

July 03, 2019

Joe Guarino
Town of Babylon
281 Phelps Lane
North Babylon, NY 11703

RE: Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

Dear Joe Guarino:

Enclosed are the analytical results for sample(s) received by the laboratory on June 10, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,



Jennifer Aracri
jennifer.aracri@pacelabs.com
(631)694-3040
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
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
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137
Minnesota Petrofund Certification #: 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 #: CL101
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

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747
New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435

Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7092927001	GM-26	EPA 6010C	JMW	8	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	KM1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
7092927002	GM-26I	EPA 6010C	JMW	8	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	KM1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
7092927003	GM-27	EPA 6010C	JMW	8	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	KM1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV

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SAMPLE ANALYTE COUNT

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7092927004	GM-27I	EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	8	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	KM1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
EPA 353.2	SDO	1	PACE-MV		
7092927005	GM-28	SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	8	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	KM1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		7092927006	GM-28I	SM22 5310B	KM1
EPA 6010C	JMW			8	PACE-MV
EPA 8270D by SIM	STB			2	PASI-M
EPA 180.1	KM1			1	PACE-MV
SM22 2320B	KM1			1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
7092927007	DUP	EPA 6010C	JMW	8	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	KM1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Method: EPA 6010C

Description: 6010 MET ICP

Client: Town of Babylon

Date: July 03, 2019

General Information:

7 samples were analyzed for EPA 6010C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 117458

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7092645001

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

- MS (Lab ID: 556156)
- Manganese

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Method: EPA 8270D by SIM

Description: 8270D MSSV 14 Dioxane By SIM

Client: Town of Babylon

Date: July 03, 2019

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

Laboratory Control Spike:

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

QC Batch: 613318

L2: Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

- LCS (Lab ID: 3314706)
 - 1,4-Dioxane (SIM)
- LCS (Lab ID: 3314707)
 - 1,4-Dioxane (SIM)

Matrix Spikes:

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

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Method: EPA 180.1

Description: 180.1 Turbidity

Client: Town of Babylon

Date: July 03, 2019

General Information:

7 samples were analyzed for EPA 180.1. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Method: SM22 2320B

Description: 2320B Alkalinity

Client: Town of Babylon

Date: July 03, 2019

General Information:

7 samples were analyzed for SM22 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

Method: SM22 2340C
Description: 2340C Hardness, Total
Client: Town of Babylon
Date: July 03, 2019

General Information:

7 samples were analyzed for SM22 2340C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

Method: SM22 2540C
Description: 2540C Total Dissolved Solids
Client: Town of Babylon
Date: July 03, 2019

General Information:

7 samples were analyzed for SM22 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 117745

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7092852006,7092927004

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

- MS (Lab ID: 557801)
- Total Dissolved Solids

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 118003

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

- DUP (Lab ID: 559705)
- Total Dissolved Solids

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

Method: EPA 410.4
Description: 410.4 COD
Client: Town of Babylon
Date: July 03, 2019

General Information:

7 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 117776

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

- DUP (Lab ID: 557835)
- Chemical Oxygen Demand

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Method: SM22 5210B

Description: 5210B BOD, 5 day

Client: Town of Babylon

Date: July 03, 2019

General Information:

7 samples were analyzed for SM22 5210B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with SM22 5210B with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Method: EPA 300.0

Description: 300.0 IC Anions 28 Days

Client: Town of Babylon

Date: July 03, 2019

General Information:

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

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 119193

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7092454017

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

- MS (Lab ID: 566431)
 - Bromide
 - Sulfate

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Method: EPA 351.2

Description: 351.2 Total Kjeldahl Nitrogen

Client: Town of Babylon

Date: July 03, 2019

General Information:

7 samples were analyzed for EPA 351.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 119029

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7093248002,7093311002

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

- MS (Lab ID: 565864)
- Nitrogen, Kjeldahl, Total

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Method: EPA 353.2

Description: 353.2 Nitrogen, NO2/NO3 unpres

Client: Town of Babylon

Date: July 03, 2019

General Information:

7 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 117112

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7092928001

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

- MS (Lab ID: 554677)
- Nitrate-Nitrite (as N)

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Method: EPA 353.2

Description: 353.2 Nitrogen, NO₂

Client: Town of Babylon

Date: July 03, 2019

General Information:

7 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 117107

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7092854001,7092926001

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

- MS (Lab ID: 554581)
- Nitrite as N

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

Method: SM22 4500 NH3 H
Description: 4500 Ammonia Water
Client: Town of Babylon
Date: July 03, 2019

General Information:

7 samples were analyzed for SM22 4500 NH3 H. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

QC Batch: 119106

- B: Analyte was detected in the associated method blank.
- BLANK for HBN 119106 [WETA/190 (Lab ID: 566010)
 - Nitrogen, Ammonia

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Method: SM22 5310B

Description: 5310B TOC as NPOC

Client: Town of Babylon

Date: July 03, 2019

General Information:

7 samples were analyzed for SM22 5310B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

Sample: GM-26	Lab ID: 7092927001	Collected: 06/10/19 09:32	Received: 06/10/19 15:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	06/12/19 12:00	06/21/19 15:21	7440-43-9	
Calcium	64600	ug/L	200	1	06/12/19 12:00	06/21/19 15:21	7440-70-2	
Iron	21300	ug/L	20.0	1	06/12/19 12:00	06/21/19 15:21	7439-89-6	
Lead	189	ug/L	5.0	1	06/12/19 12:00	06/21/19 15:21	7439-92-1	
Magnesium	6410	ug/L	200	1	06/12/19 12:00	06/21/19 15:21	7439-95-4	
Manganese	400	ug/L	10.0	1	06/12/19 12:00	06/21/19 15:21	7439-96-5	
Potassium	17500	ug/L	5000	1	06/12/19 12:00	06/21/19 15:21	7440-09-7	
Sodium	45200	ug/L	5000	1	06/12/19 12:00	06/21/19 15:21	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	<0.25	ug/L	0.25	1	06/17/19 12:55	06/21/19 14:47	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	48	%	30-125	1	06/17/19 12:55	06/21/19 14:47		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	19.0	NTU	5.0	5		06/11/19 15:40		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	112	mg/L	1.0	1		06/21/19 13:31		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	175	mg/L	5.0	1		06/19/19 16:41		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	426	mg/L	20.0	1		06/14/19 11:27		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	10.2	mg/L	10.0	1	06/14/19 09:46	06/14/19 12:12		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	1.0J	mg/L	2.0	1	06/11/19 15:00	06/16/19 09:53		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	0.58	mg/L	0.50	1		06/24/19 20:11	24959-67-9	
Chloride	79.8	mg/L	10.0	5		06/25/19 18:29	16887-00-6	
Sulfate	80.8	mg/L	25.0	5		06/25/19 18:29	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	<0.50	mg/L	0.50	1	06/24/19 06:09	06/24/19 12:37	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	6.0	mg/L	0.50	10		06/10/19 22:51	14797-55-8	
Nitrate-Nitrite (as N)	6.0	mg/L	0.50	10		06/10/19 22:51	7727-37-9	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Sample: GM-26		Lab ID: 7092927001		Collected: 06/10/19 09:32	Received: 06/10/19 15:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		06/10/19 21:08	14797-65-0	
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	0.084J	mg/L	0.10	1		06/24/19 13:30	7664-41-7	B
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	3.9J	mg/L	5.0	1		06/12/19 17:28	7440-44-0	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Sample: GM-261	Lab ID: 7092927002	Collected: 06/10/19 09:25	Received: 06/10/19 15:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	06/12/19 12:00	06/21/19 15:23	7440-43-9	
Calcium	40800	ug/L	200	1	06/12/19 12:00	06/21/19 15:23	7440-70-2	
Iron	7280	ug/L	20.0	1	06/12/19 12:00	06/21/19 15:23	7439-89-6	
Lead	28.7	ug/L	5.0	1	06/12/19 12:00	06/21/19 15:23	7439-92-1	
Magnesium	3440	ug/L	200	1	06/12/19 12:00	06/21/19 15:23	7439-95-4	
Manganese	75.9	ug/L	10.0	1	06/12/19 12:00	06/21/19 15:23	7439-96-5	
Potassium	12600	ug/L	5000	1	06/12/19 12:00	06/21/19 15:23	7440-09-7	
Sodium	33000	ug/L	5000	1	06/12/19 12:00	06/21/19 15:23	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	<0.25	ug/L	0.25	1	06/17/19 12:55	06/21/19 14:27	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	47	%	30-125	1	06/17/19 12:55	06/21/19 14:27		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	10.2	NTU	5.0	5		06/11/19 15:41		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	52.5	mg/L	1.0	1		06/21/19 13:38		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	100	mg/L	5.0	1		06/19/19 16:42		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	340	mg/L	20.0	1		06/14/19 11:27		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	06/18/19 09:22	06/18/19 11:40		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	1.0J	mg/L	2.0	1	06/11/19 15:00	06/16/19 09:55		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	0.53	mg/L	0.50	1		06/24/19 20:28	24959-67-9	
Chloride	72.5	mg/L	10.0	5		06/25/19 18:46	16887-00-6	
Sulfate	59.3	mg/L	25.0	5		06/25/19 18:46	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	<0.50	mg/L	0.50	1	06/24/19 06:09	06/24/19 12:38	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	4.1	mg/L	0.50	10		06/10/19 22:55	14797-55-8	
Nitrate-Nitrite (as N)	4.1	mg/L	0.50	10		06/10/19 22:55	7727-37-9	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Sample: GM-26I		Lab ID: 7092927002		Collected: 06/10/19 09:25	Received: 06/10/19 15:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		06/10/19 21:10	14797-65-0	
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	0.066J	mg/L	0.10	1		06/24/19 13:31	7664-41-7	B
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	1.8	mg/L	1.0	1		06/12/19 17:43	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Project No.: 7092927

