ml/min
8/15/2022 10:20 AM	04:00	7.58 pH	19.95 °C	400.09 µS/cm	7.33 mg/L	0.02 NTU	108.5 mV	41.20 ft	0.19 PSU	130.00 ml/min
8/15/2022 10:24 AM	08:00	7.58 pH	20.03 °C	400.41 µS/cm	7.30 mg/L	0.01 NTU	103.0 mV	41.30 ft	0.19 PSU	130.00 ml/min
8/15/2022 10:28 AM	12:00	7.58 pH	20.21 °C	400.33 µS/cm	7.24 mg/L	0.08 NTU	100.5 mV	41.36 ft	0.19 PSU	130.00 ml/min
8/15/2022 10:32 AM	16:00	7.58 pH	20.26 °C	397.57 µS/cm	7.05 mg/L	0.06 NTU	98.9 mV	41.39 ft	0.19 PSU	130.00 ml/min

Samples

Sample ID:	Description:
GWC-46R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/15/2022 11:24:54 AM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Kevin Stephenson

Location Name: GWA-39RZ Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 130.07 ft Total Depth: 140.07 ft Initial Depth to Water: 65.39 ft	Pump Type: Solinst Model 408 Tubing Type: LDPE Pump Intake From TOC: 135.07 ft Estimated Total Volume Pumped: 68000 ml Flow Cell Volume: 90 ml Final Flow Rate: 240 ml/min Final Draw Down: 63.44 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789317
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Test Notes:

Water level dropped below top of screen. Complete evacuation method initiated. Pump problems encountered at 1552.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/15/2022 11:24 AM	00:00	7.31 pH	17.18 °C	295.41 µS/cm	1.16 mg/L	0.90 NTU	52.9 mV	80.01 ft	0.14 PSU	400.00 ml/min
8/15/2022 11:28 AM	04:00	7.32 pH	17.16 °C	294.48 µS/cm	1.16 mg/L	1.04 NTU	48.4 mV	80.01 ft	0.14 PSU	400.00 ml/min
8/15/2022 11:32 AM	08:00	7.33 pH	17.17 °C	294.68 µS/cm	1.18 mg/L	0.96 NTU	44.8 mV	81.39 ft	0.14 PSU	400.00 ml/min
8/15/2022 11:36 AM	12:00	7.34 pH	17.18 °C	294.94 µS/cm	1.17 mg/L	0.93 NTU	40.7 mV	82.30 ft	0.14 PSU	400.00 ml/min
8/15/2022 11:40 AM	16:00	7.34 pH	17.33 °C	295.55 µS/cm	1.18 mg/L	0.99 NTU	37.7 mV	83.16 ft	0.14 PSU	400.00 ml/min
8/15/2022 11:44 AM	20:00	7.35 pH	17.30 °C	294.51 µS/cm	1.19 mg/L	0.80 NTU	36.1 mV	84.04 ft	0.14 PSU	400.00 ml/min
8/15/2022 11:48 AM	24:00	7.36 pH	17.31 °C	295.27 µS/cm	1.20 mg/L	0.82 NTU	35.1 mV	84.44 ft	0.14 PSU	400.00 ml/min
8/15/2022 11:52 AM	28:00	7.36 pH	17.26 °C	294.57 µS/cm	1.23 mg/L	0.89 NTU	34.8 mV	85.18 ft	0.14 PSU	400.00 ml/min
8/15/2022 11:56 AM	32:00	7.37 pH	17.29 °C	294.39 µS/cm	1.26 mg/L	0.82 NTU	33.7 mV	85.96 ft	0.14 PSU	400.00 ml/min
8/15/2022 12:00 PM	36:00	7.38 pH	17.26 °C	295.10 µS/cm	1.27 mg/L	0.73 NTU	32.6 mV	86.73 ft	0.14 PSU	400.00 ml/min
8/15/2022 12:04 PM	40:00	7.38 pH	17.40 °C	295.01 µS/cm	1.31 mg/L	0.90 NTU	32.4 mV	87.59 ft	0.14 PSU	400.00 ml/min
8/15/2022 12:08 PM	44:00	7.38 pH	17.44 °C	295.12 µS/cm	1.34 mg/L	0.81 NTU	31.7 mV	88.30 ft	0.14 PSU	400.00 ml/min
8/15/2022 12:12 PM	48:00	7.39 pH	17.40 °C	295.60 µS/cm	1.36 mg/L	0.74 NTU	30.6 mV	89.02 ft	0.14 PSU	120.00 ml/min
8/15/2022 12:16 PM	52:00	7.38 pH	17.63 °C	297.85 µS/cm	1.44 mg/L	0.71 NTU	29.8 mV	89.52 ft	0.14 PSU	120.00 ml/min
8/15/2022 12:20 PM	56:00	7.38 pH	18.16 °C	297.60 µS/cm	1.42 mg/L	0.57 NTU	28.7 mV	89.93 ft	0.14 PSU	120.00 ml/min

8/15/2022 12:24 PM	01:00:00	7.40 pH	17.96 °C	295.55 µS/cm	1.34 mg/L	0.68 NTU	27.0 mV	90.61 ft	0.14 PSU	200.00 ml/min
8/15/2022 12:28 PM	01:04:00	7.41 pH	17.75 °C	297.47 µS/cm	1.40 mg/L	0.76 NTU	25.0 mV	90.98 ft	0.14 PSU	200.00 ml/min
8/15/2022 12:32 PM	01:08:00	7.40 pH	17.76 °C	296.79 µS/cm	1.51 mg/L	0.71 NTU	29.3 mV	91.43 ft	0.14 PSU	200.00 ml/min
8/15/2022 12:36 PM	01:12:00	7.41 pH	17.44 °C	296.23 µS/cm	1.57 mg/L	0.74 NTU	31.2 mV	92.34 ft	0.14 PSU	200.00 ml/min
8/15/2022 12:40 PM	01:16:00	7.41 pH	17.35 °C	296.34 µS/cm	1.66 mg/L	0.91 NTU	33.2 mV	93.01 ft	0.14 PSU	200.00 ml/min
8/15/2022 12:44 PM	01:20:00	7.41 pH	17.45 °C	295.97 µS/cm	1.74 mg/L	0.83 NTU	34.2 mV	93.65 ft	0.14 PSU	200.00 ml/min
8/15/2022 12:48 PM	01:24:00	7.42 pH	17.22 °C	295.26 µS/cm	1.72 mg/L	0.87 NTU	35.0 mV	94.38 ft	0.14 PSU	200.00 ml/min
8/15/2022 12:52 PM	01:28:00	7.42 pH	17.19 °C	294.93 µS/cm	2.57 mg/L	0.74 NTU	38.1 mV	95.51 ft	0.14 PSU	200.00 ml/min
8/15/2022 12:56 PM	01:32:00	7.42 pH	17.22 °C	295.06 µS/cm	2.46 mg/L	0.69 NTU	40.5 mV	96.73 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:00 PM	01:36:00	7.41 pH	17.19 °C	295.16 µS/cm	2.29 mg/L	0.67 NTU	41.0 mV	97.75 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:04 PM	01:40:00	7.42 pH	17.22 °C	294.72 µS/cm	2.40 mg/L	0.76 NTU	41.4 mV	98.08 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:08 PM	01:44:00	7.42 pH	17.26 °C	295.35 µS/cm	2.44 mg/L	0.67 NTU	42.4 mV	98.92 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:12 PM	01:48:00	7.42 pH	17.26 °C	296.53 µS/cm	2.47 mg/L	0.56 NTU	42.4 mV	99.57 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:16 PM	01:52:00	7.42 pH	17.38 °C	296.70 µS/cm	2.42 mg/L	0.57 NTU	41.9 mV	100.31 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:20 PM	01:56:00	7.43 pH	17.35 °C	296.14 µS/cm	2.51 mg/L	0.69 NTU	43.1 mV	101.19 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:24 PM	02:00:00	7.43 pH	17.35 °C	296.77 µS/cm	2.53 mg/L	0.77 NTU	43.4 mV	101.91 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:28 PM	02:04:00	7.43 pH	17.29 °C	298.00 µS/cm	2.63 mg/L	0.93 NTU	44.3 mV	102.45 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:32 PM	02:08:00	7.44 pH	17.30 °C	297.53 µS/cm	2.66 mg/L	0.85 NTU	45.0 mV	103.38 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:36 PM	02:12:00	7.43 pH	17.32 °C	298.47 µS/cm	2.78 mg/L	0.99 NTU	46.0 mV	104.04 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:40 PM	02:16:00	7.44 pH	17.31 °C	298.80 µS/cm	2.87 mg/L	0.93 NTU	46.1 mV	104.62 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:44 PM	02:20:00	7.44 pH	17.31 °C	298.00 µS/cm	2.83 mg/L	0.85 NTU	46.8 mV	105.43 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:48 PM	02:24:00	7.44 pH	17.32 °C	298.46 µS/cm	3.08 mg/L	0.67 NTU	47.4 mV	106.11 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:52 PM	02:28:00	7.44 pH	17.40 °C	298.75 µS/cm	3.03 mg/L	0.65 NTU	47.8 mV	106.11 ft	0.14 PSU	200.00 ml/min
8/15/2022 1:56 PM	02:32:00	7.44 pH	17.35 °C	298.75 µS/cm	3.00 mg/L	0.68 NTU	47.9 mV	107.51 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:00 PM	02:36:00	7.44 pH	17.36 °C	298.71 µS/cm	3.06 mg/L	0.86 NTU	48.3 mV	108.20 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:04 PM	02:40:00	7.44 pH	17.44 °C	298.27 µS/cm	3.13 mg/L	0.70 NTU	49.3 mV	108.82 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:08 PM	02:44:00	7.44 pH	17.40 °C	298.03 µS/cm	3.21 mg/L	0.89 NTU	49.9 mV	108.99 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:12 PM	02:48:00	7.44 pH	17.49 °C	299.07 µS/cm	3.25 mg/L	0.80 NTU	50.2 mV	109.92 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:16 PM	02:52:00	7.45 pH	17.45 °C	299.62 µS/cm	3.41 mg/L	0.77 NTU	50.9 mV	110.99 ft	0.14 PSU	200.00 ml/min

8/15/2022 2:20 PM	02:56:00	7.45 pH	17.44 °C	299.15 µS/cm	3.62 mg/L	0.89 NTU	51.1 mV	111.24 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:24 PM	03:00:00	7.42 pH	17.51 °C	300.07 µS/cm	3.71 mg/L	0.89 NTU	52.9 mV	11.65 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:28 PM	03:04:00	7.42 pH	17.49 °C	299.60 µS/cm	3.69 mg/L	0.95 NTU	52.9 mV	112.28 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:32 PM	03:08:00	7.43 pH	17.57 °C	299.33 µS/cm	3.81 mg/L	1.07 NTU	53.0 mV	112.93 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:36 PM	03:12:00	7.43 pH	17.51 °C	300.43 µS/cm	3.96 mg/L	1.25 NTU	53.4 mV	113.41 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:40 PM	03:16:00	7.44 pH	17.40 °C	299.16 µS/cm	4.02 mg/L	0.88 NTU	54.3 mV	114.13 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:44 PM	03:20:00	7.44 pH	17.42 °C	299.77 µS/cm	4.05 mg/L	0.78 NTU	55.5 mV	114.61 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:48 PM	03:24:00	7.39 pH	16.86 °C	299.15 µS/cm	5.93 mg/L	1.38 NTU	57.2 mV	115.88 ft	0.14 PSU	200.00 ml/min
8/15/2022 2:52 PM	03:28:00	7.47 pH	17.27 °C	302.93 µS/cm	10.16 mg/L	2.30 NTU	58.7 mV	116.48 ft	0.15 PSU	200.00 ml/min
8/15/2022 2:56 PM	03:32:00	7.47 pH	17.42 °C	299.61 µS/cm	4.21 mg/L	2.53 NTU	57.1 mV	116.71 ft	0.14 PSU	200.00 ml/min
8/15/2022 3:00 PM	03:36:00	7.47 pH	17.48 °C	300.87 µS/cm	4.21 mg/L	1.50 NTU	57.7 mV	117.37 ft	0.14 PSU	200.00 ml/min
8/15/2022 3:04 PM	03:40:00	7.47 pH	17.49 °C	301.73 µS/cm	4.10 mg/L	1.23 NTU	57.2 mV	117.72 ft	0.14 PSU	200.00 ml/min
8/15/2022 3:08 PM	03:44:00	7.47 pH	17.55 °C	302.10 µS/cm	4.16 mg/L	1.13 NTU	57.3 mV	118.10 ft	0.15 PSU	200.00 ml/min
8/15/2022 3:12 PM	03:48:00	7.48 pH	17.35 °C	302.58 µS/cm	4.42 mg/L	1.03 NTU	56.9 mV	118.64 ft	0.15 PSU	200.00 ml/min
8/15/2022 3:16 PM	03:52:00	7.48 pH	17.35 °C	302.68 µS/cm	4.95 mg/L	1.24 NTU	58.9 mV	119.37 ft	0.15 PSU	200.00 ml/min
8/15/2022 3:20 PM	03:56:00	7.47 pH	17.37 °C	301.79 µS/cm	5.22 mg/L	1.09 NTU	59.3 mV	119.37 ft	0.14 PSU	200.00 ml/min
8/15/2022 3:24 PM	04:00:00	7.47 pH	17.33 °C	301.29 µS/cm	5.17 mg/L	1.09 NTU	60.0 mV	120.29 ft	0.14 PSU	200.00 ml/min
8/15/2022 3:28 PM	04:04:00	7.47 pH	17.37 °C	301.32 µS/cm	5.26 mg/L	1.20 NTU	60.5 mV	120.93 ft	0.14 PSU	200.00 ml/min
8/15/2022 3:32 PM	04:08:00	7.46 pH	17.49 °C	301.25 µS/cm	5.26 mg/L	3.21 NTU	61.1 mV	121.43 ft	0.14 PSU	200.00 ml/min
8/15/2022 3:36 PM	04:12:00	7.46 pH	17.45 °C	302.61 µS/cm	5.15 mg/L	3.42 NTU	62.3 mV	122.21 ft	0.15 PSU	200.00 ml/min
8/15/2022 3:40 PM	04:16:00	7.49 pH	17.26 °C	298.58 µS/cm	5.04 mg/L	3.88 NTU	61.6 mV	122.65 ft	0.14 PSU	200.00 ml/min
8/15/2022 3:44 PM	04:20:00	7.51 pH	17.21 °C	300.45 µS/cm	5.13 mg/L	2.83 NTU	61.7 mV	123.18 ft	0.14 PSU	200.00 ml/min
8/15/2022 3:48 PM	04:24:00	7.61 pH	16.50 °C	303.91 µS/cm	13.85 mg/L	0.00 NTU	57.7 mV	124.08 ft	0.15 PSU	200.00 ml/min
8/15/2022 3:52 PM	04:28:00	7.90 pH	17.80 °C	307.22 µS/cm	12.33 mg/L	0.00 NTU	49.4 mV	124.24 ft	0.15 PSU	200.00 ml/min
8/15/2022 3:56 PM	04:32:00	7.89 pH	19.85 °C	309.82 µS/cm	11.66 mg/L	3.78 NTU	55.6 mV	124.28 ft	0.15 PSU	200.00 ml/min
8/15/2022 4:00 PM	04:36:00	7.65 pH	19.76 °C	301.19 µS/cm	6.85 mg/L	3.15 NTU	57.7 mV	125.05 ft	0.14 PSU	200.00 ml/min
8/15/2022 4:04 PM	04:40:00	7.55 pH	19.02 °C	300.51 µS/cm	4.71 mg/L	5.05 NTU	58.0 mV	125.58 ft	0.14 PSU	200.00 ml/min
8/15/2022 4:08 PM	04:44:00	7.53 pH	18.70 °C	302.16 µS/cm	4.02 mg/L	5.70 NTU	58.6 mV	126.63 ft	0.15 PSU	200.00 ml/min
8/15/2022 4:12 PM	04:48:00	7.49 pH	18.29 °C	306.99 µS/cm	3.87 mg/L	5.34 NTU	59.6 mV	127.91 ft	0.15 PSU	200.00 ml/min