Sample: GM-27	Lab ID: 7092927003	Collected: 06/10/19 10:40	Received: 06/10/19 15:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	06/12/19 12:00	06/21/19 15:30	7440-43-9	
Calcium	55500	ug/L	200	1	06/12/19 12:00	06/21/19 15:30	7440-70-2	
Iron	3660	ug/L	20.0	1	06/12/19 12:00	06/21/19 15:30	7439-89-6	
Lead	13.8	ug/L	5.0	1	06/12/19 12:00	06/21/19 15:30	7439-92-1	
Magnesium	9180	ug/L	200	1	06/12/19 12:00	06/21/19 15:30	7439-95-4	
Manganese	153	ug/L	10.0	1	06/12/19 12:00	06/21/19 15:30	7439-96-5	
Potassium	43400	ug/L	5000	1	06/12/19 12:00	06/21/19 15:30	7440-09-7	
Sodium	200000	ug/L	5000	1	06/12/19 12:00	06/21/19 15:30	7440-23-5	
8270D MSSV 14 Dioxane By SIM Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.32	ug/L	0.25	1	06/17/19 12:55	06/21/19 15:06	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	44	%	30-125	1	06/17/19 12:55	06/21/19 15:06		
180.1 Turbidity Analytical Method: EPA 180.1								
Turbidity	6.5	NTU	5.0	5		06/11/19 15:41		
2320B Alkalinity Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	284	mg/L	1.0	1		06/21/19 13:52		
2340C Hardness, Total Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	180	mg/L	5.0	1		06/19/19 16:42		
2540C Total Dissolved Solids Analytical Method: SM22 2540C								
Total Dissolved Solids	874	mg/L	20.0	1		06/14/19 11:27		
410.4 COD Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	154	mg/L	10.0	1	06/18/19 09:22	06/18/19 11:40		
5210B BOD, 5 day Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	32.5	mg/L	10.0	5	06/11/19 15:00	06/16/19 09:57		
300.0 IC Anions 28 Days Analytical Method: EPA 300.0								
Bromide	2.4	mg/L	0.50	1		06/24/19 20:44	24959-67-9	
Chloride	442	mg/L	40.0	20		06/25/19 19:02	16887-00-6	
Sulfate	<5.0	mg/L	5.0	1		06/24/19 20:44	14808-79-8	
351.2 Total Kjeldahl Nitrogen Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	33.7	mg/L	2.5	5	06/24/19 06:09	06/24/19 13:27	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres Analytical Method: EPA 353.2								
Nitrate as N	0.030J	mg/L	0.050	1		06/10/19 22:56	14797-55-8	
Nitrate-Nitrite (as N)	<0.050	mg/L	0.050	1		06/10/19 22:56	7727-37-9	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Sample: GM-27		Lab ID: 7092927003		Collected: 06/10/19 10:40	Received: 06/10/19 15:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		06/10/19 21:11	14797-65-0	
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	32.0	mg/L	1.0	10		06/24/19 13:33	7664-41-7	
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	43.1	mg/L	1.0	1		06/12/19 18:13	7440-44-0	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Project No.: 7092927

Sample: GM-271	Lab ID: 7092927004	Collected: 06/10/19 10:44	Received: 06/10/19 15:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	06/12/19 12:00	06/21/19 15:32	7440-43-9	
Calcium	72800	ug/L	200	1	06/12/19 12:00	06/21/19 15:32	7440-70-2	
Iron	1920	ug/L	20.0	1	06/12/19 12:00	06/21/19 15:32	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/12/19 12:00	06/21/19 15:32	7439-92-1	
Magnesium	4680	ug/L	200	1	06/12/19 12:00	06/21/19 15:32	7439-95-4	
Manganese	85.9	ug/L	10.0	1	06/12/19 12:00	06/21/19 15:32	7439-96-5	
Potassium	38700	ug/L	5000	1	06/12/19 12:00	06/21/19 15:32	7440-09-7	
Sodium	175000	ug/L	5000	1	06/12/19 12:00	06/21/19 15:32	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.26	ug/L	0.25	1	06/17/19 12:55	06/21/19 15:26	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	45	%	30-125	1	06/17/19 12:55	06/21/19 15:26		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	23.0	NTU	5.0	5		06/11/19 15:41		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	200	mg/L	1.0	1		06/21/19 14:03		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	190	mg/L	5.0	1		06/19/19 17:15		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	900	mg/L	20.0	1		06/14/19 11:39		M1
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	83.0	mg/L	10.0	1	06/18/19 09:22	06/18/19 11:40		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	21.7	mg/L	4.0	2	06/11/19 15:00	06/16/19 09:59		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	2.0	mg/L	0.50	1		06/24/19 21:01	24959-67-9	
Chloride	424	mg/L	40.0	20		06/25/19 19:19	16887-00-6	
Sulfate	<5.0	mg/L	5.0	1		06/24/19 21:01	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	19.3	mg/L	1.0	10	06/24/19 06:09	06/24/19 13:28	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	0.044J	mg/L	0.050	1		06/10/19 22:57	14797-55-8	
Nitrate-Nitrite (as N)	0.044J	mg/L	0.050	1		06/10/19 22:57	7727-37-9	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Sample: GM-271		Lab ID: 7092927004		Collected: 06/10/19 10:44	Received: 06/10/19 15:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		06/10/19 21:12	14797-65-0	
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	17.5	mg/L	1.0	10		06/24/19 13:34	7664-41-7	
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	25.5	mg/L	1.0	1		06/12/19 18:30	7440-44-0	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Project No.: 7092927

Sample: GM-28	Lab ID: 7092927005	Collected: 06/10/19 12:03	Received: 06/10/19 15:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	06/12/19 12:00	06/21/19 15:35	7440-43-9	
Calcium	248000	ug/L	200	1	06/12/19 12:00	06/21/19 15:35	7440-70-2	
Iron	8540	ug/L	20.0	1	06/12/19 12:00	06/21/19 15:35	7439-89-6	
Lead	10.9	ug/L	5.0	1	06/12/19 12:00	06/21/19 15:35	7439-92-1	
Magnesium	54400	ug/L	200	1	06/12/19 12:00	06/21/19 15:35	7439-95-4	
Manganese	1670	ug/L	10.0	1	06/12/19 12:00	06/21/19 15:35	7439-96-5	
Potassium	51200	ug/L	5000	1	06/12/19 12:00	06/21/19 15:35	7440-09-7	
Sodium	186000	ug/L	5000	1	06/12/19 12:00	06/21/19 15:35	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.38	ug/L	0.25	1	06/17/19 12:55	06/21/19 16:24	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	45	%	30-125	1	06/17/19 12:55	06/21/19 16:24		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	65.0	NTU	5.0	5		06/11/19 15:41		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	984	mg/L	1.0	1		06/21/19 14:39		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	880	mg/L	5.0	1		06/19/19 17:15		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	1530	mg/L	20.0	1		06/14/19 11:41		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	109	mg/L	10.0	1	06/18/19 09:22	06/18/19 11:41		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	11.9	mg/L	4.0	2	06/11/19 15:00	06/16/19 10:20		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	1.3	mg/L	0.50	1		06/24/19 21:51	24959-67-9	
Chloride	256	mg/L	20.0	10		06/25/19 19:36	16887-00-6	
Sulfate	216	mg/L	50.0	10		06/25/19 19:36	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	20.9	mg/L	1.0	10	06/24/19 06:09	06/24/19 13:29	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	0.042J	mg/L	0.050	1		06/10/19 22:59	14797-55-8	
Nitrate-Nitrite (as N)	0.042J	mg/L	0.050	1		06/10/19 22:59	7727-37-9	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Sample: GM-28		Lab ID: 7092927005		Collected: 06/10/19 12:03	Received: 06/10/19 15:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		06/10/19 21:13	14797-65-0	
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	18.2	mg/L	1.0	10		06/24/19 13:35	7664-41-7	
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	35.9	mg/L	1.0	1		06/12/19 19:16	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Project No.: 7092927

Sample: GM-281	Lab ID: 7092927006	Collected: 06/10/19 11:45	Received: 06/10/19 15:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	06/12/19 12:00	06/21/19 15:37	7440-43-9	
Calcium	39600	ug/L	200	1	06/12/19 12:00	06/21/19 15:37	7440-70-2	
Iron	4070	ug/L	20.0	1	06/12/19 12:00	06/21/19 15:37	7439-89-6	
Lead	14.6	ug/L	5.0	1	06/12/19 12:00	06/21/19 15:37	7439-92-1	
Magnesium	4310	ug/L	200	1	06/12/19 12:00	06/21/19 15:37	7439-95-4	
Manganese	292	ug/L	10.0	1	06/12/19 12:00	06/21/19 15:37	7439-96-5	
Potassium	62600	ug/L	5000	1	06/12/19 12:00	06/21/19 15:37	7440-09-7	
Sodium	114000	ug/L	5000	1	06/12/19 12:00	06/21/19 15:37	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.25J	ug/L	0.25	1	06/17/19 12:55	06/21/19 16:05	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	42	%	30-125	1	06/17/19 12:55	06/21/19 16:05		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	20.0	NTU	5.0	5		06/11/19 15:41		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	149	mg/L	1.0	1		06/21/19 14:49		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	100	mg/L	5.0	1		06/19/19 17:16		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	596	mg/L	20.0	1		06/17/19 09:48		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	45.5	mg/L	10.0	1	06/18/19 09:22	06/18/19 11:41		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	13.3	mg/L	4.0	2	06/11/19 15:01	06/16/19 10:23		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	1.7	mg/L	0.50	1		06/24/19 22:08	24959-67-9	
Chloride	251	mg/L	20.0	10		06/25/19 19:53	16887-00-6	
Sulfate	31.5	mg/L	5.0	1		06/24/19 22:08	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	12.2	mg/L	1.0	10	06/24/19 06:09	06/24/19 13:30	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	0.029J	mg/L	0.050	1		06/10/19 23:00	14797-55-8	
Nitrate-Nitrite (as N)	<0.050	mg/L	0.050	1		06/10/19 23:00	7727-37-9	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Sample: GM-28I		Lab ID: 7092927006		Collected: 06/10/19 11:45	Received: 06/10/19 15:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		06/10/19 21:14	14797-65-0	
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	11.4	mg/L	1.0	10		06/24/19 13:36	7664-41-7	
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	12.7	mg/L	1.0	1		06/12/19 19:34	7440-44-0	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE
Project No.: 7092927

Sample: DUP	Lab ID: 7092927007	Collected: 06/10/19 10:44	Received: 06/10/19 15:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	06/12/19 12:00	06/21/19 15:39	7440-43-9	
Calcium	74000	ug/L	200	1	06/12/19 12:00	06/21/19 15:39	7440-70-2	
Iron	1980	ug/L	20.0	1	06/12/19 12:00	06/21/19 15:39	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/12/19 12:00	06/21/19 15:39	7439-92-1	
Magnesium	4760	ug/L	200	1	06/12/19 12:00	06/21/19 15:39	7439-95-4	
Manganese	87.2	ug/L	10.0	1	06/12/19 12:00	06/21/19 15:39	7439-96-5	
Potassium	39800	ug/L	5000	1	06/12/19 12:00	06/21/19 15:39	7440-09-7	
Sodium	176000	ug/L	5000	1	06/12/19 12:00	06/21/19 15:39	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.26	ug/L	0.25	1	06/17/19 12:55	06/21/19 15:45	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	45	%	30-125	1	06/17/19 12:55	06/21/19 15:45		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	12.6	NTU	5.0	5		06/11/19 15:41		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	206	mg/L	1.0	1		06/21/19 15:01		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	200	mg/L	5.0	1		06/19/19 17:17		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	826	mg/L	20.0	1		06/17/19 09:50		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	91.8	mg/L	10.0	1	06/18/19 09:22	06/18/19 11:41		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	22.1	mg/L	4.0	2	06/11/19 15:01	06/16/19 10:25		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	2.0	mg/L	0.50	1		06/24/19 22:25	24959-67-9	
Chloride	455	mg/L	20.0	10		06/25/19 20:09	16887-00-6	
Sulfate	<5.0	mg/L	5.0	1		06/24/19 22:25	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	19.1	mg/L	1.0	10	06/24/19 06:09	06/24/19 13:31	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	0.037J	mg/L	0.050	1		06/10/19 23:06	14797-55-8	
Nitrate-Nitrite (as N)	<0.050	mg/L	0.050	1		06/10/19 23:06	7727-37-9	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Sample: DUP		Lab ID: 7092927007		Collected: 06/10/19 10:44	Received: 06/10/19 15:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		06/10/19 21:16	14797-65-0	
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	17.4	mg/L	1.0	10		06/24/19 13:37	7664-41-7	
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	25.8	mg/L	1.0	1		06/12/19 19:52	7440-44-0	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

QC Batch: 117458 Analysis Method: EPA 6010C
 QC Batch Method: EPA 3005A Analysis Description: 6010 MET Water
 Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

METHOD BLANK: 556153 Matrix: Water
 Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	ug/L	<2.5	2.5	06/21/19 14:34	
Calcium	ug/L	<200	200	06/21/19 14:34	
Iron	ug/L	<20.0	20.0	06/21/19 14:34	
Lead	ug/L	<5.0	5.0	06/21/19 14:34	
Magnesium	ug/L	<200	200	06/21/19 14:34	
Manganese	ug/L	<10.0	10.0	06/21/19 14:34	
Potassium	ug/L	<5000	5000	06/21/19 14:34	
Sodium	ug/L	<5000	5000	06/21/19 14:34	

LABORATORY CONTROL SAMPLE: 556154

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	50	49.2	98	80-120	
Calcium	ug/L	25000	24800	99	80-120	
Iron	ug/L	2000	1970	99	80-120	
Lead	ug/L	500	501	100	80-120	
Magnesium	ug/L	25000	24500	98	80-120	
Manganese	ug/L	250	246	98	80-120	
Potassium	ug/L	50000	47900	96	80-120	
Sodium	ug/L	50000	49300	99	80-120	

MATRIX SPIKE SAMPLE: 556156

Parameter	Units	7092645001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	<0.84	50	48.1	96	75-125	
Calcium	ug/L	37300	25000	59400	88	75-125	
Iron	ug/L	8490	2000	10100	80	75-125	
Lead	ug/L	<4.3	500	493	99	75-125	
Magnesium	ug/L	20700	25000	44300	94	75-125	
Manganese	ug/L	13000	250	12700	-120	75-125	M1
Potassium	ug/L	2090J	50000	49600	95	75-125	
Sodium	ug/L	23600	50000	72100	97	75-125	

SAMPLE DUPLICATE: 556155

Parameter	Units	7092645001 Result	Dup Result	RPD	Qualifiers
Cadmium	ug/L	<0.84	<2.5		

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

SAMPLE DUPLICATE: 556155

Parameter	Units	7092645001 Result	Dup Result	RPD	Qualifiers
Calcium	ug/L	37300	37900	2	
Iron	ug/L	8490	8670	2	
Lead	ug/L	<4.3	<5.0		
Magnesium	ug/L	20700	21000	1	
Manganese	ug/L	13000	13200	2	
Potassium	ug/L	2090J	2100J		
Sodium	ug/L	23600	24100	2	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

QC Batch: 613318

Analysis Method: EPA 8270D by SIM

QC Batch Method: EPA 3510

Analysis Description: 8270D Water 14 Dioxane by SIM

Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

METHOD BLANK: 3314241

Matrix: Water

Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (SIM)	ug/L	<0.25	0.25	06/21/19 11:31	
1,4-Dioxane-d8 (S)	%	39	30-125	06/21/19 11:31	

LABORATORY CONTROL SAMPLE & LCSD: 3314242

3314243

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,4-Dioxane (SIM)	ug/L	10	7.8	7.3	78	73	40-125	6	20	
1,4-Dioxane-d8 (S)	%				39	46	30-125			

LABORATORY CONTROL SAMPLE: 3314706

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (SIM)	ug/L	10	0.22J		2	40-125 L2
1,4-Dioxane-d8 (S)	%				44	30-125

LABORATORY CONTROL SAMPLE: 3314707

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
1,4-Dioxane (SIM)	ug/L	10	0.25		3	40-125 L2
1,4-Dioxane-d8 (S)	%				47	30-125

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

QC Batch: 117124 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

METHOD BLANK: 554714 Matrix: Water
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	<1.0	1.0	06/11/19 15:40	

LABORATORY CONTROL SAMPLE: 554715

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	10	10.3	103	90-110	

SAMPLE DUPLICATE: 554716

Parameter	Units	7092924001 Result	Dup Result	RPD	Qualifiers
Turbidity	NTU	<1.0	<1.0		

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

QC Batch: 118848

Analysis Method: SM22 2320B

QC Batch Method: SM22 2320B

Analysis Description: 2320B Alkalinity

Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

METHOD BLANK: 564805

Matrix: Water

Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<1.0	1.0	06/21/19 12:45	

LABORATORY CONTROL SAMPLE: 564806

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	25	25.7	103	85-115	

MATRIX SPIKE SAMPLE: 564808

Parameter	Units	7092859001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	31.8	25	58.1	105	75-125	

SAMPLE DUPLICATE: 564807

Parameter	Units	7092859001 Result	Dup Result	RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	31.8	32.4	2	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

QC Batch: 118472 Analysis Method: SM22 2340C
QC Batch Method: SM22 2340C Analysis Description: 2340C Hardness, Total
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

METHOD BLANK: 562545 Matrix: Water
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	<5.0	5.0	06/19/19 13:35	

LABORATORY CONTROL SAMPLE: 562546

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	100	100	100	90-110	

MATRIX SPIKE SAMPLE: 562852

Parameter	Units	7092927007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	200	500	695	99	75-125	

SAMPLE DUPLICATE: 562853

Parameter	Units	7092927007 Result	Dup Result	RPD	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	200	200	0	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

QC Batch: 117745

Analysis Method: SM22 2540C

QC Batch Method: SM22 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005

METHOD BLANK: 557796

Matrix: Water

Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<10.0	10.0	06/14/19 10:42	

LABORATORY CONTROL SAMPLE: 557797

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	516	103	85-115	

MATRIX SPIKE SAMPLE: 557799

Parameter	Units	7092852006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	49.0	300	337	96	75-125	

MATRIX SPIKE SAMPLE: 557801

Parameter	Units	7092927004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	900	600	1660	127	75-125	M1

SAMPLE DUPLICATE: 557798

Parameter	Units	7092852006 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	49.0	48.0	2	

SAMPLE DUPLICATE: 557800

Parameter	Units	7092927004 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	900	860	5	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

QC Batch: 118003 Analysis Method: SM22 2540C
QC Batch Method: SM22 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 7092927006, 7092927007

METHOD BLANK: 559701 Matrix: Water
Associated Lab Samples: 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<10.0	10.0	06/17/19 09:42	

LABORATORY CONTROL SAMPLE: 559702

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	568	114	85-115	

MATRIX SPIKE SAMPLE: 559704

Parameter	Units	7092927006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	596	600	1130	89	75-125	

MATRIX SPIKE SAMPLE: 559706

Parameter	Units	7092454017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	211	300	490	93	75-125	

SAMPLE DUPLICATE: 559703

Parameter	Units	7092927006 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	596	602	1	

SAMPLE DUPLICATE: 559705

Parameter	Units	7092454017 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	211	223	6 D6	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

QC Batch:	117776	Analysis Method:	EPA 410.4
QC Batch Method:	EPA 410.4	Analysis Description:	410.4 COD
Associated Lab Samples:	7092927001		

METHOD BLANK: 557830 Matrix: Water

Associated Lab Samples: 7092927001

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	10.0	06/14/19 11:54	

LABORATORY CONTROL SAMPLE: 557831

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	509	102	90-110	

MATRIX SPIKE SAMPLE: 557832

Parameter	Units	7093543001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	10.2	1000	1010	100	90-110	

MATRIX SPIKE SAMPLE: 557834

Parameter	Units	7092454015 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	19.0	1000	969	95	90-110	

SAMPLE DUPLICATE: 557833

Parameter	Units	7093543001 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	10.2	<10.0		

SAMPLE DUPLICATE: 557835

Parameter	Units	7092454015 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	19.0	12.4	42 D6	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

QC Batch: 118174 Analysis Method: EPA 410.4
 QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
 Associated Lab Samples: 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

METHOD BLANK: 560813 Matrix: Water
 Associated Lab Samples: 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	10.0	06/18/19 11:38	

LABORATORY CONTROL SAMPLE: 560814

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	507	101	90-110	

MATRIX SPIKE SAMPLE: 560815

Parameter	Units	7093748001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	36.7	1000	1030	99	90-110	

MATRIX SPIKE SAMPLE: 560817

Parameter	Units	7092454017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	10.2	1000	987	98	90-110	

SAMPLE DUPLICATE: 560816

Parameter	Units	7093748001 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	36.7	41.1	11	

SAMPLE DUPLICATE: 560818

Parameter	Units	7092454017 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	10.2	12.4	20	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

QC Batch: 117293

Analysis Method: SM22 5210B

QC Batch Method: SM22 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

METHOD BLANK: 555119

Matrix: Water

Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	06/16/19 09:10	

LABORATORY CONTROL SAMPLE: 555120

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	208	105	84.5-115.4	

SAMPLE DUPLICATE: 555121

Parameter	Units	7092970001 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	130	157	18	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

QC Batch: 119193 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

METHOD BLANK: 566429 Matrix: Water
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	mg/L	<0.50	0.50	06/24/19 18:47	
Chloride	mg/L	<2.0	2.0	06/24/19 18:47	
Sulfate	mg/L	<5.0	5.0	06/24/19 18:47	

LABORATORY CONTROL SAMPLE: 566430

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	1.1	110	90-110	
Chloride	mg/L	10	10.9	109	90-110	
Sulfate	mg/L	10	10.3	103	90-110	

MATRIX SPIKE SAMPLE: 566431

Parameter	Units	7092454017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1.4	1	1.9	52	80-120	M1
Chloride	mg/L	94.3	50	149	109	80-120	
Sulfate	mg/L	11.2	10	15.8	47	80-120	M1