8/15/2022 4:16 PM	04:52:00	7.48 pH	18.25 °C	308.67 μS/cm	3.84 mg/L	5.71 NTU	59.2 mV	128.83 ft	0.15 PSU	400.00 ml/min
8/15/2022 4:20 PM	04:56:00	7.47 pH	18.20 °C	307.64 μS/cm	3.84 mg/L	5.68 NTU	58.5 mV	130.10 ft	0.15 PSU	400.00 ml/min

Samples

Sample ID:	Description:
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Low-Flow Test Report:

Test Date / Time: 8/15/2022 11:43:17 AM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-47R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 74.55 ft Total Depth: 84.55 ft Initial Depth to Water: 42.01 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 79.55 ft Estimated Total Volume Pumped: 5880 ml Flow Cell Volume: 90 ml Final Flow Rate: 120 ml/min Final Draw Down: 3.14 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/15/2022 11:43 AM	00:00	6.78 pH	22.23 °C	279.27 µS/cm	2.02 mg/L	1.22 NTU	37.0 mV	42.01 ft	150.00 ml/min
8/15/2022 11:47 AM	04:00	7.14 pH	20.44 °C	317.95 µS/cm	2.49 mg/L	1.13 NTU	103.2 mV	43.31 ft	150.00 ml/min
8/15/2022 11:51 AM	08:00	7.23 pH	19.69 °C	309.53 µS/cm	1.53 mg/L	1.19 NTU	127.5 mV	44.34 ft	150.00 ml/min
8/15/2022 11:55 AM	12:00	7.17 pH	20.79 °C	306.40 µS/cm	1.54 mg/L	1.52 NTU	133.4 mV	44.68 ft	100.00 ml/min
8/15/2022 11:59 AM	16:00	7.12 pH	21.86 °C	299.19 µS/cm	1.57 mg/L	2.94 NTU	136.5 mV	44.71 ft	100.00 ml/min
8/15/2022 12:03 PM	20:00	7.09 pH	23.16 °C	294.50 µS/cm	1.59 mg/L	1.34 NTU	136.5 mV	44.75 ft	110.00 ml/min
8/15/2022 12:07 PM	24:00	7.09 pH	21.47 °C	289.61 µS/cm	1.75 mg/L	1.38 NTU	137.4 mV	44.80 ft	110.00 ml/min
8/15/2022 12:11 PM	28:00	7.19 pH	21.31 °C	301.37 µS/cm	2.57 mg/L	1.36 NTU	135.2 mV	44.85 ft	120.00 ml/min
8/15/2022 12:15 PM	32:00	7.27 pH	21.08 °C	297.71 µS/cm	2.96 mg/L	1.26 NTU	136.7 mV	44.98 ft	120.00 ml/min
8/15/2022 12:19 PM	36:00	7.30 pH	21.40 °C	292.74 µS/cm	3.02 mg/L	1.27 NTU	137.5 mV	45.12 ft	120.00 ml/min
8/15/2022 12:23 PM	40:00	7.32 pH	22.14 °C	288.48 µS/cm	3.02 mg/L	1.20 NTU	138.6 mV	45.14 ft	120.00 ml/min
8/15/2022 12:27 PM	44:00	7.33 pH	22.49 °C	286.55 µS/cm	3.07 mg/L	1.32 NTU	138.8 mV	45.15 ft	120.00 ml/min
8/15/2022 12:31 PM	48:00	7.35 pH	22.71 °C	286.22 µS/cm	3.11 mg/L	1.17 NTU	139.2 mV	45.15 ft	120.00 ml/min

Samples

Sample ID:	Description:
GWC-47R	Metals, Inorganics, TDS

Created using VuSitu from In-Situ, Inc.

Low-Flow Test Report:

Test Date / Time: 8/15/2022 1:22:27 PM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-47 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 57.63 ft Total Depth: 67.63 ft Initial Depth to Water: 41.02 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 62.63 ft Estimated Total Volume Pumped: 3120 ml Flow Cell Volume: 90 ml Final Flow Rate: 130 ml/min Final Draw Down: 0.01 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:
Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/15/2022 1:22 PM	00:00	7.59 pH	23.54 °C	199.08 µS/cm	5.64 mg/L	1.24 NTU	81.1 mV	41.02 ft	130.00 ml/min
8/15/2022 1:26 PM	04:00	7.53 pH	21.65 °C	205.31 µS/cm	4.18 mg/L	2.03 NTU	127.8 mV	41.03 ft	130.00 ml/min
8/15/2022 1:30 PM	08:00	7.49 pH	21.26 °C	206.28 µS/cm	3.42 mg/L	1.58 NTU	135.7 mV	41.03 ft	130.00 ml/min
8/15/2022 1:34 PM	12:00	7.46 pH	21.03 °C	207.22 µS/cm	3.26 mg/L	1.71 NTU	136.2 mV	41.03 ft	130.00 ml/min
8/15/2022 1:38 PM	16:00	7.45 pH	21.02 °C	206.76 µS/cm	3.13 mg/L	1.56 NTU	136.8 mV	41.03 ft	130.00 ml/min
8/15/2022 1:42 PM	20:00	7.44 pH	20.93 °C	207.42 µS/cm	3.07 mg/L	1.28 NTU	135.9 mV	41.03 ft	130.00 ml/min
8/15/2022 1:46 PM	24:00	7.43 pH	20.95 °C	206.75 µS/cm	3.00 mg/L	1.36 NTU	136.3 mV	41.03 ft	130.00 ml/min

Samples

Sample ID:	Description:
GWC-47	Metals, Inorganics, TDS
DUP-2	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/15/2022 2:12:13 PM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: William Laaker

Location Name: GWC-49R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 126.8 ft Total Depth: 136.8 ft Initial Depth to Water: 56.27 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 131.8 ft Estimated Total Volume Pumped: 3840 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0.03 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/15/2022 2:12 PM	00:00	7.97 pH	21.93 °C	228.21 µS/cm	1.17 mg/L	0.08 NTU	27.2 mV	56.30 ft	0.11 PSU	160.00 ml/min
8/15/2022 2:16 PM	04:00	7.93 pH	21.23 °C	239.97 µS/cm	5.52 mg/L	0.10 NTU	65.2 mV	56.30 ft	0.11 PSU	160.00 ml/min
8/15/2022 2:20 PM	08:00	7.87 pH	21.11 °C	241.35 µS/cm	6.07 mg/L	0.04 NTU	76.7 mV	56.30 ft	0.12 PSU	160.00 ml/min
8/15/2022 2:24 PM	12:00	7.84 pH	20.86 °C	241.31 µS/cm	6.39 mg/L	0.11 NTU	81.9 mV	56.30 ft	0.12 PSU	160.00 ml/min
8/15/2022 2:28 PM	16:00	7.82 pH	20.66 °C	241.36 µS/cm	6.54 mg/L	0.11 NTU	84.7 mV	56.30 ft	0.12 PSU	160.00 ml/min
8/15/2022 2:32 PM	20:00	7.82 pH	20.71 °C	241.29 µS/cm	6.63 mg/L	0.17 NTU	86.5 mV	56.30 ft	0.12 PSU	160.00 ml/min
8/15/2022 2:36 PM	24:00	7.81 pH	20.48 °C	240.16 µS/cm	6.72 mg/L	0.06 NTU	87.7 mV	56.30 ft	0.11 PSU	160.00 ml/min

Samples

Sample ID:	Description:
GWC-49R	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/15/2022 2:50:46 PM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: Meredith Duncan

Location Name: GWC-48 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 49.49 ft Total Depth: 59.49 ft Initial Depth to Water: 37.98 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 54.49 ft Estimated Total Volume Pumped: 11720 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.09 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
8/15/2022 2:50 PM	00:00	5.27 pH	22.45 °C	52.50 µS/cm	5.06 mg/L	1.00 NTU	130.7 mV	37.98 ft	130.00 ml/min
8/15/2022 2:54 PM	04:00	4.85 pH	21.70 °C	49.32 µS/cm	3.60 mg/L	1.09 NTU	143.0 mV	37.98 ft	130.00 ml/min
8/15/2022 2:58 PM	08:00	4.88 pH	21.57 °C	50.93 µS/cm	3.43 mg/L	1.29 NTU	144.1 mV	37.98 ft	130.00 ml/min
8/15/2022 3:02 PM	12:00	4.94 pH	21.56 °C	53.26 µS/cm	3.27 mg/L	1.03 NTU	142.3 mV	37.98 ft	130.00 ml/min
8/15/2022 3:06 PM	16:00	4.96 pH	21.91 °C	54.51 µS/cm	3.18 mg/L	1.09 NTU	143.1 mV	37.98 ft	130.00 ml/min
8/15/2022 3:10 PM	20:00	4.98 pH	21.69 °C	55.03 µS/cm	3.08 mg/L	0.97 NTU	145.8 mV	37.98 ft	200.00 ml/min
8/15/2022 3:14 PM	24:00	5.00 pH	21.24 °C	55.18 µS/cm	3.02 mg/L	1.01 NTU	145.1 mV	37.98 ft	200.00 ml/min
8/15/2022 3:18 PM	28:00	5.02 pH	19.69 °C	54.52 µS/cm	3.11 mg/L	0.93 NTU	146.3 mV	38.03 ft	200.00 ml/min
8/15/2022 3:22 PM	32:00	5.03 pH	19.69 °C	53.77 µS/cm	3.11 mg/L	1.10 NTU	145.1 mV	38.05 ft	200.00 ml/min
8/15/2022 3:26 PM	36:00	5.06 pH	19.52 °C	53.41 µS/cm	3.06 mg/L	0.86 NTU	144.4 mV	38.08 ft	220.00 ml/min
8/15/2022 3:30 PM	40:00	5.09 pH	18.67 °C	53.06 µS/cm	3.12 mg/L	0.97 NTU	141.9 mV	38.17 ft	220.00 ml/min
8/15/2022 3:34 PM	44:00	5.10 pH	18.05 °C	53.89 µS/cm	3.28 mg/L	0.91 NTU	142.0 mV	38.29 ft	220.00 ml/min
8/15/2022 3:38 PM	48:00	5.04 pH	18.04 °C	56.92 µS/cm	3.43 mg/L	1.14 NTU	143.8 mV	38.38 ft	220.00 ml/min
8/15/2022 3:42 PM	52:00	5.00 pH	19.63 °C	60.18 µS/cm	3.44 mg/L	0.96 NTU	142.0 mV	38.18 ft	150.00 ml/min
8/15/2022 3:46 PM	56:00	4.95 pH	19.73 °C	62.05 µS/cm	3.47 mg/L	0.88 NTU	139.6 mV	38.15 ft	150.00 ml/min

8/15/2022 3:50 PM	01:00:00	4.95 pH	19.64 °C	65.64 µS/cm	3.51 mg/L	0.90 NTU	140.6 mV	38.12 ft	150.00 ml/min
8/15/2022 3:54 PM	01:04:00	4.92 pH	20.31 °C	68.17 µS/cm	3.56 mg/L	0.94 NTU	140.6 mV	38.08 ft	150.00 ml/min
8/15/2022 3:58 PM	01:08:00	4.89 pH	22.19 °C	69.01 µS/cm	3.57 mg/L	1.09 NTU	140.0 mV	38.07 ft	150.00 ml/min

Samples

Sample ID:	Description:
GWC-48	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 8/15/2022 3:04:18 PM

Project: Plant Bowen LF Cells 9&10 August 2022

Operator Name: William Laaker

Location Name: GWC-49Z Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 85.2 ft Total Depth: 95.2 ft Initial Depth to Water: 55.57 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 90.2 ft Estimated Total Volume Pumped: 5120 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 1.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 1 L