SAMPLE DUPLICATE: 566432

Parameter	Units	7092454017 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	1.4	1.4	1	
Chloride	mg/L	94.3	92.9	2	
Sulfate	mg/L	11.2	11.2	0	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

QC Batch: 119029 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

METHOD BLANK: 565860 Matrix: Water
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	0.10	06/24/19 12:34	

LABORATORY CONTROL SAMPLE: 565861

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.3	107	90-110	

MATRIX SPIKE SAMPLE: 565862

Parameter	Units	7093248002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.92	4	4.7	95	90-110	

MATRIX SPIKE SAMPLE: 565864

Parameter	Units	7093311002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.7	4	6.6	122	90-110	M1

SAMPLE DUPLICATE: 565863

Parameter	Units	7093248002 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	0.92	0.89	4	

SAMPLE DUPLICATE: 565865

Parameter	Units	7093311002 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	1.7	1.9	11	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

QC Batch:	117107	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrite, Unpres.
Associated Lab Samples:	7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007		

METHOD BLANK: 554577 Matrix: Water
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.050	0.050	06/10/19 20:42	

LABORATORY CONTROL SAMPLE: 554578

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	1	1.0	102	90-110	

MATRIX SPIKE SAMPLE: 554579

Parameter	Units	7092854001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.48	95	90-110	

MATRIX SPIKE SAMPLE: 554581

Parameter	Units	7092926001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.18	37	90-110	M1

SAMPLE DUPLICATE: 554580

Parameter	Units	7092854001 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

SAMPLE DUPLICATE: 554582

Parameter	Units	7092926001 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

QC Batch: 117111 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate, Unpres.
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006

METHOD BLANK: 554669 Matrix: Water
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.050	06/10/19 22:25	

LABORATORY CONTROL SAMPLE: 554670

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	103	90-110	

MATRIX SPIKE SAMPLE: 554671

Parameter	Units	7092927001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	6.0	5	10.8	95	90-110	

MATRIX SPIKE SAMPLE: 554673

Parameter	Units	7092854001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	4.3	5	9.5	102	90-110	

SAMPLE DUPLICATE: 554672

Parameter	Units	7092927001 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	6.0	5.7	5	

SAMPLE DUPLICATE: 554674

Parameter	Units	7092854001 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	4.3	4.3	1	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

QC Batch: 117112	Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2	Analysis Description: 353.2 Nitrate, Unpres.
Associated Lab Samples: 7092927007	

METHOD BLANK: 554675 Matrix: Water
Associated Lab Samples: 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.050	06/10/19 23:03	

LABORATORY CONTROL SAMPLE: 554676

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	105	90-110	

MATRIX SPIKE SAMPLE: 554677

Parameter	Units	7092928001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	7.6	5	7.6	-1	90-110	M6

SAMPLE DUPLICATE: 554678

Parameter	Units	7092928001 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	7.6	7.2	5	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE
Pace Project No.: 7092927

QC Batch: 119106 Analysis Method: SM22 4500 NH3 H
QC Batch Method: SM22 4500 NH3 H Analysis Description: 4500 Ammonia
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

METHOD BLANK: 566010 Matrix: Water
Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.020J	0.10	06/24/19 13:28	

LABORATORY CONTROL SAMPLE: 566011

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	0.94	94	90-110	

MATRIX SPIKE SAMPLE: 566012

Parameter	Units	7093315001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	14.8	10	25.5	107	75-125	

SAMPLE DUPLICATE: 566013

Parameter	Units	7093315001 Result	Dup Result	RPD	Qualifiers
Nitrogen, Ammonia	mg/L	14.8	14.6	1	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

QC Batch: 117347

Analysis Method: SM22 5310B

QC Batch Method: SM22 5310B

Analysis Description: 5310B TOC

Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

METHOD BLANK: 555730

Matrix: Water

Associated Lab Samples: 7092927001, 7092927002, 7092927003, 7092927004, 7092927005, 7092927006, 7092927007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<1.0	1.0	06/12/19 15:41	

LABORATORY CONTROL SAMPLE: 555731

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.0	90	85-115	

MATRIX SPIKE SAMPLE: 555733

Parameter	Units	7092957011 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	1.1	10	10.5	94	75-125	

SAMPLE DUPLICATE: 555732

Parameter	Units	7092957011 Result	Dup Result	RPD	Qualifiers
Total Organic Carbon	mg/L	1.1	1.1	2	

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QUALIFIERS

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

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.

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

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

TNI - The NELAC Institute.

LABORATORIES

PACE-MV Pace Analytical Services - Melville

PASI-M Pace Analytical Services - Minneapolis

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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

L2 Analyte recovery in the laboratory control sample (LCS) was below QC limits. Results for this analyte in associated samples may be biased low.

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

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7092927001	GM-26	EPA 3005A	117458	EPA 6010C	117471
7092927002	GM-26I	EPA 3005A	117458	EPA 6010C	117471
7092927003	GM-27	EPA 3005A	117458	EPA 6010C	117471
7092927004	GM-27I	EPA 3005A	117458	EPA 6010C	117471
7092927005	GM-28	EPA 3005A	117458	EPA 6010C	117471
7092927006	GM-28I	EPA 3005A	117458	EPA 6010C	117471
7092927007	DUP	EPA 3005A	117458	EPA 6010C	117471
7092927001	GM-26	EPA 3510	613318	EPA 8270D by SIM	614673
7092927002	GM-26I	EPA 3510	613318	EPA 8270D by SIM	614673
7092927003	GM-27	EPA 3510	613318	EPA 8270D by SIM	614673
7092927004	GM-27I	EPA 3510	613318	EPA 8270D by SIM	614673
7092927005	GM-28	EPA 3510	613318	EPA 8270D by SIM	614673
7092927006	GM-28I	EPA 3510	613318	EPA 8270D by SIM	614673
7092927007	DUP	EPA 3510	613318	EPA 8270D by SIM	614673
7092927001	GM-26	EPA 180.1	117124		
7092927002	GM-26I	EPA 180.1	117124		
7092927003	GM-27	EPA 180.1	117124		
7092927004	GM-27I	EPA 180.1	117124		
7092927005	GM-28	EPA 180.1	117124		
7092927006	GM-28I	EPA 180.1	117124		
7092927007	DUP	EPA 180.1	117124		
7092927001	GM-26	SM22 2320B	118848		
7092927002	GM-26I	SM22 2320B	118848		
7092927003	GM-27	SM22 2320B	118848		
7092927004	GM-27I	SM22 2320B	118848		
7092927005	GM-28	SM22 2320B	118848		
7092927006	GM-28I	SM22 2320B	118848		
7092927007	DUP	SM22 2320B	118848		
7092927001	GM-26	SM22 2340C	118472		
7092927002	GM-26I	SM22 2340C	118472		
7092927003	GM-27	SM22 2340C	118472		
7092927004	GM-27I	SM22 2340C	118472		
7092927005	GM-28	SM22 2340C	118472		
7092927006	GM-28I	SM22 2340C	118472		
7092927007	DUP	SM22 2340C	118472		
7092927001	GM-26	SM22 2540C	117745		
7092927002	GM-26I	SM22 2540C	117745		
7092927003	GM-27	SM22 2540C	117745		
7092927004	GM-27I	SM22 2540C	117745		
7092927005	GM-28	SM22 2540C	117745		
7092927006	GM-28I	SM22 2540C	118003		
7092927007	DUP	SM22 2540C	118003		
7092927001	GM-26	EPA 410.4	117776	EPA 410.4	117816
7092927002	GM-26I	EPA 410.4	118174	EPA 410.4	118224
7092927003	GM-27	EPA 410.4	118174	EPA 410.4	118224

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7092927004	GM-27I	EPA 410.4	118174	EPA 410.4	118224
7092927005	GM-28	EPA 410.4	118174	EPA 410.4	118224
7092927006	GM-28I	EPA 410.4	118174	EPA 410.4	118224
7092927007	DUP	EPA 410.4	118174	EPA 410.4	118224
7092927001	GM-26	SM22 5210B	117293	SM22 5210B	118243
7092927002	GM-26I	SM22 5210B	117293	SM22 5210B	118243
7092927003	GM-27	SM22 5210B	117293	SM22 5210B	118243
7092927004	GM-27I	SM22 5210B	117293	SM22 5210B	118243
7092927005	GM-28	SM22 5210B	117293	SM22 5210B	118243
7092927006	GM-28I	SM22 5210B	117293	SM22 5210B	118243
7092927007	DUP	SM22 5210B	117293	SM22 5210B	118243
7092927001	GM-26	EPA 300.0	119193		
7092927002	GM-26I	EPA 300.0	119193		
7092927003	GM-27	EPA 300.0	119193		
7092927004	GM-27I	EPA 300.0	119193		
7092927005	GM-28	EPA 300.0	119193		
7092927006	GM-28I	EPA 300.0	119193		
7092927007	DUP	EPA 300.0	119193		
7092927001	GM-26	EPA 351.2	119029	EPA 351.2	119070
7092927002	GM-26I	EPA 351.2	119029	EPA 351.2	119070
7092927003	GM-27	EPA 351.2	119029	EPA 351.2	119070
7092927004	GM-27I	EPA 351.2	119029	EPA 351.2	119070
7092927005	GM-28	EPA 351.2	119029	EPA 351.2	119070
7092927006	GM-28I	EPA 351.2	119029	EPA 351.2	119070
7092927007	DUP	EPA 351.2	119029	EPA 351.2	119070
7092927001	GM-26	EPA 353.2	117111		
7092927002	GM-26I	EPA 353.2	117111		
7092927003	GM-27	EPA 353.2	117111		
7092927004	GM-27I	EPA 353.2	117111		
7092927005	GM-28	EPA 353.2	117111		
7092927006	GM-28I	EPA 353.2	117111		
7092927007	DUP	EPA 353.2	117112		
7092927001	GM-26	EPA 353.2	117107		
7092927002	GM-26I	EPA 353.2	117107		
7092927003	GM-27	EPA 353.2	117107		
7092927004	GM-27I	EPA 353.2	117107		
7092927005	GM-28	EPA 353.2	117107		
7092927006	GM-28I	EPA 353.2	117107		
7092927007	DUP	EPA 353.2	117107		
7092927001	GM-26	SM22 4500 NH3 H	119106		
7092927002	GM-26I	SM22 4500 NH3 H	119106		
7092927003	GM-27	SM22 4500 NH3 H	119106		
7092927004	GM-27I	SM22 4500 NH3 H	119106		
7092927005	GM-28	SM22 4500 NH3 H	119106		
7092927006	GM-28I	SM22 4500 NH3 H	119106		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WELL CLUSTER 26,27,28, ROUTINE