Well historically stabilizes pH below pH range.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
8/15/2022 3:04 PM	00:00	6.53 pH	22.47 °C	21.58 µS/cm	6.55 mg/L	0.72 NTU	102.7 mV	56.18 ft	0.01 PSU	160.00 ml/min
8/15/2022 3:08 PM	04:00	5.82 pH	21.91 °C	22.44 µS/cm	7.49 mg/L	0.68 NTU	105.2 mV	56.28 ft	0.01 PSU	160.00 ml/min
8/15/2022 3:12 PM	08:00	5.42 pH	21.46 °C	22.70 µS/cm	7.66 mg/L	0.55 NTU	106.0 mV	56.35 ft	0.01 PSU	160.00 ml/min
8/15/2022 3:16 PM	12:00	5.23 pH	21.06 °C	22.76 µS/cm	7.68 mg/L	0.79 NTU	105.8 mV	56.45 ft	0.01 PSU	160.00 ml/min
8/15/2022 3:20 PM	16:00	5.13 pH	21.02 °C	22.95 µS/cm	7.77 mg/L	0.82 NTU	105.9 mV	56.50 ft	0.01 PSU	160.00 ml/min
8/15/2022 3:24 PM	20:00	5.08 pH	21.30 °C	22.91 µS/cm	7.68 mg/L	1.50 NTU	106.1 mV	56.55 ft	0.01 PSU	160.00 ml/min
8/15/2022 3:28 PM	24:00	5.07 pH	21.11 °C	22.91 µS/cm	7.61 mg/L	1.54 NTU	106.0 mV	56.60 ft	0.01 PSU	160.00 ml/min
8/15/2022 3:32 PM	28:00	5.05 pH	21.04 °C	23.06 µS/cm	7.59 mg/L	1.34 NTU	106.3 mV	56.63 ft	0.01 PSU	160.00 ml/min
8/15/2022 3:36 PM	32:00	5.06 pH	21.20 °C	23.17 µS/cm	7.58 mg/L	1.16 NTU	105.9 mV	56.64 ft	0.01 PSU	160.00 ml/min

Samples

Sample ID:	Description:
GWC-49Z	Metals, Inorganics, TDS

Low-Flow Test Report:

Test Date / Time: 10/11/2022 9:28:15 AM

Project: Plant Bowen LF Cells 9&10 Resample

Operator Name: Meredith Duncan

Location Name: GWC-44 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 81.1 ft Total Depth: 91.1 ft Initial Depth to Water: 56.86 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 86.1 ft Estimated Total Volume Pumped: 9000 ml Flow Cell Volume: 90 ml Final Flow Rate: 150 ml/min Final Draw Down: 0.1 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes:

Prepurge 1L

Pumped for an hour in attempt to get pH into range, to no effect.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
10/11/2022 9:28 AM	00:00	4.79 pH	17.29 °C	81.14 µS/cm	6.07 mg/L	0.75 NTU	201.3 mV	56.86 ft	150.00 ml/min
10/11/2022 9:32 AM	04:00	4.21 pH	17.32 °C	62.55 µS/cm	5.12 mg/L	0.81 NTU	171.4 mV	56.86 ft	150.00 ml/min
10/11/2022 9:36 AM	08:00	4.16 pH	17.45 °C	58.76 µS/cm	5.03 mg/L	0.59 NTU	159.0 mV	56.87 ft	150.00 ml/min
10/11/2022 9:40 AM	12:00	4.14 pH	17.54 °C	57.08 µS/cm	5.02 mg/L	0.68 NTU	153.5 mV	56.88 ft	150.00 ml/min
10/11/2022 9:44 AM	16:00	4.12 pH	17.55 °C	56.25 µS/cm	5.03 mg/L	0.42 NTU	150.3 mV	56.89 ft	150.00 ml/min
10/11/2022 9:48 AM	20:00	4.12 pH	17.55 °C	56.00 µS/cm	5.04 mg/L	0.49 NTU	147.6 mV	56.90 ft	150.00 ml/min
10/11/2022 9:52 AM	24:00	4.12 pH	17.61 °C	56.10 µS/cm	5.04 mg/L	0.61 NTU	144.8 mV	56.91 ft	150.00 ml/min
10/11/2022 9:56 AM	28:00	4.09 pH	17.68 °C	56.63 µS/cm	5.02 mg/L	0.36 NTU	144.9 mV	56.92 ft	150.00 ml/min
10/11/2022 10:00 AM	32:00	4.10 pH	17.86 °C	57.28 µS/cm	5.02 mg/L	0.42 NTU	143.1 mV	56.93 ft	150.00 ml/min
10/11/2022 10:04 AM	36:00	4.11 pH	18.00 °C	57.79 µS/cm	5.00 mg/L	0.33 NTU	141.0 mV	56.93 ft	150.00 ml/min
10/11/2022 10:08 AM	40:00	4.11 pH	18.05 °C	58.34 µS/cm	5.01 mg/L	0.30 NTU	140.7 mV	56.94 ft	150.00 ml/min
10/11/2022 10:12 AM	44:00	4.12 pH	18.15 °C	58.84 µS/cm	4.98 mg/L	0.35 NTU	139.7 mV	56.94 ft	150.00 ml/min
10/11/2022 10:16 AM	48:00	4.11 pH	18.26 °C	59.30 µS/cm	4.96 mg/L	0.34 NTU	140.1 mV	56.95 ft	150.00 ml/min
10/11/2022 10:20 AM	52:00	4.11 pH	18.31 °C	59.83 µS/cm	4.91 mg/L	0.51 NTU	139.0 mV	56.95 ft	150.00 ml/min
10/11/2022 10:24 AM	56:00	4.13 pH	18.35 °C	60.24 µS/cm	4.88 mg/L	0.32 NTU	138.7 mV	56.96 ft	150.00 ml/min

10/11/2022 10:28 AM	01:00:00	4.13 pH	18.52 °C	60.62 µS/cm	4.88 mg/L	0.27 NTU	138.4 mV	56.96 ft	150.00 ml/min
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Samples

Sample ID:	Description:
GWC-44	Chloride
DUP-1	Chloride

Low-Flow Test Report:

Test Date / Time: 10/21/2022 10:05:30 AM

Project: Plant Bowen LF Cells 9&10 Resample

Operator Name: Meredith Duncan

Location Name: GWC-48 Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 49.49 ft Total Depth: 59.49 ft Initial Depth to Water: 40.05 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 54.49 ft Estimated Total Volume Pumped: 9600 ml Flow Cell Volume: 90 ml Final Flow Rate: 160 ml/min Final Draw Down: 0.95 ft	Instrument Used: Aqua TROLL 400 Serial Number: 893479
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Test Notes: Prepurge 1L

Pumped for an hour in attempt to get pH into range to no effect.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Flow
		+/- 0.1	+/- 1000	+/- 5 %	+/- 10 %	+/- 5	+/- 1000	+/- 0.3	
10/21/2022 10:05 AM	00:00	6.49 pH	17.63 °C	84.83 µS/cm	9.09 mg/L	0.63 NTU	185.9 mV	40.05 ft	160.00 ml/min
10/21/2022 10:09 AM	04:00	4.65 pH	17.53 °C	59.73 µS/cm	4.73 mg/L	0.91 NTU	181.4 mV	40.06 ft	160.00 ml/min
10/21/2022 10:13 AM	08:00	4.61 pH	17.46 °C	57.21 µS/cm	3.69 mg/L	0.89 NTU	170.4 mV	40.06 ft	160.00 ml/min
10/21/2022 10:17 AM	12:00	4.63 pH	17.55 °C	56.98 µS/cm	3.58 mg/L	0.73 NTU	162.6 mV	40.07 ft	160.00 ml/min
10/21/2022 10:21 AM	16:00	4.64 pH	17.59 °C	56.57 µS/cm	3.56 mg/L	0.92 NTU	158.7 mV	40.08 ft	160.00 ml/min
10/21/2022 10:25 AM	20:00	4.63 pH	17.64 °C	56.67 µS/cm	3.52 mg/L	0.84 NTU	156.2 mV	40.08 ft	160.00 ml/min
10/21/2022 10:29 AM	24:00	4.64 pH	17.73 °C	56.29 µS/cm	3.48 mg/L	0.97 NTU	155.3 mV	40.09 ft	160.00 ml/min
10/21/2022 10:33 AM	28:00	4.66 pH	17.73 °C	55.57 µS/cm	3.47 mg/L	0.96 NTU	151.6 mV	41.00 ft	160.00 ml/min
10/21/2022 10:37 AM	32:00	4.67 pH	17.69 °C	55.37 µS/cm	3.47 mg/L	1.01 NTU	149.8 mV	41.00 ft	160.00 ml/min
10/21/2022 10:41 AM	36:00	4.69 pH	17.73 °C	54.93 µS/cm	3.47 mg/L	1.03 NTU	148.6 mV	41.00 ft	160.00 ml/min
10/21/2022 10:45 AM	40:00	4.72 pH	17.77 °C	54.33 µS/cm	3.49 mg/L	0.89 NTU	146.2 mV	41.00 ft	160.00 ml/min
10/21/2022 10:49 AM	44:00	4.73 pH	17.85 °C	53.81 µS/cm	3.52 mg/L	1.13 NTU	146.1 mV	41.00 ft	160.00 ml/min
10/21/2022 10:53 AM	48:00	4.74 pH	17.90 °C	53.39 µS/cm	3.53 mg/L	1.02 NTU	145.2 mV	41.00 ft	160.00 ml/min
10/21/2022 10:57 AM	52:00	4.76 pH	17.87 °C	53.31 µS/cm	3.54 mg/L	1.01 NTU	144.0 mV	41.00 ft	160.00 ml/min
10/21/2022 11:01 AM	56:00	4.77 pH	18.00 °C	53.35 µS/cm	3.57 mg/L	1.07 NTU	141.8 mV	41.00 ft	160.00 ml/min

10/21/2022 11:05 AM	01:00:00	4.79 pH	18.08 °C	53.43 µS/cm	3.58 mg/L	1.05 NTU	142.0 mV	41.00 ft	160.00 ml/min
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Samples

Sample ID:	Description:
GWC-48	Chloride
DUP-1	Chloride

Low-Flow Test Report:

Test Date / Time: 11/2/2022 10:14:31 AM
Project: Plant Bowen LF Cells 3&4 Resample
Operator Name: William Laaker

Location Name: GWC-23R Well Diameter: 2 in Casing Type: PVC Screen Length: 10 ft Top of Screen: 39.57 ft Total Depth: 49.57 ft Initial Depth to Water: 41.08 ft	Pump Type: QED Dedicated Tubing Type: LDPE Pump Intake From TOC: 44.57 ft Estimated Total Volume Pumped: 1760 ml Flow Cell Volume: 90 ml Final Flow Rate: 110 ml/min Final Draw Down: 0.07 ft	Instrument Used: Aqua TROLL 400 Serial Number: 789301
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Test Notes:

Prepurged 0.25 L

DTW started in screen interval. Water level fell below top of pump. Full evac performed.

Low-Flow Readings:

Date Time	Elapsed Time	pH	Temperature	Specific Conductivity	RDO Concentration	Turbidity	ORP	Depth to Water	Salinity	Flow
		+/- 0.1	+/- 1000 %	+/- 5 %	+/- 10 %	+/- 5	+/- 1000 %	+/- 0.3	+/- 1000 %	
11/2/2022 10:14 AM	00:00	6.95 pH	16.56 °C	922.67 µS/cm	4.96 mg/L	0.13 NTU	61.0 mV	41.15 ft	0.51 PSU	110.00 ml/min
11/2/2022 10:18 AM	04:00	6.84 pH	16.56 °C	951.90 µS/cm	2.80 mg/L	0.37 NTU	25.3 mV		0.53 PSU	110.00 ml/min
11/2/2022 10:22 AM	08:00	6.80 pH	16.56 °C	940.79 µS/cm	1.70 mg/L	0.67 NTU	17.7 mV		0.52 PSU	110.00 ml/min
11/2/2022 10:26 AM	12:00	6.81 pH	16.58 °C	936.76 µS/cm	1.51 mg/L	0.94 NTU	24.3 mV		0.52 PSU	110.00 ml/min
11/2/2022 10:30 AM	16:00	6.82 pH	16.62 °C	934.75 µS/cm	1.60 mg/L	0.91 NTU	35.7 mV		0.52 PSU	110.00 ml/min

Samples

Sample ID:	Description:
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EQUIPMENT CALIBRATION LOG

Field Technician: <u>Kevin Stephenson</u>	Date: <u>1/25/22</u>	Time (Calibration): <u>1252</u>	Time (Mid-day Check): <u>1402</u>
AquaTroll SN: <u>789317</u>	Turbidity Meter Type: <u>LaMotte 2020</u>		SN:
Project: <u>Bowen LF</u>	Weather Conditions: <u>55°/28° 00%</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<u>103.68</u>	
Specific Conductance (µS/cm)	21470032 04/23	<u>11.70</u>	4490	<u>4378.8</u>	
pH (4)	21470032 04/24	<u>11.74</u>	4	<u>4.39</u>	<u>Reset Calibration and changed fluids, still high</u>
pH (7)	21380102 04/23	<u>11.37</u>	7	<u>7.41</u>	
pH (10)	20080056 0423	<u>10.91</u>	10	<u>10.29</u>	
ORP (mV)	21140143 04/23	<u>11.02</u>	228	<u>232.2</u>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	<u>0.17</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 1 NTU	1	<u>0.91</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 10 NTU	10	<u>10.43</u>	+/- 0.5 NTU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check		4	<u>4.10</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Mid-Day pH (7) check		7	<u>7.08</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Mid-Day pH (10) check		10	<u>10.10</u>	+/- 0.1 SU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician	Robert Mull	Date	1/25/22	Time (Calibration)	0835	Time (Mid-day Check)	1640	
AquaTroll SN	789310	Turbidity Meter Type	LaMotte 2020	SN	7042-3818			
Project	Plant Bowen Cells 3+4		Weather Conditions					Fully Cloudy, 50°F

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				101.68%	
Specific Conductance (µS/cm)	21470032 04/23	6.13	4490	4192.9	
pH (4)	21470032 04/24	6.27	4	4.03	
pH (7)	21380102 04/23	6.12	7	7.12	
pH (10)	20080056 04/23	6.13	10	10.26	
ORP (mV)	21140143 04/23	6.08	228	225.5	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.03	+/- 0.5 NTU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 1 NTU	1	0.80	+/- 0.5 NTU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 10 NTU	10	9.61	+/- 0.5 NTU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	13.88	4	4.15	+/- 0.1 SU	Yes	<input checked="" type="radio"/> No	only 0.0550 out
Mid-Day pH (7) check	14.78	7	7.01	+/- 0.1 SU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Mid-Day pH (10) check	14.30	10	10.11	+/- 0.1 SU	Yes	<input checked="" type="radio"/> No	only 0.0150 out