Pace Project No.: 7092927

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7092927007	DUP	SM22 4500 NH3 H	119106		
7092927001	GM-26	SM22 5310B	117347		
7092927002	GM-26I	SM22 5310B	117347		
7092927003	GM-27	SM22 5310B	117347		
7092927004	GM-27I	SM22 5310B	117347		
7092927005	GM-28	SM22 5310B	117347		
7092927006	GM-28I	SM22 5310B	117347		
7092927007	DUP	SM22 5310B	117347		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: Town Babylon

WO#: **7092927**
PM: JSA Due Date: 06/24/19
CLIENT: BAB-ECO

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____
Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Ziploc None Other
Thermometer Used: TH091 Correction Factor: 0.0

Cooler Temperature (°C): 1.7/2.7/1.8 Cooler Temperature Corrected (°C): 1.7/2.7/1.8 Date/Time 5035A kits placed in freezer _____

Temp should be above freezing to 6.0°C

USDA Regulated Soil (N/A, water sample)

Date and Initials of person examining contents: 6/10/19 JSP

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? YES NO

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

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

			COMMENTS:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No	7.
Sufficient Volume: (Triple volume provided for MS/MSD):	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	
Containers Intact:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No	12.
-Includes date/time/ID/Analysis Matrix SL WT OIL			
All containers needing preservation have been checked	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
pH paper Lot # <u>HC663463</u>			Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl, NaOH > 9 Sulfide, NaOH > 12 Cyanide) Exceptions: VOA, Coliform, <u>COC</u> /DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	<input checked="" type="checkbox"/> Yes	<input type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed: _____ Lot # of added preservative: _____ Date/Time preservative added: _____
Samples checked for dechlorination:	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14. Positive for Res. Chlorine? Y N
KI starch test strips Lot #			
Residual chlorine strips Lot #			
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes	<input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if applicable): _____			

Client Notification/ Resolution: _____ Date/Time: _____ Field Data Required? Y / N

Person Contacted: _____

Comments/ Resolution: _____

ANALYTICAL REPORT

Job Number: 420-155301-1

SDG Number: 7092927

Job Description: Pace Analytical Sevices, Inc.-Mellville

For:

Pace Analytical Mellville
575 Broadhollow Road
Melville, NY 11747

Attention: James Murphy

Laura Marciano

Laura L Marciano

Customer Service Manager

lmarciano@envirotestlaboratories.com

06/18/2019

cc: Ms. Jen Aracri
Betty Harrison
Accounts Payable
Sophia Sparkes

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified in the Certification Information section of this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOPH PH-0554

Envirotest Laboratories, Inc.

315 Fullerton Avenue, Newburgh, NY 12550

Tel (845) 562-0890 Fax (845) 562-0841 www.envirotestlaboratories.com

Comments

No additional comments.

Receipt

All samples were received in good condition within temperature requirements.

General Chemistry

No analytical or quality issues were noted.

EXECUTIVE SUMMARY - Detections

Client: Pace Analytical Mellville

Job Number: 420-155301-1

Sdg Number: 7092927

Lab Sample ID	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
---------------	------------------	--------------------	-----------------	-------	--------

No Detections

METHOD SUMMARY

Client: Pace Analytical Mellville

Job Number: 420-155301-1

SDG Number: 7092927

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Phenols Semi-Automated	EnvTest	EPA 420.4 Rev. 1.0	
Distillation/Phenolics	EnvTest		Distill/Phenol

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

METHOD / ANALYST SUMMARY

Client: Pace Analytical Mellville

Job Number: 420-155301-1

SDG Number: 7092927

Method	Analyst	Analyst ID
EPA 420.4 Rev. 1.0	Mastrobuono, Danielle	DM

SAMPLE SUMMARY

Client: Pace Analytical Mellville

Job Number: 420-155301-1

SDG Number: 7092927

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-155301-1	GM-26	Water	06/10/2019 0932	06/14/2019 1000
420-155301-2	GM-26I	Water	06/10/2019 0925	06/14/2019 1000
420-155301-3	GM-27	Water	06/10/2019 1040	06/14/2019 1000
420-155301-4	GM-27I	Water	06/10/2019 1044	06/14/2019 1000
420-155301-5	GM-28	Water	06/10/2019 1203	06/14/2019 1000
420-155301-6	GM-28I	Water	06/10/2019 1145	06/14/2019 1000
420-155301-7	DUP	Water	06/10/2019 1044	06/14/2019 1000

SAMPLE RESULTS

Analytical Data

Client: Pace Analytical Mellville

Job Number: 420-155301-1
Sdg Number: 7092927

General Chemistry

Client Sample ID: GM-26

Lab Sample ID: 420-155301-1
Client Matrix: Water

Date Sampled: 06/10/2019 0932
Date Received: 06/14/2019 1000

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.010	U	mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/17/2019	1513			
Prep Batch:		Date Prepared:	06/17/2019	1107			

Client Sample ID: GM-26I

Lab Sample ID: 420-155301-2
Client Matrix: Water

Date Sampled: 06/10/2019 0925
Date Received: 06/14/2019 1000

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.010	U	mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/17/2019	1514			
Prep Batch:		Date Prepared:	06/17/2019	1107			

Client Sample ID: GM-27

Lab Sample ID: 420-155301-3
Client Matrix: Water

Date Sampled: 06/10/2019 1040
Date Received: 06/14/2019 1000

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.010	U	mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/17/2019	1514			
Prep Batch:		Date Prepared:	06/17/2019	1107			

Client Sample ID: GM-27I

Lab Sample ID: 420-155301-4
Client Matrix: Water

Date Sampled: 06/10/2019 1044
Date Received: 06/14/2019 1000

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.010	U	mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/17/2019	1515			
Prep Batch:		Date Prepared:	06/17/2019	1107			

Client Sample ID: GM-28

Lab Sample ID: 420-155301-5
Client Matrix: Water

Date Sampled: 06/10/2019 1203
Date Received: 06/14/2019 1000

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.010	U	mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/17/2019	1515			
Prep Batch:		Date Prepared:	06/17/2019	1107			

Analytical Data

Client: Pace Analytical Mellville

Job Number: 420-155301-1
Sdg Number: 7092927

General Chemistry

Client Sample ID: GM-28I

Lab Sample ID: 420-155301-6
Client Matrix: Water

Date Sampled: 06/10/2019 1145
Date Received: 06/14/2019 1000

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.010	U N	mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/17/2019	1516			
Prep Batch:		Date Prepared:	06/17/2019	1107			

Client Sample ID: DUP

Lab Sample ID: 420-155301-7
Client Matrix: Water

Date Sampled: 06/10/2019 1044
Date Received: 06/14/2019 1000

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.010	U	mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/17/2019	1518			
Prep Batch:		Date Prepared:	06/17/2019	1107			

DATA REPORTING QUALIFIERS

Client: Pace Analytical Mellville

Job Number:
Sdg Number: 7092927

Lab Section	Qualifier	Description
General Chemistry	U	Indicates analyzed for but not detected.
	N	Spiked sample recovery is not within control limits.

Certification Information

Client: Pace Analytical Mellville

Job Number:

Sdg Number: 7092927

The following analytes are Not Part of the ELAP scope of accreditation:

Sulfur, Tungsten, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide, Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Solids (Fixed), Solids (Percent), Solids (Percent Moisture), Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, 1,2,4,5-Tetramethylbenzene, 4-Ethyl toluene, p-Diethylbenzene, Iron Bacteria, Salmonella, Sulfur Reducing Bacteria, & UOD (Ultimate Oxygen Demand).

The following analytes are Not Part of ELAP Potable Water scope of accreditation:

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), o-Xylene (502.2, 524), Sulfide (SM4500SD), Acenaphthene (525.2), Acenaphthylene (525.2), Fluoranthene (525.2), Fluorene (525.2), Phenanthrene (525.2), Anthracene (525.2), Pyrene (525.2), Benzo[a]anthracene (525.2), Benzo[b]fluoranthene (525.2), Benzo[g,h,i]perylene (525.2), Benzo[k]fluoranthene (525.2), Indeno[1,2,3-cd]pyrene (525.2), & Dibenz(a,h)anthracene (525.2).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation:

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation:

Dissolved Organic Carbon (5310C), Mecoprop (8151A), MCPA (8151A), Propylene Glycol (8015D).

Definitions and Glossary

Client: Pace Analytical Mellville

Job Number:

Sdg Number: 7092927

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points

QUALITY CONTROL RESULTS

Quality Control Results

Client: Pace Analytical Mellville

Job Number: 420-155301-1

Sdg Number: 7092927

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 420-132594					
LCS 420-132594/27-A	Lab Control Spike	T	Water	Distill/Phenol	
MB 420-132594/26-A	Method Blank	T	Water	Distill/Phenol	
420-155301-1	GM-26	T	Water	Distill/Phenol	
420-155301-2	GM-26I	T	Water	Distill/Phenol	
420-155301-3	GM-27	T	Water	Distill/Phenol	
420-155301-4	GM-27I	T	Water	Distill/Phenol	
420-155301-5	GM-28	T	Water	Distill/Phenol	
420-155301-6	GM-28I	T	Water	Distill/Phenol	
420-155301-6DU	Duplicate	T	Water	Distill/Phenol	
420-155301-7	DUP	T	Water	Distill/Phenol	
Analysis Batch:420-132621					
LCS 420-132594/27-A	Lab Control Spike	T	Water	420.4 Rev. 1.0	420-132594
MB 420-132594/26-A	Method Blank	T	Water	420.4 Rev. 1.0	420-132594
420-155301-1	GM-26	T	Water	420.4 Rev. 1.0	420-132594
420-155301-2	GM-26I	T	Water	420.4 Rev. 1.0	420-132594
420-155301-3	GM-27	T	Water	420.4 Rev. 1.0	420-132594
420-155301-4	GM-27I	T	Water	420.4 Rev. 1.0	420-132594
420-155301-5	GM-28	T	Water	420.4 Rev. 1.0	420-132594
420-155301-6	GM-28I	T	Water	420.4 Rev. 1.0	420-132594
420-155301-6DU	Duplicate	T	Water	420.4 Rev. 1.0	420-132594
420-155301-7	DUP	T	Water	420.4 Rev. 1.0	420-132594

Report Basis

T = Total

Quality Control Results

Client: Pace Analytical Mellville

Job Number: 420-155301-1
Sdg Number: 7092927

Method Blank - Batch: 420-132594

Method: 420.4 Rev. 1.0
Preparation: Distill/Phenol

Lab Sample ID: MB 420-132594/26-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/17/2019 1512
Date Prepared: 06/17/2019 1107

Analysis Batch: 420-132621
Prep Batch: 420-132594
Units: mg/L

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-17-2019_02-50-22PM.(
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Result	Qual	RL	RL
Phenolics, Total Recoverable	0.010	U	0.010	0.010

Lab Control Spike - Batch: 420-132594

Method: 420.4 Rev. 1.0
Preparation: Distill/Phenol

Lab Sample ID: LCS 420-132594/27-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/17/2019 1512
Date Prepared: 06/17/2019 1107

Analysis Batch: 420-132621
Prep Batch: 420-132594
Units: mg/L

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-17-2019_02-50-22PM.(
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Phenolics, Total Recoverable	0.0500	0.0301	60	57 - 123	

Duplicate - Batch: 420-132594

Method: 420.4 Rev. 1.0
Preparation: Distill/Phenol

Lab Sample ID: 420-155301-6
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/17/2019 1517
Date Prepared: 06/17/2019 1107

Analysis Batch: 420-132621
Prep Batch: 420-132594
Units: mg/L

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-17-2019_02-50-22PM.(
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Phenolics, Total Recoverable	0.010 U	0.00315	NC	15	U

Calculations are performed before rounding to avoid round-off errors in calculated results.

Chain of Custody



155301

Workorder: 7092927

Workorder Name: WELL CLUSTER 26,27,28, ROUTINE

Results Requested By: 6/24/2019

Report / Invoice To		Subcontract To				Requested Analysis									
Jennifer Aracri Pace Analytical Melville 575 Broad Hollow Road Melville, NY 11747 Phone (631)694-3040 Email: jennifer.aracri@pacelabs.com		EnviroTest Laboratories, Inc. P.O. 7092927JSA 315 Fullerton Avenue Newburgh, NY 12550													
State of Sample Origin: NY		Preserved Containers										Total Phenolics by 420.1	LAB USE ONLY		
Item	Sample ID	Collect Date/Time	Lab ID	Matrix	H2SO4	Unpreserved									
1	GM-26	6/10/2019 09:32	7092927001	Water										X	
2	GM-26I	6/10/2019 09:25	7092927002	Water										X	
3	GM-27	6/10/2019 10:40	7092927003	Water										X	
4	GM-27I	6/10/2019 10:44	7092927004	Water										X	
5	GM-28	6/10/2019 12:03	7092927005	Water										X	
6	GM-28I	6/10/2019 11:45	7092927006	Water										X	
7	DUP	6/10/2019 10:44	7092927007	Water								X			
Transfers		Released By	Date/Time	Received By	Date/Time	Comments									
1		<i>[Signature]</i>	6/13/19 1500	<i>[Signature]</i>	6/14/19 10:00	Need a Category B Package and EQUIS EDDs									
2															
3															
Cooler Temperature on Receipt		1.4 °C	Custody Seal Y or N		Received on Ice (Y) or N		Samples Intact (Y) or N								

FEDEX P.O. 1068 0079 3385



420-155301-B-7

DUP

Date Sampled: 6/10/2019

420-1350237

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Pace Analytical Mellville

Job Number: 420-155301-1

SDG Number: 7092927

Login Number: 155301

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	1.4 C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-51334-1
Laboratory Sample Delivery Group: 7092927
Client Project/Site: Pace PFAS Testing

For:
Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, New York 11747

Attn: Jennifer Aracri

Cesar C Cortes

Authorized for release by:
7/3/2019 11:38:57 AM

Cesar Cortes, Project Manager I
(916)374-4316
cesar.cortes@testamericainc.com

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www.testamericainc.com

The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Case Narrative

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-51334-1
SDG: 7092927

1
2
3

Job ID: 320-51334-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Receipt

The samples were received on 6/14/2019 at 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 4.0° C.

Subcontract Work

Method General Subcontract Method: This method was subcontracted to Eurofins Lancaster Laboratories Env LLC. The subcontract laboratory certification is different from that of the facility issuing the final report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

TestAmerica Sacramento
880 Riverside Parkway
West Sacramento CA 95605

Report Date: July 03, 2019 14:10

Project: Pace PFAS Testing

Account #: 01042
Group Number: 2049638
SDG: TAC06
State of Sample Origin: NY

Electronic Copy To TestAmerica

Attn: Cesar C Cortes

Respectfully Submitted,



Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
GM-26 (320-51334-1) Water	06/10/2019 09:32	1083895
GM-26l (320-51334-2) Water	06/10/2019 09:25	1083896
GM-27 (320-51334-3) Water	06/10/2019 10:40	1083897
GM-27l (320-51334-4) Water	06/10/2019 10:44	1083898
GM-28 (320-51334-5) Water	06/10/2019 12:03	1083899
GM-28l (320-51334-6) Water	06/10/2019 11:45	1083900
DUP (320-51334-7) Water	06/10/2019 10:44	1083901

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: GM-26 (320-51334-1) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083895
ELLE Group #: 2049638
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/10/2019 09:32
SDG#: TAC06-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	7.2	0.94	1.9	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	1.9	5.7	1
14473	NEtFOSAA ¹ NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	N.D.	0.94	2.8	1
14473	NMeFOSAA ¹ NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	N.D.	0.94	2.8	1
14473	Perfluorobutanesulfonic acid ¹	375-73-5	5.7	0.28	0.94	1
14473	Perfluorobutanoic Acid ¹	375-22-4	43	1.9	5.7	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.57	1.9	1
14473	Perfluorodecanoic Acid ¹	335-76-2	1.7 J	0.85	1.9	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.47	1.9	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	0.69 J	0.38	1.9	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	34	0.38	0.94	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	13	0.38	1.9	1
14473	Perfluorohexanoic Acid ¹	307-24-4	63	0.38	1.9	1
14473	Perfluorononanoic Acid ¹	375-95-1	24	0.38	1.9	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.47	2.8	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	51	0.38	1.9	1
14473	Perfluorooctanoic Acid ¹	335-67-1	32	0.28	0.94	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	94	1.9	5.7	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.28	0.94	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.38	0.94	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	3.3	0.38	1.9	1

The recovery for the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19172001	06/28/2019 16:02	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19172001	06/21/2019 07:40	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-26I (320-51334-2) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083896
ELLE Group #: 2049638
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/10/2019 09:25
SDG#: TAC06-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	9.7	0.97	1.9	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	1.9	5.8	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.97	2.9	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.97	2.9	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	4.5	0.29	0.97	1
14473	Perfluorobutanoic Acid ¹	375-22-4	49	1.9	5.8	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic Acid ¹	335-76-2	0.92 J	0.87	1.9	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.48	1.9	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	0.57 J	0.39	1.9	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	41	0.39	0.97	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	14	0.39	1.9	1
14473	Perfluorohexanoic Acid ¹	307-24-4	84	0.39	1.9	1
14473	Perfluorononanoic Acid ¹	375-95-1	11	0.39	1.9	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.48	2.9	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	27	0.39	1.9	1
14473	Perfluorooctanoic Acid ¹	335-67-1	27	0.29	0.97	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	120	1.9	5.8	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.29	0.97	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.39	0.97	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	1.9	0.39	1.9	1

The recovery for the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19172001	06/28/2019 16:11	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19172001	06/21/2019 07:40	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-27 (320-51334-3) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083897
ELLE Group #: 2049638
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/10/2019 10:40
SDG#: TAC06-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	35	1.0	2.0	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	4.9 J	2.0	6.0	1
14473	NEtFOSAA ¹ NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	15	1.0	3.0	1
14473	NMeFOSAA ¹ NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	8.3	1.0	3.0	1
14473	Perfluorobutanesulfonic acid ¹	375-73-5	25	0.30	1.0	1
14473	Perfluorobutanoic Acid ¹	375-22-4	220	2.0	6.0	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.60	2.0	1
14473	Perfluorodecanoic Acid ¹	335-76-2	38	0.90	2.0	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.50	2.0	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	1.7 J	0.40	2.0	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	100	0.40	1.0	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	42	0.40	2.0	1
14473	Perfluorohexanoic Acid ¹	307-24-4	180	0.40	2.0	1
14473	Perfluorononanoic Acid ¹	375-95-1	100	0.40	2.0	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	7.5	0.50	3.0	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	150	0.40	2.0	1
14473	Perfluorooctanoic Acid ¹	335-67-1	200	0.30	1.0	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	140	2.0	6.0	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.30	1.0	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.40	1.0	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	4.8	0.40	2.0	1

The sample injection internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19172001	06/28/2019 11:49	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19172001	06/21/2019 07:40	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-271 (320-51334-4) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083898
ELLE Group #: 2049638
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/10/2019 10:44
SDG#: TAC06-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	90	0.96	1.9	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	3.6 J	1.9	5.8	1
14473	NEtFOSAA ¹ NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	14	0.96	2.9	1
14473	NMeFOSAA ¹ NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	4.5	0.96	2.9	1
14473	Perfluorobutanesulfonic acid ¹	375-73-5	18	0.29	0.96	1
14473	Perfluorobutanoic Acid ¹	375-22-4	130	1.9	5.8	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic Acid ¹	335-76-2	24	0.87	1.9	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.48	1.9	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	1.2 J	0.39	1.9	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	62	0.39	0.96	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	27	0.39	1.9	1
14473	Perfluorohexanoic Acid ¹	307-24-4	99	0.39	1.9	1
14473	Perfluorononanoic Acid ¹	375-95-1	53	0.39	1.9	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	4.5	0.48	2.9	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	88	0.39	1.9	1
14473	Perfluorooctanoic Acid ¹	335-67-1	110	0.29	0.96	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	100	1.9	5.8	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.29	0.96	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.39	0.96	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	6.2	0.39	1.9	1

The sample injection internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.