EQUIPMENT CALIBRATION LOG

Field Technician <i>Meredith Duncan</i>	Date <i>01/25/22</i>	Time (Calibration) <i>09:34</i>	Time (Mid-day Check) <i>1630</i>
AquaTroll SN <i>789301</i>	Turbidity Meter Type <i>La Motte 220w</i>		SN <i>-9429-4417</i>
Project <i>Bower LF</i>	Weather Conditions <i>45° Partly Cloudy</i>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<i>103.78</i>	
Specific Conductance (µS/cm)	21470032 04/23	<i>8.45</i>	4490	<i>4,428</i>	
pH (4)	21470032 04/24	<i>8.18</i>	4	<i>4.03</i>	
pH (7)	21380102 04/23	<i>7.85</i>	7	<i>7.05</i>	
pH (10)	20080056 0423	<i>7.74</i>	10	<i>10.17</i>	
ORP (mV)	21140143 04/23	<i>7.72</i>	228	<i>223.6</i>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	<i>0.00</i>	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Turbidity 1 NTU	1	<i>1.06</i>	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Turbidity 10 NTU	10	<i>10.21</i>	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	<i>13.67</i>	4	<i>0.00</i>	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<i>4.19</i>
Mid-Day pH (7) check	<i>13.72</i>	7	<i>1.06</i>	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<i>7.28</i>
Mid-Day pH (10) check	<i>14.44</i>	10	<i>10.21</i>	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	<i>10.23</i>

EQUIPMENT CALIBRATION LOG

Field Technician	Meredith Duncan	Date	01/26/22	Time (Calibration)	0825	Time (Mid-day Check)	1619
AquaTroll SN	789310	Turbidity Meter Type	la motte		SN 7042-3818		
Project	Bowen LF		Weather Conditions 30°F Sunny				

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt. 100% water saturated air cal)				99.11	
Specific Conductance (µS/cm)	21470032 04/23	6.82	4490	4513.7	
pH (4)	21470032 04/24	5.74	4	3.92	
pH (7)	21380102 04/23	5.29	7	6.99	
pH (10)	20080056 04/23	5.67	10	10.09	
ORP (mV)	21140143 04/23	5.93	228	228.2	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	+/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.87	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.88	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	13.79	4	4.24	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	12.50	7	7.21	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	12.43	10	10.24	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician William Laaker	Date 1/26/22	Time (Calibration) 8:45	Time (Mid-day Check) 1505
AquaTroll SN 789301	Turbidity Meter Type LaMotte 2020	SN 9429-4417	
Project Jan 2022 LF Semi	Weather Conditions 48°/27° sunny, windy		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				99.63	
Specific Conductance (µS/cm)	21470032 04/23	3.98	4490	4584.6	
pH (4)	21470032 04/24	4.18	4	4.42	
pH (7)	21380102 04/23	5.57	7	7.26	
pH (10)	20080056 04/23	5.75	10	10.11	
ORP (mV)	21140143 04/23	5.76	228	254.8	

		Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU		0	0.00	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU		1	1.14	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU		10	9.79	+/- 0.5 NTU	Yes No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	14.48	4	3.73	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	13.78	7	7.02	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	13.40	10	10.26	+/- 0.1 SU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Louis Stephenson</u>	Date: <u>1/27/22</u>	Time (Calibration): <u>1158</u>	Time (Mid-day Check):
Aqua Troll SN: <u>789317</u>	Turbidity Meter Type: <u>Model 7020</u>	SN: <u>2008-0320</u>	
Project: <u>Bowen LF</u>	Weather Conditions: <u>54°/32° / 0%</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<u>10.15</u>	
Specific Conductance (µS/cm)	<u>21470032 04/23</u>	<u>5.69</u>	<u>4490</u>	<u>4,511.4</u>	
pH (4)	<u>21470032 04/24</u>	<u>5.46</u>	<u>4</u>	<u>4.00</u>	
pH (7)	<u>21380102 04/23</u>	<u>4.89</u>	<u>7</u>	<u>7.05</u>	
pH (10)	<u>20080056 04/23</u>	<u>4.75</u>	<u>10</u>	<u>10.18</u>	
ORP (mV)	<u>21140143 04/23</u>	<u>4.95</u>	<u>228</u>	<u>237.1</u>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	<u>0</u>	<u>0.00</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 1 NTU	<u>1</u>	<u>0.80</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 10 NTU	<u>10</u>	<u>10.28</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	<u>9.69</u>	<u>4</u>	<u>4.13</u>	<u>+/- 0.1 SU</u>	Yes	<input checked="" type="radio"/> No	
Mid-Day pH (7) check	<u>8.46</u>	<u>7</u>	<u>7.19</u>	<u>+/- 0.1 SU</u>	Yes	<input checked="" type="radio"/> No	
Mid-Day pH (10) check	<u>7.74</u>	<u>10</u>	<u>10.17</u>	<u>+/- 0.1 SU</u>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician	Meredith Duncan	Date	01/27/22	Time (Calibration)	0850	Time (Mid-day Check)	1633
AquaTroll SN	850762	Turbidity Meter Type	la motte	SN	7042-3818		
Project	Bowen LF	Weather Conditions	32°F Sunny				

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt. 100% water saturated air cal)				100.29	
Specific Conductance (µS/cm)	21470032 04/23	2.45	4490	4508.9	
pH (4)	21470032 04/24	2.50	4	4.25	
pH (7)	21380102 04/23	2.50	7	7.12	
pH (10)	20080056 04/23	2.46	10	10.69	
ORP (mV)	21140143 04/23	2.32	228	230	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	+/- 0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.95	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.75	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	17.70	4	4.13	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	16.14	7	7.12	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	15.18	10	10.70	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician	Robert Mull	Date	1/27/22	Time (Calibration)	0825	Time (Mid-day Check)	1555	
AquaTroll SN	789310	Turbidity Meter Type	Lumette 200we	SN	9453-4417			
Project	Plant Bowen- Cells 3+4		Weather Conditions					Partly Cloudy, 35°F

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				100.84%	
Specific Conductance (µS/cm)	21470032 04/23	-0.18	4490	4390.7	
pH (4)	21470032 04/24	-0.18	4	4.15	
pH (7)	21380102 04/23	-0.13	7	7.08	
pH (10)	20080056 04/23	0.09	10	10.17	
ORP (mV)	21140143 04/23	-0.02	228	256.6	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.05	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Turbidity 1 NTU	1	0.81	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Turbidity 10 NTU	10	10.37	+/- 0.5 NTU	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check		4	4.20	+/- 0.1 SU	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Mid-Day pH (7) check		7	7.31	+/- 0.1 SU	<input type="checkbox"/> Yes	<input type="checkbox"/> No	
Mid-Day pH (10) check		10	10.06	+/- 0.1 SU	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>William Laaker</u>	Date: <u>1/27/22</u>	Time (Calibration): <u>8:46</u>	Time (Mid-day Check): <u>14:25</u>
AquaTroll SN: <u>789301</u>	Turbidity Meter Type: <u>LaMotte 2020</u>	SN: <u>9429-4417</u>	
Project: <u>Jan 2022 LF Semi</u>	Weather Conditions: <u>52°/25° sunny</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				99.28	
Specific Conductance (µS/cm)	21470032 04/23	3.87	4490	4228.5	
pH (4)	21470032 04/24	3.42	4	3.90	
pH (7)	21380102 04/23	1.80	7	6.99	
pH (10)	20080056 0423	1.59	10	10.09	
ORP (mV)	21140143 04/23	1.50	228	237.0	

		Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU		0	0.03	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU		1	1.14	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU		10	9.67	+/- 0.5 NTU	Yes No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	12.27	4	4.28 ¹⁹	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	12.07	7	7.28 ⁷	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	12.60	10	10.23	+/- 0.1 SU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Kevin Stephenson</u>	Date: <u>1/28/22</u>	Time (Calibration): <u>1030</u>	Time (Mid-day Check):
AquaTroll SN: <u>789317</u>	Turbidity Meter Type: <u>Lamotte 2020</u> SN: <u>2068-0320</u>		
Project: <u>LF Bowlin</u>	Weather Conditions: <u>46°/20°/090</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<u>96.20</u>	
Specific Conductance (µS/cm)	<u>21470032 04/23</u>	<u>9.17</u>	<u>4490</u>	<u>4465.3</u>	
pH (4)	<u>21470032 04/24</u>	<u>8.94</u>	<u>4</u>	<u>4.02</u>	
pH (7)	<u>21380102 04/23</u>	<u>7.98</u>	<u>7</u>	<u>7.10</u>	
pH (10)	<u>20080056 04/23</u>	<u>7.52</u>	<u>10</u>	<u>10.05</u>	
ORP (mV)	<u>21140143 04/23</u>	<u>7.94</u>	<u>228</u>	<u>222.2</u>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	<u>0</u>	<u>0.01</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 1 NTU	<u>1</u>	<u>1.00</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 10 NTU	<u>10</u>	<u>10.21</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	<u>8.34</u>	<u>4</u>	<u>4.12</u>	<u>+/- 0.1 SU</u>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Mid-Day pH (7) check	<u>8.70</u>	<u>7</u>	<u>7.26</u>	<u>+/- 0.1 SU</u>	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<u>Cold?</u>
Mid-Day pH (10) check	<u>9.50</u>	<u>10</u>	<u>10.28</u>	<u>+/- 0.1 SU</u>	<input type="radio"/> Yes	<input checked="" type="radio"/> No	<u>Cold?</u>

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 01/28/22	Time (Calibration): 0825	Time (Mid-day Check): 1142
AquaTroll SN: 850762	Turbidity Meter Type: la Motte		SN: 7042-3818
Project: Bowen LF	Weather Conditions: 32°F Cloudy		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt. 100% water saturated air cal)				100.07	
Specific Conductance (µS/cm)	21470032 04/23	4.06	4490	4863.5	
pH (4)	21470032 04/24	4.59	4	3.80	
pH (7)	21380102 04/23	4.99	7	6.95	
pH (10)	20080056 0423	4.07	10	10.19	
ORP (mV)	21140143 04/23	4.89	228	253.3	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU	0	0.06	+/- 0.5 NTU	Yes No	
Turbidity 1 NTU	1	1.46	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU	10	10.20	+/- 0.5 NTU	Yes No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	7.48	4	4.00	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	7.54	7	7.31	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	8.11	10	10.14	+/- 0.1 SU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Robert Mull</u>	Date: <u>1/28/22</u>	Time (Calibration): <u>0820</u>	Time (Mid-day Check): <u>1125</u>
AquaTroll SN: <u>783910</u>	Turbidity Meter Type: <u>LaMotte 780</u> SN: _____		
Project: <u>Plant Bowen Cells 3+4</u>	Weather Conditions: <u>cloudy, 35°F</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<u>100.17</u>	
Specific Conductance (µS/cm)	<u>21470032 04/23</u>	<u>7.61</u>	<u>4490</u>	<u>46353</u>	
pH (4)	<u>21470032 04/24</u>	<u>7.60</u>	<u>4</u>	<u>3.98</u>	
pH (7)	<u>21380102 04/23</u>	<u>7.71</u>	<u>7</u>	<u>7.05</u>	
pH (10)	<u>20080056 04/23</u>	<u>7.82</u>	<u>10</u>	<u>10.01</u>	
ORP (mV)	<u>21140143 04/23</u>	<u>7.81</u>	<u>228</u>	<u>222.3</u>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU	<u>0</u>	<u>-0.12</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="checkbox"/> No	
Turbidity 1 NTU	<u>1</u>	<u>0.76</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="checkbox"/> No	
Turbidity 10 NTU	<u>10</u>	<u>9.86</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="checkbox"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	<u>7.63</u>	<u>4</u>	<u>4.10</u>	<u>+/- 0.1 SU</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (7) check	<u>7.53</u>	<u>7</u>	<u>7.33</u>	<u>+/- 0.1 SU</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	
Mid-Day pH (10) check	<u>10.22</u>	<u>10</u>	<u>10.21</u>	<u>+/- 0.1 SU</u>	<input type="checkbox"/> Yes <input type="checkbox"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: William Laaker	Date: 1/28/22	Time (Calibration): 8:20	Time (Mid-day Check): 12:30
AquaTroll SN: 789301	Turbidity Meter Type: LaMotte 2020	SN: 9429-4417	
Project: Jan 2022 LF Semi	Weather Conditions: 45°/25° cloudy		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				101.95	
Specific Conductance (µS/cm)	21470032 04/23	2.76	4490	4882.9	
pH (4)	21470032 04/24	2.78	4	4.46	
pH (7)	21380102 04/23	3.04	7	7.29	
pH (10)	20080056 04/23	3.45	10	9.92	
ORP (mV)	21140143 04/23	3.55	228	223.1	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.01	+/- 0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.21	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	10.17	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	7.51	4	3.93	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	8 7.75	7	9 6.93	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	8.96	10	10.10	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Karin Stogard</u>	Date: <u>1/31/22</u>	Time (Calibration): <u>1240</u>	Time (Mid-day Check): <u>1434</u>
AquaTroll SN: <u>789317</u>	Turbidity Meter Type: <u>LaMotte 2020</u>	SN: <u>9453-4417</u>	
Project: <u>Banow LF</u>	Weather Conditions: <u>55°/32°, 0%10</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				99.56	
Specific Conductance (µS/cm)	21470032 04/23	7.80	4490	4477.9	
pH (4)	21470032 04/24	7.46	4	3.99	
pH (7)	21380102 04/23	6.63	7	7.04	
pH (10)	20080056 04/23	6.43	10	10.08	
ORP (mV)	21140143 04/23	6.72	228	229.1	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.16	+/- 0.5 NTU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 1 NTU	1	0.91	+/- 0.5 NTU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 10 NTU	10	9.57	+/- 0.5 NTU	<input checked="" type="radio"/> Yes	<input type="radio"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	9.13	4	4.17	+/- 0.1 SU	Yes	<input type="radio"/> No	
Mid-Day pH (7) check	9.60	7	7.23	+/- 0.1 SU	Yes	<input type="radio"/> No	
Mid-Day pH (10) check	11.19	10	10.30	+/- 0.1 SU	Yes	<input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 01/31/22	Time (Calibration): 0823	Time (Mid-day Check): 1608
AguaTron SN: 850762	Turbidity Meter Type: la motte	SN: 7042-3818	
Project: Bowen LF	Weather Conditions: 32°F Partly Cloudy		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				100.62	
Specific Conductance (µS/cm)	21470032 04/23	4.25	4490	4589.8	
pH (4)	21470032 04/24	2.19	4	3.91	
pH (7)	21380102 04/23	3.89	7	6.99	
pH (10)	20080056 04/23	4.45	10	9.81	
ORP (mV)	21140143 04/23	4.74	228	258	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	-0.02	+/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.67	+/-0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.69	+/-0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	11.39	4	4.47	+/-0.1 SU	Yes	No	
Mid-Day pH (7) check	11.23	7	7.50	+/-0.1 SU	Yes	No	
Mid-Day pH (10) check	12.28	10	10.30	+/-0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician	Robert Mull	Date	11/31/22	Time (Calibration)	1249	Time (Mid-day Check)	
AquaTroll SN	789310	Turbidity Meter Type	LaMotte 2005	SN	2068-0520		
Project	Bowen Landfill	Weather Conditions	Partly Cloudy 55°F				

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				100.26	
Specific Conductance (µS/cm)	21470032 04/23	7.20	4490	4539.0	
pH (4)	21470032 04/24	7.27	4	4.02	
pH (7)	21380102 04/23	8.57	7	7.12	
pH (10)	20080056 04/23	9.22	10	10.03	
ORP (mV)	21140143 04/23	9.54	228	247.8	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU	0	0.00	+/- 0.5 NTU	<input checked="" type="checkbox"/> No	
Turbidity 1 NTU	1	1.39	+/- 0.5 NTU	<input checked="" type="checkbox"/> No	
Turbidity 10 NTU	10	10.42	+/- 0.5 NTU	<input checked="" type="checkbox"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check		4	4.16	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check		7	7.28	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check		10	10.22	+/- 0.1 SU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>William Laaker</u>	Date: <u>1/31/22</u>	Time (Calibration): <u>8:33</u>	Time (Mid-day Check): <u>15:20</u>
AquaTroll SN: <u>789301</u>	Turbidity Meter Type: <u>LaMotte 2020</u>	SN: <u>9429-4417</u>	
Project: <u>Jan 2022 LF Semi</u>	Weather Conditions: <u>54°/27° partly cloudy</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				99.67	
Specific Conductance (µS/cm)	21470032 04/23	11.86	4490	4472.0	
pH (4)	21470032 04/24	12.01	4	3.95	
pH (7)	21380102 04/23	12.85	7	6.88	
pH (10)	20080056 04/23	12.62	10	10.04	
ORP (mV)	21140143 04/23	12.28	228	208.3	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.03	+/- 0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.16	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.66	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	18.60	4	4.02	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	15.97	7	7.07	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	15.97	10	9.79	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Kevin Stephenson Date: 2/1/22 Time (Calibration): 022 Time (Mid-day Check): 1444

AquaTroll SN: 789317 Turbidity Meter Type: LaMotte SN: _____

Project: LF Bowen Weather Conditions: 61°/43%, 00%

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<u>100.27</u>	
Specific Conductance (µS/cm)	<u>21470032 04/23</u>	<u>7.98</u>	<u>4490</u>	<u>4470.6</u>	
pH (4)	<u>21470032 04/24</u>	<u>7.67</u>	<u>4</u>	<u>4.02</u>	
pH (7)	<u>21380102 04/23</u>	<u>7.00</u>	<u>7</u>	<u>7.07</u>	
pH (10)	<u>20080056 04/23</u>	<u>6.96</u>	<u>10</u>	<u>10.17</u>	
ORP (mV)	<u>21140143 04/23</u>	<u>7.50</u>	<u>228</u>	<u>224.7</u>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU	<u>0</u>	<u>0.03</u>	<u>+/- 0.5 NTU</u>	Yes <input checked="" type="radio"/> No <input type="radio"/>	
Turbidity 1 NTU	<u>1</u>	<u>0.89</u>	<u>+/- 0.5 NTU</u>	Yes <input checked="" type="radio"/> No <input type="radio"/>	
Turbidity 10 NTU	<u>10</u>	<u>9.51</u>	<u>+/- 0.5 NTU</u>	Yes <input checked="" type="radio"/> No <input type="radio"/>	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	<u>10.58</u>	<u>4</u>	<u>4.17</u>	<u>+/- 0.1 SU</u>	Yes <input type="radio"/> No <input checked="" type="radio"/>	
Mid-Day pH (7) check	<u>10.11</u>	<u>7</u>	<u>7.14</u>	<u>+/- 0.1 SU</u>	Yes <input checked="" type="radio"/> No <input type="radio"/>	
Mid-Day pH (10) check	<u>11.50</u>	<u>10</u>	<u>10.32</u>	<u>+/- 0.1 SU</u>	Yes <input type="radio"/> No <input checked="" type="radio"/>	

EQUIPMENT CALIBRATION LOG

Field Technician	Meredith Duncan	Date	2/1/22	Time (Calibration)	0830	Time (Mid-day Check)	1525	
AquaTroll SN	850762	Turbidity Meter Type	la motte		SN	7042-3818		
Project	Bowen LF		Weather Conditions					38°F

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments	
DO (%) (1pt. 100% water saturated air cal)				102.88		
Specific Conductance (µS/cm)	21470032 04/23	5.43	4490	3697.1		
pH (4)	21470032 04/24	5.45	4	4.30		
pH (7)	21380102 04/23	5.73	7	7.34		
pH (10)	20080056 04/23	6.05	10	10.19		
ORP (mV)	21140143 04/23	6.22	228	251.0		

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.08	+/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.15	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	10.52	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	16.67	4	4.15	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	15.87	7	7.19	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	15.05	10	10.23	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Robert Mull	Date: 2/1/22	Time (Calibration): 0809	Time (Mid-day Check): 1553
Aqua Troll SN: 789310	Turbidity Meter Type: Lamotte 2020t		SN: 2068-0320
Project: Baker Landfill	Weather Conditions: Sunny, 35°F		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				100.02	
Specific Conductance (µS/cm)	21470032 04/23	3.73	4490	486.4	
pH (4)	21470032 04/24	3.78	4	3.91	
pH (7)	21380102 04/23	4.60	7	7.01	
pH (10)	20080056 04/23	4.99	10	10.14	
ORP (mV)	21140143 04/23	4.64	228	236.0	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	+/- 0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.08	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	10.46	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check		4	4.22	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check		7	7.34	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check		10	10.27	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: William Loaker	Date: 2/1/22	Time (Calibration): 8:42	Time (Mid-day Check): 16:15
AquaTrill SN: 789301	Turbidity Meter Type: LaMotte 2020	SN: 9429-4417	
Project: Jan 2022 LF Semi	Weather Conditions: 60°/28° sunny, windy		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air sat)				99.21	
Specific Conductance (µS/cm)	21470032 04/23	7.57	4490	4222.0	
pH (4)	21470032 04/24	7.27	4	3.63	
pH (7)	21380102 04/23	4.86	7	7.19	
pH (10)	20080056 04/23	4.16	10	10.53	
ORP (mV)	21140143 04/23	3.90	228	244.5	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.03	±0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.24	±0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.56	±0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	13.21	4	4.24	±0.1 SU	Yes	No	
Mid-Day pH (7) check	13.24	7	6.99	±0.1 SU	Yes	No	
Mid-Day pH (10) check	13.96	10	9.56	±0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Kevin Stephenson</u>	Date: <u>2/2/22</u>	Time (Calibration): <u>10:10</u>	Time (Mid-day Check):
AquaTroll SN: <u>789317</u>	Turbidity Meter Type: <u>LaMotte</u>	SN: <u>9453-4417</u>	
Project: <u>LF Sampling</u>	Weather Conditions: <u>59°/52° 30%.</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<u>97.87</u>	
Specific Conductance (µS/cm)	<u>21470032 04/23</u>	<u>12.10</u>	<u>4490</u>	<u>4506.1</u>	
pH (4)	<u>21470032 04/24</u>	<u>11.94</u>	<u>4</u>	<u>4.00</u>	
pH (7)	<u>21380102 04/23</u>	<u>11.44</u>	<u>7</u>	<u>7.08</u>	
pH (10)	<u>20080056 04/23</u>	<u>11.25</u>	<u>10</u>	<u>10.15</u>	
ORP (mV)	<u>21140143 04/23</u>	<u>11.41</u>	<u>228</u>	<u>222.3</u>	

		Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU		<u>0</u>	<u>0.03</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU		<u>1</u>	<u>0.79</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU		<u>10</u>	<u>9.76</u>	<u>+/- 0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	

		Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check		<u>13.32</u>	<u>4</u>	<u>4.12</u>	<u>+/- 0.1 SU</u>	<input type="radio"/> Yes <input checked="" type="radio"/> No	
Mid-Day pH (7) check		<u>13.51</u>	<u>7</u>	<u>7.18</u>	<u>+/- 0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check		<u>14.12</u>	<u>10</u>	<u>10.21</u>	<u>+/- 0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician	Meredith Duncan	Date	2/2/22	Time (Calibration)	0820	Time (Mid-day Check)	1607
AquaTroll SN	850762	Turbidity Meter Type	la motte	SN	7042-3818		
Project	Bowen LF		Weather Conditions 45°F Cloudy & Windy				

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt. 100% water saturated air cal)				105.21	
Specific Conductance (µS/cm)	21470032 04/23	8.83	4490	4565	
pH (4)	21470032 04/24	8.86	4	4.85	
pH (7)	21380102 04/23	8.50	7	7.08	
pH (10)	20080056 0423	8.55	10	10.13	
ORP (mV)	21140143 04/23	8.82	228	248.3	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.03	+/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.08	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	10.36	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	12.67	4	4.11	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	12.11	7	7.21	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	12.64	10	10.24	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician <i>Robert Mull</i>	Date <i>2/2/22</i>	Time (Calibration) <i>0821</i>	Time (Mid-day Check) <i>1558</i>
AquaTroll SN <i>789310</i>	Turbidity Meter Type <i>Lamotte 2020</i>	SN <i>2028-0320</i>	
Project <i>Bown Landfill</i>	Weather Conditions <i>40F Cloudy, Windy</i>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<i>97.70</i>	
Specific Conductance (µS/cm)	<i>21470032 04/23</i>	<i>9.99</i>	<i>4490</i>	<i>4284.3</i>	
pH (4)	<i>21470032 04/24</i>	<i>9.93</i>	<i>4</i>	<i>4.09</i>	
pH (7)	<i>21380102 04/23</i>	<i>9.20</i>	<i>7</i>	<i>7.18</i>	
pH (10)	<i>20080056 04/23</i>	<i>8.74</i>	<i>10</i>	<i>10.14</i>	
ORP (mV)	<i>21140143 04/23</i>	<i>8.57</i>	<i>228</i>	<i>221.1</i>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	<i>0</i>	<i>0.02</i>	<i>+/- 0.5 NTU</i>	Yes	No	
Turbidity 1 NTU	<i>1</i>	<i>1.09</i>	<i>+/- 0.5 NTU</i>	Yes	No	
Turbidity 10 NTU	<i>10</i>	<i>10.20</i>	<i>+/- 0.5 NTU</i>	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	<i>12.93</i>	<i>4</i>	<i>4.16</i>	<i>+/- 0.1 SU</i>	Yes	No	
Mid-Day pH (7) check	<i>12.93</i>	<i>7</i>	<i>7.27</i>	<i>+/- 0.1 SU</i>	Yes	No	
Mid-Day pH (10) check	<i>13.52</i>	<i>10</i>	<i>10.27</i>	<i>+/- 0.1 SU</i>	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: William Laaker	Date: 2/2/22	Time (Calibration): 8:13	Time (Meter Check): 16:40
AquaTroll SN: 789301	Turbidity Meter Type: LaMotte 2020	SN: 4429-4417	
Project: Jan 2022 LF Semi	Weather Conditions: 52°/43° cloudy, 30% rain		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt. 100% water saturated air cal)				99.99	
Specific Conductance (µS/cm)	21070193 8/22 21470032 4/23	16.15	4490	4835.7	
pH (4)	21070193 8/22 21470032 4/23	17.36	4	4.34	* pH cap and fluid replaced
pH (7)	21010066 8/22 21380102 4/23	18.19	7	6.88	
pH (10)	21080189 6/22 20080056 4/23	18.39	10	9.4 ⁴	
ORP (mV)	21140141 8/22 21140143 4/23	18.36	228	235.1	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.01	±0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.21	±0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.50	±0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	15.31	4	4.00	±0.1 SU	Yes	No	
Mid-Day pH (7) check	15.45	7	7.20	±0.1 SU	Yes	No	
Mid-Day pH (10) check	15.52	10	10.20	±0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Meredith Dunca</u>	Date: <u>2/3/22</u>	Time (Calibration): <u>0815</u>	Time (Mid-day Check): <u>1146</u>
AquaTroll SN: <u>850762</u>	Turbidity Meter Type: <u>lanotte</u>		SN: <u>7042-3818</u>
Project: <u>Bowen LF</u>	Weather Conditions: <u>50°F rainy</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<u>93.12</u>	
Specific Conductance (µS/cm)	<u>21470032 04/23</u>	<u>9.99</u>	<u>4490</u>	<u>5104</u>	
pH (4)	<u>21470032 04/24</u>	<u>10.47</u>	<u>4</u>	<u>4.00</u>	
pH (7)	<u>21380102 04/23</u>	<u>10.57</u>	<u>7</u>	<u>7.04</u>	
pH (10)	<u>20080056 04/23</u>	<u>10.57</u>	<u>10</u>	<u>10.09</u>	
ORP (mV)	<u>21140143 04/23</u>	<u>10.52</u>	<u>228</u>	<u>249.9</u>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU	<u>0</u>	<u>0.09</u>	<u>+/- 0.5 NTU</u>	Yes No	
Turbidity 1 NTU	<u>1</u>	<u>1.37</u>	<u>+/- 0.5 NTU</u>	Yes No	
Turbidity 10 NTU	<u>10</u>	<u>10.33</u>	<u>+/- 0.5 NTU</u>	Yes No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	<u>13.69</u>	<u>4</u>	<u>4.12</u>	<u>+/- 0.1 SU</u>	Yes No	
Mid-Day pH (7) check	<u>13.66</u>	<u>7</u>	<u>7.20</u>	<u>+/- 0.1 SU</u>	Yes No	
Mid-Day pH (10) check	<u>14.11</u>	<u>10</u>	<u>10.23</u>	<u>+/- 0.1 SU</u>	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Robert Mull	Date: 2/3/22	Time (Calibration): 0900	Time (Mid-day Check): 1255
AquaTroll SN: 789310	Turbidity Meter Type: Lo-Mottle 2020		SN: 2068-0320
Project: Plant Bowen Landfill	Weather Conditions: Rainy 51°F		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				99.85	
Specific Conductance (µS/cm)	21470032 04/23	11.78	4490	4124.8	
pH (4)	21470032 04/24	11.76	4	4.05	
pH (7)	21380102 04/23	11.74	7	7.05	
pH (10)	20080056 04/23	11.69	10	10.16	
ORP (mV)	21140143 04/23	11.69	228	221.5	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.02	+/- 0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.78	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	10.43	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	14.67	4	4.11	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	15.02	7	7.07	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	15.24	10	10.15	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician <i>Karin Stojanovic</i>	Date <i>2/4/22</i>	Time (Calibration) <i>1058</i>	Time (Mid-day Check) <i>1332</i>
AquaTroll SN <i>789317</i>	Turbidity Meter Type <i>LaMotte 2020</i>		SN
Project <i>RLF Sampling</i>	Weather Conditions <i>45°/27°, 50%</i>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<i>100.59</i>	
Specific Conductance (µS/cm)	<i>21470032 04/23</i>	<i>13.57</i>	<i>4490</i>	<i>4635.0</i>	
pH (4)	<i>21470032 04/24</i>	<i>13.39</i>	<i>4</i>	<i>4.02</i>	
pH (7)	<i>21380102 04/23</i>	<i>12.20</i>	<i>7</i>	<i>7.09</i>	
pH (10)	<i>20080056 04/23</i>	<i>11.96</i>	<i>10</i>	<i>10.09</i>	
ORP (mV)	<i>21140143 04/23</i>	<i>12.34</i>	<i>228</i>	<i>224.7</i>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	<i>0</i>	<i>-0.09</i>	<i>+/- 0.5 NTU</i>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 1 NTU	<i>1</i>	<i>0.91</i>	<i>+/- 0.5 NTU</i>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Turbidity 10 NTU	<i>10</i>	<i>9.52</i>	<i>+/- 0.5 NTU</i>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	<i>10.16</i>	<i>4</i>	<i>4.09</i>	<i>+/- 0.1 SU</i>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Mid-Day pH (7) check	<i>9.85</i>	<i>7</i>	<i>7.18</i>	<i>+/- 0.1 SU</i>	<input checked="" type="radio"/> Yes	<input type="radio"/> No	
Mid-Day pH (10) check	<i>9.26</i>	<i>10</i>	<i>10.33</i>	<i>+/- 0.1 SU</i>	<input type="radio"/> Yes	<input checked="" type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician Meredith Duncan	Date 2/4/22	Time (Calibration) 0844	Time (Mid-day Check) 1307
AquaTroll SN: 893479	Turbidity Meter Type: lanotte	SN: 7042-3818	
Project: Bowen LF	Weather Conditions: 41°F Cloudy / drizzle		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				107.17	
Specific Conductance (µS/cm)	21470032 04/23	11.52	4490	4,538.8	
pH (4)	21470032 04/24	11.49	4	3.97	
pH (7)	21380102 04/23	11.19	7	7.02	
pH (10)	20080056 04/23	11.03	10	9.90	
ORP (mV)	21140143 04/23	11.57	228	240.5	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU	0	0.05	+/-0.5 NTU	Yes No	
Turbidity 1 NTU	1	1.02	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU	10	9.95	+/- 0.5 NTU	Yes No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	9.98	4	4.19	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	9.91	7	7.27	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	9.48	10	10.35	+/- 0.1 SU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician	Robert Mull	Date	2/4/22	Time (Calibration)	0825	Time (Mid-day Check)	1200
AquaTroll SN	789310	Turbidity Meter Type	LaMotte 2000t		SN	2068-0320	
Project	Plant Bowen Landfill		Weather Conditions				