The recovery for the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: GM-271 (320-51334-4) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083898
ELLE Group #: 2049638
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/10/2019 10:44
SDG#: TAC06-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19172001	06/28/2019 11:58	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19172001	06/21/2019 07:40	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-28 (320-51334-5) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083899
ELLE Group #: 2049638
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/10/2019 12:03
SDG#: TAC06-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	12	1.0	2.0	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	5.7 J	2.0	6.1	1
14473	NEtFOSAA ¹	2991-50-6	4.5	1.0	3.0	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	1.8 J	1.0	3.0	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	39	0.30	1.0	1
14473	Perfluorobutanoic Acid ¹	375-22-4	140	2.0	6.1	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.61	2.0	1
14473	Perfluorodecanoic Acid ¹	335-76-2	22	0.91	2.0	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.51	2.0	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	4.7	0.41	2.0	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	130	0.41	1.0	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	120	0.41	2.0	1
14473	Perfluorohexanoic Acid ¹	307-24-4	170	0.41	2.0	1
14473	Perfluorononanoic Acid ¹	375-95-1	67	0.41	2.0	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	3.7	0.51	3.0	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	190	0.41	2.0	1
14473	Perfluorooctanoic Acid ¹	335-67-1	350	0.30	1.0	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	180	2.0	6.1	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.30	1.0	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.41	1.0	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	6.0	0.41	2.0	1

The sample injection internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19172001	06/28/2019 12:07	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19172001	06/21/2019 07:40	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-28I (320-51334-6) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083900
ELLE Group #: 2049638
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/10/2019 11:45
SDG#: TAC06-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	67	1.0	2.0	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	3.3 J	2.0	6.0	1
14473	NEtFOSAA ¹ NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	10	1.0	3.0	1
14473	NMeFOSAA ¹ NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	3.2	1.0	3.0	1
14473	Perfluorobutanesulfonic acid ¹	375-73-5	14	0.30	1.0	1
14473	Perfluorobutanoic Acid ¹	375-22-4	48	2.0	6.0	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.60	2.0	1
14473	Perfluorodecanoic Acid ¹	335-76-2	15	0.90	2.0	1
14473	Perfluorododecanoic Acid ¹	307-55-1	0.69 J	0.50	2.0	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	1.3 J	0.40	2.0	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	34	0.40	1.0	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	26	0.40	2.0	1
14473	Perfluorohexanoic Acid ¹	307-24-4	55	0.40	2.0	1
14473	Perfluorononanoic Acid ¹	375-95-1	26	0.40	2.0	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	4.1	0.50	3.0	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	88	0.40	2.0	1
14473	Perfluorooctanoic Acid ¹	335-67-1	82	0.30	1.0	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	73	2.0	6.0	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.30	1.0	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.40	1.0	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	6.4	0.40	2.0	1

The sample injection internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19172001	06/30/2019 21:14	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19172001	06/21/2019 07:40	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Sample Description: DUP (320-51334-7) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083901
ELLE Group #: 2049638
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/10/2019 10:44
SDG#: TAC06-07FD

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
	LC/MS/MS Miscellaneous	EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	87	1.0	2.0	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	4.1 J	2.0	6.0	1
14473	NEtFOSAA ¹ NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.	2991-50-6	16	1.0	3.0	1
14473	NMeFOSAA ¹ NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.	2355-31-9	4.7	1.0	3.0	1
14473	Perfluorobutanesulfonic acid ¹	375-73-5	17	0.30	1.0	1
14473	Perfluorobutanoic Acid ¹	375-22-4	140	2.0	6.0	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.60	2.0	1
14473	Perfluorodecanoic Acid ¹	335-76-2	25	0.91	2.0	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.50	2.0	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	1.3 J	0.40	2.0	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	65	0.40	1.0	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	30	0.40	2.0	1
14473	Perfluorohexanoic Acid ¹	307-24-4	98	0.40	2.0	1
14473	Perfluorononanoic Acid ¹	375-95-1	53	0.40	2.0	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	5.2	0.50	3.0	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	89	0.40	2.0	1
14473	Perfluorooctanoic Acid ¹	335-67-1	110	0.30	1.0	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	95	2.0	6.0	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.30	1.0	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.40	1.0	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	6.7	0.40	2.0	1

The sample injection internal standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

The recovery for labeled compound used as extraction standards is outside of QC acceptance limits as noted on the QC Summary due to the matrix of the sample.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19172001	06/28/2019 12:25	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19172001	06/21/2019 07:40	Courtney J Fatta	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: TestAmerica Sacramento
Reported: 07/03/2019 14:10

Group Number: 2049638

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result ng/l	MDL** ng/l	LOQ ng/l
Batch number: 19172001	Sample number(s): 1083895-1083901		
6:2-Fluorotelomersulfonic acid	N.D.	1.0	2.0
8:2-Fluorotelomersulfonic acid	N.D.	2.0	6.0
NEtFOSAA	N.D.	1.0	3.0
NMeFOSAA	N.D.	1.0	3.0
Perfluorobutanesulfonic acid	N.D.	0.30	1.0
Perfluorobutanoic Acid	N.D.	2.0	6.0
Perfluorodecanesulfonic acid	N.D.	0.60	2.0
Perfluorodecanoic Acid	N.D.	0.90	2.0
Perfluorododecanoic Acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.40	2.0
Perfluoroheptanoic Acid	N.D.	0.40	1.0
Perfluorohexanesulfonic acid	N.D.	0.40	2.0
Perfluorohexanoic Acid	N.D.	0.40	2.0
Perfluorononanoic Acid	N.D.	0.40	2.0
Perfluorooctanesulfonamide	N.D.	0.50	3.0
Perfluorooctanesulfonic acid	N.D.	0.40	2.0
Perfluorooctanoic Acid	N.D.	0.30	1.0
Perfluoropentanoic Acid	N.D.	2.0	6.0
Perfluorotetradecanoic Acid	N.D.	0.30	1.0
Perfluorotridecanoic Acid	N.D.	0.40	1.0
Perfluoroundecanoic Acid	N.D.	0.40	2.0

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19172001	Sample number(s): 1083895-1083901								
6:2-Fluorotelomersulfonic acid	15.17	18.11	15.17	18.27	119	120	66-155	1	30
8:2-Fluorotelomersulfonic acid	15.33	18.74	15.33	19.21	122	125	66-148	2	30
NEtFOSAA	5.44	6.11	5.44	6.34	112	117	55-169	4	30
NMeFOSAA	5.44	5.75	5.44	6.18	106	114	44-147	7	30
Perfluorobutanesulfonic acid	4.81	5.45	4.81	5.32	113	110	73-128	3	30
Perfluorobutanoic Acid	5.44	6.64	5.44	6.67	122	123	74-142	0	30
Perfluorodecanesulfonic acid	5.24	5.64	5.24	5.32	108	101	60-135	6	30
Perfluorodecanoic Acid	5.44	5.99	5.44	6.10	110	112	69-148	2	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: TestAmerica Sacramento
Reported: 07/03/2019 14:10

Group Number: 2049638

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluorododecanoic Acid	5.44	6.16	5.44	6.99	113	128	75-136	13	30
Perfluoroheptanesulfonic acid	5.18	5.30	5.18	5.78	102	112	64-135	9	30
Perfluoroheptanoic Acid	5.44	5.93	5.44	5.30	109	97	76-140	11	30
Perfluorohexanesulfonic acid	5.14	5.33	5.14	5.14	104	100	71-131	4	30
Perfluorohexanoic Acid	5.44	6.42	5.44	5.81	118	107	75-135	10	30
Perfluorononanoic Acid	5.44	5.85	5.44	6.85	108	126	72-148	16	30
Perfluorooctanesulfonamide	5.44	6.41	5.44	6.49	118	119	65-164	1	30
Perfluorooctanesulfonic acid	5.20	5.42	5.20	5.41	104	104	67-138	0	30
Perfluorooctanoic Acid	5.44	6.21	5.44	6.02	114	111	72-138	3	30
Perfluoropentanoic Acid	5.44	5.78	5.44	5.35	106	98	74-134	8	30
Perfluorotetradecanoic Acid	5.44	5.53	5.44	6.74	102	124	74-135	20	30
Perfluorotridecanoic Acid	5.44	6.13	5.44	7.56	113	139	61-145	21	30
Perfluoroundecanoic Acid	5.44	6.54	5.44	6.56	120	121	75-146	0	30

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 21 PFAS
Batch number: 19172001

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1083895	77	77	106	58	76	67
1083896	80	76	97	60	89	79
1083897	43	71	193*	51	140*	73
1083898	46	79	167*	51	109	66
1083899	55	93	235*	44	110	61
1083900	65	73	147	55	98	69
1083901	50	86	185*	50	103	63
Blank	69	70	62	64	71	69
LCS	80	84	71	77	87	81
LCSD	80	83	71	81	83	86
Limits:	33-123	31-157	26-148	35-138	34-126	35-126
	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1083895	197*	75	81	88	76	125
1083896	199*	82	83	88	74	128
1083897	398*	83	75	53	74	308*
1083898	312*	74	68	50	66	232*
1083899	303*	73	77	60	71	232*
1083900	268*	77	78	67	73	221*

*- Outside of specification

**--This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: TestAmerica Sacramento
Reported: 07/03/2019 14:10

Group Number: 2049638

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 21 PFAS
Batch number: 19172001

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1083901	304*	71	68	52	65	220*
Blank	59	64	68	64	71	58
LCS	78	79	80	82	77	73
LCSD	74	78	79	74	76	72
Limits:	32-170	48-122	50-121	41-144	47-125	27-164
	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDoDA	13C2-PFTeDA	13C8-PFOA
1083895	75	61	74	44	13*	46
1083896	78	68	82	61	34	54
1083897	90	79	109	64	49	33
1083898	72	61	73	54	20*	31
1083899	77	80	88	70	46	33
1083900	78	82	97	70	29	35
1083901	64	61	68	50	27	37
Blank	78	64	74	60	57	54
LCS	84	72	80	70	63	61
LCSD	84	71	82	64	59	61
Limits:	30-127	30-128	30-142	39-130	26-119	11-127

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.



Client: TestAmerica

Delivery and Receipt Information

Delivery Method: Fed Ex Arrival Timestamp: 06/19/2019 10:10
 Number of Packages: 1 Number of Projects: 2
 State/Province of Origin: NY

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace \geq 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 12:42 on 06/19/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT131	1.7	DT	Wet	Y	Loose	N

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

April 09, 2019

Joe Guarino
Town of Babylon
281 Phelps Lane
North Babylon, NY 11703

RE: Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

Dear Joe Guarino:

Enclosed are the analytical results for sample(s) received by the laboratory on March 20, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,



Jennifer Aracri
jennifer.aracri@pacelabs.com
(631)694-3040
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485
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
CNMI Saipan Certification #: MP0003
Colorado Certification #: MN00064
Connecticut Certification #: PH-0256
EPA Region 8+Wyoming DW Certification #: via MN 027-053-137
Florida Certification #: E87605
Georgia Certification #: 959
Guam EPA Certification #: MN00064
Hawaii Certification #: MN00064
Idaho Certification #: MN00064
Illinois Certification #: 200011
Indiana Certification #: C-MN-01
Iowa Certification #: 368
Kansas Certification #: E-10167
Kentucky DW Certification #: 90062
Kentucky WW Certification #: 90062
Louisiana DEQ Certification #: 03086
Louisiana DW Certification #: MN00064
Maine Certification #: MN00064
Maryland Certification #: 322
Massachusetts Certification #: M-MN064
Michigan Certification #: 9909
Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137
Minnesota Petrofund Certification #: 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 #: CL101
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
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

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747
New York Certification #: 10478 Primary Accrediting Body
New Jersey Certification #: NY158
Pennsylvania Certification #: 68-00350
Connecticut Certification #: PH-0435