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt. 100% water saturated air cal)				96.65	
Specific Conductance (µS/cm)	21470032 04/23	12.84	4490	4655.2	
pH (4)	21470032 04/24	12.73	4	4.01	
pH (7)	21380102 04/23	12.01	7	7.06	
pH (10)	20080056 0423	11.37	10	10.07	
ORP (mV)	21140143 04/23	11.48	228	229.3	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.01	+/- 0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.84	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.88	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	11.20	4	4.08	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	11.27	7	7.27	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	11.55	10	10.29	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: William Laaker	Date: 2/4/22	Time (Calibration): 8:54	Time (Mid-day Check): 12:50
AquaTroll SN: 789301	Turbidity Meter Type: LaMotte 2020	SN: 9429-4417	
Project: Jan 2022 LF Semi	Weather Conditions: 63°/27° cloudy 60% rain		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				97.57	
Specific Conductance (µS/cm)	21470032 04/23	12.88	4490	4690.0	
pH (4)	21470032 04/24	13.36	4	3.93	
pH (7)	21380102 04/23	13.26	7	7.05	
pH (10)	20080056 04/23	13.36	10	10.13	
ORP (mV)	21140143 04/23	13.20	228	242.5	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.01	+/- 0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.01	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.53	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	10.48	4	3.93	4.00 +/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	11.01	7	7.01	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	11.59	10	9.91	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: <i>Meredith Duncan</i>	Date: <i>2/7/22</i>	Time (Calibration): <i>0810</i>	Time (Mid-day Check): <i>1451</i>
AquaTroll SN: <i>893479</i>	Turbidity Meter Type: <i>la Motte</i>	SN: <i>7042-3818</i>	
Project: <i>Bowen LF</i>	Weather Conditions: <i>40°F Cloudy</i>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt. 100% water saturated air cal)				<i>108.04</i>	
Specific Conductance (µS/cm)	<i>21470032 04/23</i>	<i>7.92</i>	<i>4490</i>	<i>4584</i>	
pH (4)	<i>21470032 04/24</i>	<i>7.91</i>	<i>4</i>	<i>4.05</i>	
pH (7)	<i>21380102 04/23</i>	<i>7.92</i>	<i>7</i>	<i>7.10</i>	
pH (10)	<i>20080056 04/23</i>	<i>7.95</i>	<i>10</i>	<i>10.19</i>	
ORP (mV)	<i>21140143 04/23</i>	<i>7.96</i>	<i>228</i>	<i>252.9</i>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	<i>0</i>	<i>0.01</i>	<i>+/-0.5 NTU</i>	Yes	No	
Turbidity 1 NTU	<i>1</i>	<i>1.11</i>	<i>+/- 0.5 NTU</i>	Yes	No	
Turbidity 10 NTU	<i>10</i>	<i>10.07</i>	<i>+/- 0.5 NTU</i>	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	<i>11.50</i>	<i>4</i>	<i>4.12</i>	<i>+/- 0.1 SU</i>	Yes	No	
Mid-Day pH (7) check	<i>11.23</i>	<i>7</i>	<i>7.23</i>	<i>+/- 0.1 SU</i>	Yes	No	
Mid-Day pH (10) check	<i>11.65</i>	<i>10</i>	<i>10.34</i>	<i>+/- 0.1 SU</i>	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>William Locker</u>	Date: <u>2/7/22</u>	Time (Calibration): <u>8:23</u>	Time (Mid-day Check): <u>11:37</u>
AquaTroll SN: <u>789301</u>	Turbidity Meter Type: <u>LaMotte 2020</u>	SN: <u>9429-4417</u>	
Project: <u>Jan 2022 LF Semi</u>	Weather Conditions: <u>51°/29° partly cloudy</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				102.42	
Specific Conductance (µS/cm)	21470032 04/23	8.76	4490	4485.6	
pH (4)	21470032 04/24	8.33	4	4.04	
pH (7)	21380102 04/23	8.18	7	7.11	
pH (10)	20080056 04/23	8.18	10	10.10	
ORP (mV)	21140143 04/23	8.18	228	237.1	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	+/- 0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.02	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	10.28	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	8.11	4	4.27	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	10.12	7	6.83	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	10.59	10	9.32	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Robert M-11 Date: 8/12/22 Time (Calibration): 0800 Time (Mid-day Check): 1020
 Aqua Troll SN: 789310 Turbidity Meter Type: LaMotte 7020t SN: 2068-0320
 Project: Bower - Cells 9810 Weather Conditions: Cloudy, 70°F

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt. 100% water saturated air cal)				94.40	
Specific Conductance (µS/cm)	21470032 04/23	24.60	4490	4430.8	
pH (4)	21470032 04/23	24.55	4	4.07	
pH (7)	21380102 04/23	24.62	7	7.02	
pH (10)	20080056 04/23	24.70	10	10.01	
ORP (mV)	21140143 04/23	25.21	228	226.1	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU	0	0.03	±0.5 NTU	Yes No	
Turbidity 1 NTU	1	0.80	±0.5 NTU	Yes No	
Turbidity 10 NTU	10	10.15	±0.5 NTU	Yes No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	23.95	4	4.14	±0.1 SU	Yes No	
Mid-Day pH (7) check	23.80	7	7.28	±0.1 SU	Yes No	
Mid-Day pH (10) check	23.78	10	10.16	±0.1 SU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 8/15/22	Time (Calibration): 0825	Time (Mid-day Check): 1615
AquaTroll SN: 893479	Turbidity Meter Type: La Motte	SN: 2068 -0320	
Project: Bowen LF	Weather Conditions: 77°		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				100.82	
Specific Conductance (µS/cm)	21470032 04/23	24.98	4490	4534.7	
pH (4)	21470032 04/23	25.34	4	3.86	
pH (7)	21380102 04/23	25.61	7	6.84	
pH (10)	20080056 04/23	25.66	10	9.82	
ORP (mV)	21140143 04/23	25.70	228	226.5	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.01	+/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.87	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.93	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	21.97	4	4.16	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	31.49	7	7.12	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	30.89	10	10.14	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 8/16/22	0811 Time (Calibration):	1517 Time (Mid-day Check):
AquaTroll SN: 893479	Turbidity Meter Type: La Motte		SN: 2068-0320
Project: Bowen LF	Weather Conditions: 75° Cloudy		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				99.41	
Specific Conductance (µS/cm)	21470032 04/23	21.81	4490	4450.9	
pH (4)	21470032 04/23	21.77	4	4.01	
pH (7)	21380102 04/23	22.10	7	7.01	
pH (10)	20080056 04/23	21.90	10	10.05	
ORP (mV)	21140143 04/23	22.12	228	233.0	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	+/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.07	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.87	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	26.7	4	4.15	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	26.91	7	7.21	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	26.92	10	10.17	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 8/17/22	Time (Calibration): 0815	Time (Mid-day Check): 1523
AquaTroll SN: 893479	Turbidity Meter Type: La Motte		SN: 2068-0320
Project: Bowen LF	Weather Conditions: 71° Cloudy		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				101.16	
Specific Conductance (µS/cm)	21470032 04/23	24.20	4490	4524.9	
pH (4)	21470032 04/23	24.38	4	3.85	
pH (7)	21380102 04/23	24.55	7	6.81	
pH (10)	20080056 04/23	24.62	10	9.83	
ORP (mV)	21140143 04/23	24.57	228	240.9	

		Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU		0	0.03	+/-0.5 NTU	Yes No	
Turbidity 1 NTU		1	1.01	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU		10	9.96	+/- 0.5 NTU	Yes No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	26.47	4	4.15	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	25.8	7	7.19	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	24.81	10	10.18	+/- 0.1 SU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 8/18/22	Time (Calibration): 0815	Time (Mid-day Check): 1537
AquaTroll SN: 893479	Turbidity Meter Type: La Motte		SN: 2068 - 0320
Project: Bowen LF	Weather Conditions: 73° Cloudy		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				98.54	
Specific Conductance (µS/cm)	21470032 04/23	23.53	4490	4519.1	
pH (4)	21470032 04/23	23.7	4	3.84	
pH (7)	21380102 04/23	23.48	7	6.81	
pH (10)	20080056 04/23	23.41	10	9.84	
ORP (mV)	21140143 04/23	23.37	228	219.5	

		Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU		0	0.02	+/-0.5 NTU	Yes No	
Turbidity 1 NTU		1	0.93	+/- 0.5 NTU	Yes No	
Turbidity 10 NTU		10	9.88	+/- 0.5 NTU	Yes No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	27.95	4	4.20	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	28.32	7	7.20	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	29.46	10	10.15	+/- 0.1 SU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 8/19/22	Time (Calibration): 0810	Time (Mid-day Check): 1125
AquaTroll SN: 893479	Turbidity Meter Type: La Motte		SN: 2068-6320
Project: Bowen LF	Weather Conditions: 75° Cloudy		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt. 100% water saturated air cal)				101.21	
Specific Conductance (µS/cm)	21470032 04/23	23.64	4490	4509.5	
pH (4)	21470032 04/23	23.80	4	3.83	
pH (7)	21380102 04/23	24.18	7	6.78	
pH (10)	20080056 04/23	24.34	10	9.79	
ORP (mV)	21140143 04/23	24.38	228	229.3	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	-/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.00	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.84	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	25.83	4	4.13	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	25.82	7	7.18	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	26.11	10	10.15	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 10/11/22	845 Time (Calibration)	1053 Time (Mid-day check)
AquaTroll SN: 893479	Turbidity Meter Type: La Motte	SN: 7642-3818	
Project: Bowen LF	Weather Conditions: 50°		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt. 100% water saturated air cal)				100.52	
Specific Conductance (µS/cm)	21470032 04/23	15.40	4490	4023.5	
pH (4)	21470032 04/23	16.03	4	4.88	
pH (7)	21380102 04/23	16.54	7	6.87	
pH (10)	20080056 04/23	16.8	10	9.84	
ORP (mV)	21140143 04/23	16.75	228	240.2	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	-/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.86	-/-0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.74	-/-0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	20.09	4	4.10	-/-0.1 SU	Yes	No	
Mid-Day pH (7) check	19.8	7	7.16	-/-0.1 SU	Yes	No	
Mid-Day pH (10) check	19.62	10	10.16	-/-0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 10/21/22	Time (Calibration): 0918	Time (Mid-day Check): 1127
AquaTroll SN: 893479	Turbidity Meter Type: La Motte	SN: 2068 - 0320	
Project: Bowen LF	Weather Conditions: 35°		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				90.74	
Specific Conductance (µS/cm)	21470032 04/23	9.27	4490	4500	
pH (4)	21470032 04/23	9.34	4	4.09	
pH (7)	21380102 04/23	9.81	7	7.10	
pH (10)	20080056 04/23	10.12	10	10.19	
ORP (mV)	21140143 04/23	10.32	228	247.3	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.03	+/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.87	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.74	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	12.15	4	4.16	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	12.36	7	7.25	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	13.23	10	10.22	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: William Laaker	Date: 8/5/22	Time (Calibration): 8:15	Time (Mid-day Check): 12:45
AquaTroll SN: 789301	Turbidity Meter Type: LaMotte 2020	SN: 7042-3818	
Project: August 2022 LF Semi	Weather Conditions: 88°/72° sunny		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				99.53	
Specific Conductance (µS/cm)	21470032 04/23	25.18	4490	4516.6	
pH (4)	21470032 04/23	25.28	4	3.99	
pH (7)	21380102 04/23	25.51	7	7.04	
pH (10)	20080056 04/23	25.55	10	10.03	
ORP (mV)	21140143 04/23	25.37	228	227.0	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.04	-/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.83	-/-0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.73	-/-0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	32.33	4	4.03	-/-0.1 SU	Yes	No	
Mid-Day pH (7) check	32.40	7	7.02	-/-0.1 SU	Yes	No	
Mid-Day pH (10) check	32.65	10	9.98	-/-0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: William Laaker	Date: 8/8/22	Time (Calibration): 8:33	Time (Mid-day Check): 15:30
AquaTroll SN: 789301	Turbidity Meter Type: LaMotte 2020	SN: 2068-0320	
Project: August 2022 LF Semi	Weather Conditions: 88°/72° sunny		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				96.93	
Specific Conductance (µS/cm)	21470032 04/23	24.39	4490	44079	
pH (4)	21470032 04/23	24.49	4	4.06	
pH (7)	21380102 04/23	24.16	7	7.04	
pH (10)	20080056 04/23	25.37	10	10.08	
ORP (mV)	21140143 04/23	24.76	228	221.6	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.01	-/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.98	-/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.74	-/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	32.65	4	4.02	-/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	32.64	7	7.06	-/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	32.88	10	9.98	-/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: William Laaker	Date: 8/10/22	Time (Calibration): 8:20	Time (Mid-day Check): 15:50
AquaTroll SN: 789301	Turbidity Meter Type: LaMotte 2020	SN: 2068-0320	
Project: August 2022 LF Semi	Weather Conditions: 81°/70° overcast 70 l. rain		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				98.37	
Specific Conductance (µS/cm)	21470032 04/23	23.56	4490	4423.4	
pH (4)	21470032 04/23	23.62	4	4.07	
pH (7)	21380102 04/23	23.65	7	7.08	
pH (10)	20080056 04/23	23.66	10	10.14	
ORP (mV)	21140143 04/23	23.48	228	225.7	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.04	-/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.96	-/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.92	-/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	28.71	4	4.05	-/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	28.54	7	7.08	-/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	28.23	10	10.01	-/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Kevin Stephenson</u>	Date: <u>8/15/22</u>	Time (Calibration): <u>09:10</u>	Time (Mid-day Check):
AquaTroll SN: <u>789317</u>	Turbidity Meter Type: <u>Lanette 2021</u>		S/N: <u>7042-3818</u>
Project: <u>Plant Basin</u>	Weather Conditions: <u>90°/66° 30% 10</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<u>97.29</u>	
Specific Conductance (µS/cm)	<u>21470032 04/23</u>	<u>24.09</u>	<u>4490</u>	<u>4333.4</u>	
pH (4)	<u>21470032 04/23</u>	<u>24.47</u>	<u>4</u>	<u>4.02</u>	
pH (7)	<u>21380102 04/23</u>	<u>24.50</u>	<u>7</u>	<u>7.03</u>	
pH (10)	<u>20080056 04/23</u>	<u>24.82</u>	<u>10</u>	<u>9.97</u>	
ORP (mV)	<u>21140143 04/23</u>	<u>24.91</u>	<u>228</u>	<u>224.6</u>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU	<u>0</u>	<u>0.02</u>	<u>±0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU	<u>1</u>	<u>1.15</u>	<u>±0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU	<u>10</u>	<u>10.46</u>	<u>±0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	<u>27.05</u>	<u>4</u>	<u>4.11</u>	<u>±0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (7) check	<u>27.83</u>	<u>7</u>	<u>7.09</u>	<u>±0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	<u>26.92</u>	<u>10</u>	<u>10.08</u>	<u>±0.1 SU</u>	<input type="radio"/> Yes <input checked="" type="radio"/> No	

Field Technician: <u>William Lauker</u>	Date: <u>8/15/22</u>	Time (Calibration): <u>8:55</u>	Time (Mid-day Check): <u>16:00</u>
Aquaflo ID #: <u>184301</u>	Turbidity Meter Type: <u>LaMotte 2020</u>	SN: <u>9424-4417</u>	
Project: <u>August 2022 LF 5em</u>	Weather Conditions: <u>81°/66° partly cloudy</u>		

Calibration Log

	Standard Lot #	Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DH (%) (ppt, 100% water saturated at call)					99.88	
Specific Conductance (µS/cm)	21470032	04/23	24.64	4490	4364.5	
pH (4)	21470032	04/23	24.78	4	3.99	
pH (7)	21380102	04/23	24.88	7	6.97	
pH (10)	20080056	04/23	24.86	10	9.92	
ORP (mV)	21140143	04/23	24.75	228	224.5	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	0-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.20	0-0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.70	0-0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	34.44	4	4.02	0-0.5 NTU	Yes	No	
Mid-Day pH (7) check	34.79	7	7.03	0-0.5 NTU	Yes	No	
Mid-Day pH (10) check	35.15	10	9.96	0-0.5 NTU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Kelvin Stephenson</u>	Date: <u>8/16/22</u>	Time (Calibration): <u>0900</u>	Time (Mid-day Check):
AquaTroll SN: <u>789317</u>	Turbidity Meter Type: <u>LaMotte 2020</u>	SN: <u>7042-3818</u>	
Project: <u>Basin LF Sampling</u>	Weather Conditions: <u>88/66° 10% 10/10</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air sat)				<u>101.42</u>	
Specific Conductance (µS/cm)	<u>21470032 04/23</u>	<u>23.92</u>	<u>4490</u>	<u>4524.2</u>	
pH (4)	<u>21470032 04/23</u>	<u>24.23</u>	<u>4</u>	<u>4.01</u>	
pH (7)	<u>21380102 04/23</u>	<u>24.45</u>	<u>7</u>	<u>7.04</u>	
pH (10)	<u>20080056 04/23</u>	<u>24.68</u>	<u>10</u>	<u>10.12</u>	
ORP (mV)	<u>21140143 04/23</u>	<u>24.62</u>	<u>228</u>	<u>226.9</u>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU	<u>0</u>	<u>0.00</u>	<u>-/+ 0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 1 NTU	<u>1</u>	<u>1.14</u>	<u>-/+ 0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Turbidity 10 NTU	<u>10</u>	<u>10.15</u>	<u>-/+ 0.5 NTU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	<u>26.68</u>	<u>4</u>	<u>4.13</u>	<u>-/+ 0.1 SU</u>	<input checked="" type="radio"/> Yes <input checked="" type="radio"/> No	
Mid-Day pH (7) check	<u>26.64</u>	<u>7</u>	<u>7.15</u>	<u>-/+ 0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	
Mid-Day pH (10) check	<u>26.60</u>	<u>10</u>	<u>10.10</u>	<u>-/+ 0.1 SU</u>	<input checked="" type="radio"/> Yes <input type="radio"/> No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>William Laaker</u>	Date: <u>8/16/22</u>	Time (Calibration): <u>8:22</u>	Time (Mid-day Check): <u>16:25</u>
AquaTroll SN: <u>789301</u>	Turbidity Meter Type: <u>LaMotte 2020</u>	SN: <u>9429-4417</u>	
Project: <u>August 2022 LF Semi</u>	Weather Conditions: <u>86°/68° sunny</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				102.26	
Specific Conductance (µS/cm)	21470032 04/23	21.75	4490	4502.6	
pH (4)	21470032 04/23	21.84	4	4.03	
pH (7)	21380102 04/23	22.13	7	7.03	
pH (10)	20080056 04/23	21.96	10	10.07	
ORP (mV)	21140143 04/23	21.91	228	231.7	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU	0	0.00	-/+0.5 NTU	Yes No	
Turbidity 1 NTU	1	0.99	-/+ 0.5 NTU	Yes No	
Turbidity 10 NTU	10	10.15	-/+ 0.5 NTU	Yes No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	27.67	4	4.06	+/- 0.1 SU	Yes No	
Mid-Day pH (7) check	27.23	7	7.10	+/- 0.1 SU	Yes No	
Mid-Day pH (10) check	26.40	10	10.09	+/- 0.1 SU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Kevin Stephenson</u>	Date: <u>8/17/2</u>	Time (Calibration): <u>0841</u>	Time (Mid-day Check):
AquaTroll SN: <u>789817</u>	Turbidity Meter Type: <u>LaMotte 2020</u>	SN: <u>7042-3818</u>	
Project: <u>Beaver LF</u>	Weather Conditions: <u>84°/66° 2090</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<u>101.38</u>	
Specific Conductance (µS/cm)	21470032 04/23	<u>23.85</u>	4490	<u>4470.0</u>	
pH (4)	21470032 04/23	<u>24.19</u>	4	<u>4.00</u>	
pH (7)	21380102 04/23	<u>24.60</u>	7	<u>7.00</u>	
pH (10)	20080056 04/23	<u>23.96</u>	10	<u>9.95</u>	
ORP (mV)	21140143 04/23	<u>24.32</u>	228	<u>229.2</u>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU	0	<u>-0.01</u>	± 0.5 NTU	Yes No	
Turbidity 1 NTU	1	<u>1.18</u>	± 0.3 NTU	Yes No	
Turbidity 10 NTU	10	<u>10.33</u>	± 0.5 NTU	Yes No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	<u>27.27</u>	4	<u>4.10</u>	± 0.1 SU	Yes No	
Mid-Day pH (7) check	<u>27.54</u>	7	<u>7.14</u>	± 0.1 SU	Yes No	
Mid-Day pH (10) check	<u>27.69</u>	10	<u>10.11</u>	± 0.1 SU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>William Laaker</u>	Date: <u>8/17/22</u>	Time (Calibration): <u>8:27</u>	Time (Mid-day Check): <u>15:50</u>
Aqua Troll SN: <u>789301</u>	Turbidity Meter Type: <u>LaMotte 2020</u>	SN: <u>9429-4417</u>	
Project: <u>August 2022 LF Semi</u>	Weather Conditions: <u>82°/68° partly cloudy</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air sat)				<u>99.44</u>	
Specific Conductance (µS/cm)	<u>21470032 04/23</u>	<u>23.21</u>	<u>4490</u>	<u>4524.9</u>	
pH (4)	<u>21470032 04/23</u>	<u>23.34</u>	<u>4</u>	<u>3.96</u>	
pH (7)	<u>21380102 04/23</u>	<u>23.91</u>	<u>7</u>	<u>6.98</u>	
pH (10)	<u>20080056 04/23</u>	<u>24.38</u>	<u>10</u>	<u>9.96</u>	
ORP (mV)	<u>21140143 04/23</u>	<u>24.46</u>	<u>228</u>	<u>225.7</u>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	<u>0</u>	<u>0.00</u>	<u>±0.5 NTU</u>	Yes	No	
Turbidity 1 NTU	<u>1</u>	<u>0.85</u>	<u>±0.5 NTU</u>	Yes	No	
Turbidity 10 NTU	<u>10</u>	<u>10.35</u>	<u>±0.5 NTU</u>	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	<u>31.19</u>	<u>4</u>	<u>4.10</u>	<u>±0.1 SU</u>	Yes	No	
Mid-Day pH (7) check	<u>31.51</u>	<u>7</u>	<u>7.10</u>	<u>±0.1 SU</u>	Yes	No	
Mid-Day pH (10) check	<u>32.16</u>	<u>10</u>	<u>10.07</u>	<u>±0.1 SU</u>	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: William Laaker	Date: 8/18/22	Time (Calibration): 8:35	Time (Mid-day Check): 15:05
AquaTroll SN: 789301	Turbidity Meter Type: LaMotte 2020	SN: 9429-4417	
Project: August 2022 LF Semi	Weather Conditions: 84°/68° partly cloudy		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				99.35	
Specific Conductance (µS/cm)	21470032 04/23	23.41	4490	4458.9	
pH (4)	21470032 04/23	23.49	4	4.03	
pH (7)	21380102 04/23	23.66	7	7.07	
pH (10)	20080056 04/23	23.81	10	10.07	
ORP (mV)	21140143 04/23	23.88	228	225.2	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.01	-/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.93	-/-0.5 NTU	Yes	No	
Turbidity 10 NTU	10	10.08	-/-0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	32.40	4	4.02	-/-0.1 SU	Yes	No	
Mid-Day pH (7) check	32.07	7	7.05	-/-0.1 SU	Yes	No	
Mid-Day pH (10) check	32.05	10	9.99	-/-0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Will Laaker</u>	Date: <u>8/19/22</u>	Time (Calibration): <u>8:33</u>	Time (Mid-day Check): <u>11:15</u>
AquaTroll SN: <u>789301</u>	Turbidity Meter Type: <u>LaMotte 2020</u>	SN: <u>9429-4417</u>	
Project: <u>August 2022 LF Semi</u>	Weather Conditions: <u>84°/68° cloudy 70% rain</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				97.81	
Specific Conductance (µS/cm)	21470032 04/23	22.26	4490	4530.5	
pH (4)	21470032 04/23	22.71	4	4.00	
pH (7)	21380102 04/23	23.21	7	6.99	
pH (10)	20080056 04/23	23.50	10	10.00	
ORP (mV)	21140143 04/23	23.54	228	227.5	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	-/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.90	-/-0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.78	-/-0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	27.03	4	4.06	-/-0.1 SU	Yes	No	
Mid-Day pH (7) check	27.17	7	7.09	-/-0.1 SU	Yes	No	
Mid-Day pH (10) check	27.44	10	10.02	-/-0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: William Laaker	Date: 11/2/22	Time (Calibration): 9:35	Time (Mid-day Check): 10:50
AquaTroll SN: 789301	Turbidity Meter Type: LaMotte 2020	SN: 2068-0320	
Project: Nov 2022 LF Re-Sample	Weather Conditions: 73°/52° partly cloudy		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air sat)				99.31	
Specific Conductance (µS/cm)	21470032 04/23	15.21	4490	4550.5	
pH (4)	21470032 04/24	15.39	4	4.07	
pH (7)	21380102 04/23	16.02	7	7.07	
pH (10)	20080056 04/23	16.29	10	10.20	
ORP (mV)	21140143 04/23	16.41	228	227.5	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.01	-/+ 0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.98	-/+ 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.74	-/+ 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	17.14	4	4.03	-/+ 0.1 SU	Yes	No	
Mid-Day pH (7) check	17.03	7	7.09	-/+ 0.1 SU	Yes	No	
Mid-Day pH (10) check	16.36	10	10.16	-/+ 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>William Laaker</u>	Date: <u>11/3/22</u>	Time (Calibration): <u>9:14</u>	Time (Mid-day Check): <u>10:10</u>
AquaTroll SN: <u>789301</u>	Turbidity Meter Type: <u>LaMotte 2020</u>	SN: <u>2068-0320</u>	
Project: <u>Nov 2022 LF Re-Sample</u>	Weather Conditions: <u>74°/52° sunny</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				105.13	
Specific Conductance (µS/cm)	21470032 04/23	11.81	4490	4443.2	
pH (4)	21470032 04/24	11.94	4	4.03	
pH (7)	21380102 04/23	12.49	7	7.09	
pH (10)	20080056 04/23	12.81	10	10.15	
ORP (mV)	21140143 04/23	12.94	228	233.9	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.03	-/+ 0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.16	-/+ 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	10.30	-/+ 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	14.95	4	4.02	-/+ 0.1 SU	Yes	No	
Mid-Day pH (7) check	15.16	7	7.10	-/+ 0.1 SU	Yes	No	
Mid-Day pH (10) check	15.44	10	10.05	-/+ 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 8/5/22	Time (Calibration): 0810	Time (Mid-day Check): 1129
Aqua Troll SN: 893479	Turbidity Meter Type: La Motte	SN: 5990-3915	
Project: Bowen LF	Weather Conditions: 77° Sunny		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				102.35	
Specific Conductance (µS/cm)	21470032 04/23	25.34	4490	4483.3	
pH (4)	21470032 04/23	25.17	4	3.83	
pH (7)	21380102 04/23	24.84	7	6.80	
pH (10)	20080056 04/23	24.75	10	9.77	
ORP (mV)	21140143 04/23	25.01	228	225.0	

		Value of Standard	Instrument Reading	Acceptable Range	Pass?	Comments
Turbidity 0 NTU		0	0.01	±0.5 NTU	Yes No	
Turbidity 1 NTU		1	0.87	±0.5 NTU	Yes No	
Turbidity 10 NTU		10	9.87	±0.5 NTU	Yes No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?	Comments
Mid-Day pH (4) check	27.49	4	4.15	±0.1 SU	Yes No	
Mid-Day pH (7) check	27.67	7	7.18	±0.1 SU	Yes No	
Mid-Day pH (10) check	28.42	10	10.12	±0.1 SU	Yes No	

EQUIPMENT CALIBRATION LOG

Field Technician: Robert Mull	Date: 8/5/22	Time (Calibration): 0810	Time (Mid-day Check): 1030
AquaTroll SN: 789310	Turbidity Meter Type: Lamotte 2020E		SN: 7269-0320
Project: Bowen Cilia 384	Weather Conditions: Partly Cloudy, 75°F		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				85.01%	
Specific Conductance (µS/cm)	21470032 04/23	26.41	4490	4511.5	
pH (4)	21470032 04/23	26.55	4	4.08	
pH (7)	21380102 04/23	27.28	7	7.04	
pH (10)	20080056 04/23	27.74	10	10.00	
ORP (mV)	21140143 04/23	27.85	228	223.2	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.02	-/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.82	-/-0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.98	-/-0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	26.68	4	4.17	-/-0.1 SU	Yes	No	
Mid-Day pH (7) check	26.18	7	7.14	-/-0.1 SU	Yes	No	
Mid-Day pH (10) check	24.91	10	10.08	-/-0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 8/8/22	08/5 Time (Calibration):	1637 Time (Mid-day Check):
AquaTroll SN: 893479	Turbidity Meter Type: La Motte	SN: 7042 - 3818	
Project: Bowen LF	Weather Conditions: 74°		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading as Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				97.92	
Specific Conductance (µS/cm)	21470032 04/23	24.58	4490	4488	
pH (4)	21470032 04/23	24.75	4	3.86	
pH (7)	21380102 04/23	24.97	7	6.81	
pH (10)	20080056 04/23	25.2	10	9.83	
ORP (mV)	21140143 04/23	25.11	228	229.3	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.02	-/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.89	-/-0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.82	-/-0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	32.02	4	4.16	-/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	32.17	7	7.17	-/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	31.43	10	10.17	-/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Robert Mull</u>	Date: <u>8/8/22</u>	Time (Calibration): <u>1252</u>	Time (Mid-day Check): <u>1350</u>
AquaTroll SN: <u>789310</u>	Turbidity Meter Type: <u>L₂ 1170 Hc</u>	SN: <u>6990-3915</u>	
Project: <u>Bowers - Calls 324</u>	Weather Conditions: <u>Partly Cloudy, 85°F</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air sat)				9.02	inadequate calibration over 113.63%
Specific Conductance (µS/cm)	21470032 04/23	29.00	4490	4650.7	
pH (4)	21470032 04/23	28.81	4	4.93	
pH (7)	21380102 04/23	28.84	7	6.97	
pH (10)	20080056 04/23	28.13	10	9.97	
ORP (mV)	21140143 04/23	29.00	228	230.2	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	±0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.98	±0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.90	±0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	29.24	4	4.10	±0.1 SU	Yes	No	
Mid-Day pH (7) check	28.25	7	7.36	±0.1 SU	Yes	No	
Mid-Day pH (10) check	26.84	10	10.25	±0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 8/9/22	Time (Calibration): 0815	Time (Multi-day Check): 1456
AquaTroll SN: 893479	Turbidity Meter Type: La Motte	SN: 7042-3818	
Project: Bowen LF	Weather Conditions: Cloudy + Rain 72°		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				100.06	
Specific Conductance (µS/cm)	21470032 04/23	24.47	4490	4521.1	
pH (4)	21470032 04/23	24.79	4	3.88	
pH (7)	21380102 04/23	25.24	7	6.84	
pH (10)	20080056 04/23	25.36	10	9.66	
ORP (mV)	21140143 04/23	25.38	228	224.8	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	-/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.88	-/-0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.75	-/-0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	26.54	4	4.13	-/-0.1 SU	Yes	No	
Mid-Day pH (7) check	25.99	7	7.21	-/-0.1 SU	Yes	No	
Mid-Day pH (10) check	25.15	10	10.21	-/-0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Robert Mull	Date: 8/19/22	Time (Calibration): 0821	Time (Mid-day Check): 1515
AquaTroll SN: 78930	Turbidity Meter Type: LaMotte 7020we		SN: 5990-3915
Project: Plant Bowen - Cells 3&4	Weather Conditions: Partly Cloudy, 75°F		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				99.34	
Specific Conductance (µS/cm)	21470032 04/23	26.07	4490	45657	
pH (4)	21470032 04/23	26.08	4	3.97	
pH (7)	21380102 04/23	25.76	7	7.01	
pH (10)	20080056 04/23	25.86	10	10.02	
ORP (mV)	21140143 04/23	25.76	228	225.3	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.01	±0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.02	±0.5 NTU	Yes	No	
Turbidity 10 NTU	10	10.13	±0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	25.74	4	4.21	±0.1 SU	Yes	No	
Mid-Day pH (7) check	25.86	7	7.32	±0.1 SU	Yes	No	
Mid-Day pH (10) check	25.77	10	10.26	±0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 8/10/22	Time (Calibration): 0820	Time (Mid-day Check): 1541
AquaTroll SN: 893479	Turbidity Meter Type: La Motte		SN: 7042-3818
Project: Bowen LF	Weather Conditions: Cloudy 73°		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				98.90	
Specific Conductance (µS/cm)	21470032 04/23	23.96	4490	4487.3	
pH (4)	21470032 04/23	23.99	4	4.03	
pH (7)	21380102 04/23	23.93	7	7.03	
pH (10)	20080056 04/23	24.06	10	10.03	
ORP (mV)	21140143 04/23	24.25	228	229.6	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	+/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.91	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.73	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	26.36	4	4.12	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	26.38	7	7.18	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	26.52	10	10.14	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: <u>Robert Mull</u>	Date: <u>8/10/22</u>	Time (Calibration): <u>0820</u>	Time (Mid-day Check): <u>1540</u>
AquaTroll SN: <u>789 310</u>	Turbidity Meter Type: <u>La Motte 2020we</u>		SN: <u>5990-3915</u>
Project: <u>Bower - Cells 3&4/9&10</u>	Weather Conditions: <u>Cloudy / Rain, 73°F</u>		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				<u>100.6%</u>	
Specific Conductance (µS/cm)	<u>21470032 04/23</u>	<u>73.77</u>	<u>4490</u>	<u>4562.3</u>	
pH (4)	<u>21470032 04/23</u>	<u>23.82</u>	<u>4</u>	<u>4.00</u>	
pH (7)	<u>21380102 04/23</u>	<u>24.21</u>	<u>7</u>	<u>6.99</u>	
pH (10)	<u>20080056 04/23</u>	<u>24.44</u>	<u>10</u>	<u>10.02</u>	
ORP (mV)	<u>21140143 04/23</u>	<u>24.88</u>	<u>228</u>	<u>230.1</u>	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	<u>0</u>	<u>0.00</u>	<u>-/-0.5 NTU</u>	Yes	No	
Turbidity 1 NTU	<u>1</u>	<u>0.94</u>	<u>-/-0.5 NTU</u>	Yes	No	
Turbidity 10 NTU	<u>10</u>	<u>10.17</u>	<u>-/-0.5 NTU</u>	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	<u>24.61</u>	<u>4</u>	<u>4.17</u>	<u>-/-0.1 SU</u>	Yes	No	
Mid-Day pH (7) check	<u>24.50</u>	<u>7</u>	<u>7.25</u>	<u>-/-0.1 SU</u>	Yes	No	
Mid-Day pH (10) check	<u>23.99</u>	<u>10</u>	<u>10.08</u>	<u>-/-0.1 SU</u>	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 8/11/22	Time (Calibration): 1325	Time (Mid-day Check): 1611
AquaTroll SN: 893479	Turbidity Meter Type: La Motte	SN: 7042-3818	
Project: Bowen LF	Weather Conditions: Foggy + Cloudy 73°		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				98.75	
Specific Conductance (µS/cm)	21470032 04/23	34.2	4490	4565.2	
pH (4)	21470032 04/23	34.16	4	4.04	
pH (7)	21380102 04/23	31.49	7	6.98	
pH (10)	20080056 04/23	30.16	10	9.95	
ORP (mV)	21140143 04/23	29.9	228	219.0	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.00	+/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	0.86	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	10.04	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	29.12	4	4.02	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	27.86	7	7.01	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	25.99	10	10.13	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Robert Mull	Date: 8/11/22	Time (Calibration): 0803	Time (Mid-day Check): 1030
AquaTroll SN: 789310	Turbidity Meter Type: LaMotte 2020 ver		SN: 5990-3215
Project: Bower Cells 3&4 / Cells 940	Weather Conditions: Cloudy, 72°F		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				99.85%	
Specific Conductance (µS/cm)	21470032 04/23	23.40	4490	4496.3	
pH (4)	21470032 04/23	23.50	4	4.01	
pH (7)	21380102 04/23	23.88	7	7.02	
pH (10)	20080056 04/23	24.22	10	10.04	
ORP (mV)	21140143 04/23	24.31	228	226.9	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.20	-/- 0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.05	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	10.20	-/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	25.98	4	4.11	-/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	25.58	7	7.08	-/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	25.89	10	9.96	+/- 0.1 SU	Yes	No	

EQUIPMENT CALIBRATION LOG

Field Technician: Meredith Duncan	Date: 8/12/22	Time (Calibration): 0810	Time (Mid-day Check): 1210
AquaTroll SN: 893479	Turbidity Meter Type: La Motte		SN: 7042-3818
Project: Bowen LF	Weather Conditions: Cloudy 74°		

Calibration Log

	Standard Lot # / Date of Expiration	Temp of Standard (°C)	Value of Standard	Instrument Reading at Calibration	Comments
DO (%) (1pt, 100% water saturated air cal)				100.75	
Specific Conductance (µS/cm)	21470032 04/23	23.94	4490	4393.5	
pH (4)	21470032 04/23	23.98	4	3.93	
pH (7)	21380102 04/23	24.41	7	7.01	
pH (10)	20080056 04/23	24.51	10	9.88	
ORP (mV)	21140143 04/23	24.25	228	234.8	

	Value of Standard	Instrument Reading	Acceptable Range	Pass?		Comments
Turbidity 0 NTU	0	0.01	+/-0.5 NTU	Yes	No	
Turbidity 1 NTU	1	1.03	+/- 0.5 NTU	Yes	No	
Turbidity 10 NTU	10	9.97	+/- 0.5 NTU	Yes	No	

	Temp of Standard (°C)	Value of Standard	Post Calibration Reading	Acceptable Range	Pass?		Comments
Mid-Day pH (4) check	26.75	4	4.16	+/- 0.1 SU	Yes	No	
Mid-Day pH (7) check	27.07	7	7.19	+/- 0.1 SU	Yes	No	
Mid-Day pH (10) check	27.81	10	10.15	+/- 0.1 SU	Yes	No	