Maryland Certification #: 208
Rhode Island Certification #: LAO00340
Massachusetts Certification #: M-NY026
New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7082918001	GM-26	EPA 6010C	JMW	8	PACE-MV
		EPA 8270D by SIM	AT1	2	PASI-M
		EPA 180.1	BP1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	STH	1	PACE-MV
		SM22 2540C	STH	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		EPA 420.1	STH	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
		7082918002	GM-26I	EPA 6010C	JMW
EPA 8270D by SIM	AT1			2	PASI-M
EPA 180.1	BP1			1	PACE-MV
SM22 2320B	AK1			1	PACE-MV
SM22 2340C	STH			1	PACE-MV
SM22 2540C	STH			1	PACE-MV
EPA 410.4	JCA			1	PACE-MV
SM22 5210B	VNS			1	PACE-MV
EPA 300.0	BNK			3	PACE-MV
EPA 351.2	SDO			1	PACE-MV
EPA 353.2	SDO			2	PACE-MV
EPA 353.2	SDO			1	PACE-MV
EPA 420.1	STH			1	PACE-MV
SM22 4500 NH3 H	BNK			1	PACE-MV
SM22 5310B	KM1			1	PACE-MV
7082918003	GM-27			EPA 6010C	JMW
		EPA 8270D by SIM	AT1	2	PASI-M
		EPA 180.1	BP1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	STH	1	PACE-MV
		SM22 2540C	STH	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7082918004	GM-27I	SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		EPA 420.1	STH	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	8	PACE-MV
		EPA 8270D by SIM	AT1	2	PASI-M
		EPA 180.1	BP1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	STH	1	PACE-MV
		SM22 2540C	STH	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
EPA 420.1	STH	1	PACE-MV		
SM22 4500 NH3 H	BNK	1	PACE-MV		
SM22 5310B	KM1	1	PACE-MV		
7082918005	GM-28	EPA 6010C	JMW	8	PACE-MV
		EPA 8270D by SIM	AT1	2	PASI-M
		EPA 180.1	BP1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	STH	1	PACE-MV
		SM22 2540C	STH	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		EPA 420.1	STH	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7082918006	GM-28I	SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	8	PACE-MV
		EPA 8270D by SIM	AT1	2	PASI-M
		EPA 180.1	BP1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	STH	1	PACE-MV
		SM22 2540C	STH	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		EPA 420.1	STH	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
7082918007	DUP	SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	8	PACE-MV
		EPA 8270D by SIM	AT1	2	PASI-M
		EPA 180.1	BP1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	STH	1	PACE-MV
		SM22 2540C	STH	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		EPA 420.1	STH	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
SM22 5310B	KM1	1	PACE-MV		

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: EPA 6010C

Description: 6010 MET ICP

Client: Town of Babylon

Date: April 09, 2019

General Information:

7 samples were analyzed for EPA 6010C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: EPA 8270D by SIM

Description: 8270D MSSV 14 Dioxane By SIM

Client: Town of Babylon

Date: April 09, 2019

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

QC Batch: 595547

B: Analyte was detected in the associated method blank.

- BLANK for HBN 595547 [OEXT/476 (Lab ID: 3219789)
- 1,4-Dioxane (SIM)

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 595547

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

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: EPA 180.1

Description: 180.1 Turbidity

Client: Town of Babylon

Date: April 09, 2019

General Information:

7 samples were analyzed for EPA 180.1. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: SM22 2320B

Description: 2320B Alkalinity

Client: Town of Babylon

Date: April 09, 2019

General Information:

6 samples were analyzed for SM22 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: SM22 2320B

Description: 2320B Alkalinity

Client: Town of Babylon

Date: April 09, 2019

General Information:

1 sample was analyzed for SM22 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

Method: SM22 2340C
Description: 2340C Hardness, Total
Client: Town of Babylon
Date: April 09, 2019

General Information:

7 samples were analyzed for SM22 2340C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: SM22 2540C

Description: 2540C Total Dissolved Solids

Client: Town of Babylon

Date: April 09, 2019

General Information:

7 samples were analyzed for SM22 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: EPA 410.4

Description: 410.4 COD

Client: Town of Babylon

Date: April 09, 2019

General Information:

7 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

Method: SM22 5210B
Description: 5210B BOD, 5 day
Client: Town of Babylon
Date: April 09, 2019

General Information:

7 samples were analyzed for SM22 5210B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with SM22 5210B with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

Method: EPA 300.0
Description: 300.0 IC Anions 28 Days
Client: Town of Babylon
Date: April 09, 2019

General Information:

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

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: EPA 351.2

Description: 351.2 Total Kjeldahl Nitrogen

Client: Town of Babylon

Date: April 09, 2019

General Information:

7 samples were analyzed for EPA 351.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 107272

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7083477002,7083751001

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

- MS (Lab ID: 496386)
 - Nitrogen, Kjeldahl, Total
- MS (Lab ID: 496388)
 - Nitrogen, Kjeldahl, Total

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: EPA 353.2

Description: 353.2 Nitrogen, NO₂/NO₃ unpres

Client: Town of Babylon

Date: April 09, 2019

General Information:

7 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 106242

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7082918001,7082967001

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

- MS (Lab ID: 491338)
 - Nitrate-Nitrite (as N)
- MS (Lab ID: 491340)
 - Nitrate-Nitrite (as N)

QC Batch: 106243

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7082856001,7082954001

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

- MS (Lab ID: 491344)
 - Nitrate-Nitrite (as N)

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: EPA 353.2

Description: 353.2 Nitrogen, NO₂

Client: Town of Babylon

Date: April 09, 2019

General Information:

7 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: EPA 420.1

Description: Phenolics, Total Recoverable

Client: Town of Babylon

Date: April 09, 2019

General Information:

7 samples were analyzed for EPA 420.1. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 420.1 with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: SM22 4500 NH3 H

Description: 4500 Ammonia Water

Client: Town of Babylon

Date: April 09, 2019

General Information:

7 samples were analyzed for SM22 4500 NH3 H. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Method: SM22 5310B

Description: 5310B TOC as NPOC

Client: Town of Babylon

Date: April 09, 2019

General Information:

7 samples were analyzed for SM22 5310B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Sample: GM-26	Lab ID: 7082918001	Collected: 03/20/19 09:05	Received: 03/20/19 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	03/22/19 14:20	03/24/19 11:28	7440-43-9	
Calcium	97900	ug/L	200	1	03/22/19 14:20	03/24/19 11:28	7440-70-2	
Iron	25600	ug/L	20.0	1	03/22/19 14:20	03/24/19 11:28	7439-89-6	
Lead	358	ug/L	5.0	1	03/22/19 14:20	03/24/19 11:28	7439-92-1	
Magnesium	10600	ug/L	200	1	03/22/19 14:20	03/24/19 11:28	7439-95-4	
Manganese	638	ug/L	10.0	1	03/22/19 14:20	03/24/19 11:28	7439-96-5	
Potassium	19200	ug/L	5000	1	03/22/19 14:20	03/24/19 11:28	7440-09-7	
Sodium	113000	ug/L	5000	1	03/22/19 14:20	03/24/19 11:28	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.12J	ug/L	0.25	1	03/25/19 17:46	03/27/19 18:52	123-91-1	B
<i>Surrogates</i>								
1,4-Dioxane-d8 (S)	30	%	30-125	1	03/25/19 17:46	03/27/19 18:52		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	406	NTU	50.0	50		03/20/19 17:54		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	159	mg/L	1.0	1		03/25/19 15:04		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	250	mg/L	5.0	1		03/25/19 14:42		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	664	mg/L	40.0	1		03/26/19 13:40		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	34.5	mg/L	10.0	1	03/27/19 09:10	03/27/19 11:54		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	1.0J	mg/L	4.0	2	03/21/19 12:38	03/26/19 10:58		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	0.80	mg/L	0.50	1		03/28/19 21:00	24959-67-9	
Chloride	225	mg/L	20.0	10		03/28/19 21:16	16887-00-6	
Sulfate	128	mg/L	50.0	10		03/28/19 21:16	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	<0.10	mg/L	0.10	1	03/29/19 05:56	03/29/19 12:45	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	8.0	mg/L	0.50	10		03/20/19 21:33	14797-55-8	
Nitrate-Nitrite (as N)	8.0	mg/L	0.50	10		03/20/19 21:33	7727-37-9	M6

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Sample: GM-26		Lab ID: 7082918001		Collected: 03/20/19 09:05	Received: 03/20/19 12:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		03/20/19 20:09	14797-65-0	
Phenolics, Total Recoverable		Analytical Method: EPA 420.1 Preparation Method: EPA 420.1						
Phenolics, Total Recoverable	13.8	ug/L	10.0	1	03/25/19 12:00	03/25/19 16:19		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	0.022J	mg/L	0.10	1		03/29/19 15:19	7664-41-7	
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	4.1	mg/L	1.0	1		03/25/19 16:59	7440-44-0	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Sample: GM-261	Lab ID: 7082918002	Collected: 03/20/19 09:15	Received: 03/20/19 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	03/22/19 14:20	03/24/19 11:33	7440-43-9	
Calcium	40700	ug/L	200	1	03/22/19 14:20	03/24/19 11:33	7440-70-2	
Iron	6020	ug/L	20.0	1	03/22/19 14:20	03/24/19 11:33	7439-89-6	
Lead	29.0	ug/L	5.0	1	03/22/19 14:20	03/24/19 11:33	7439-92-1	
Magnesium	3150	ug/L	200	1	03/22/19 14:20	03/24/19 11:33	7439-95-4	
Manganese	72.1	ug/L	10.0	1	03/22/19 14:20	03/24/19 11:33	7439-96-5	
Potassium	13200	ug/L	5000	1	03/22/19 14:20	03/24/19 11:33	7440-09-7	
Sodium	31900	ug/L	5000	1	03/22/19 14:20	03/24/19 11:33	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.12J	ug/L	0.25	1	03/25/19 17:46	03/27/19 19:12	123-91-1	B
Surrogates								
1,4-Dioxane-d8 (S)	40	%	30-125	1	03/25/19 17:46	03/27/19 19:12		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	85.0	NTU	5.0	5		03/20/19 17:56		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	51.2	mg/L	1.0	1		03/25/19 15:11		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	92.0	mg/L	5.0	1		03/25/19 14:45		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	248	mg/L	20.0	1		03/26/19 13:40		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	03/27/19 09:10	03/27/19 11:55		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	1.0J	mg/L	2.0	1	03/21/19 12:38	03/26/19 11:00		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	0.43J	mg/L	0.50	1		03/28/19 21:33	24959-67-9	
Chloride	62.2	mg/L	20.0	10		03/28/19 21:50	16887-00-6	
Sulfate	58.0	mg/L	50.0	10		03/28/19 21:50	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	<0.10	mg/L	0.10	1	03/29/19 05:56	03/29/19 12:45	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	4.7	mg/L	0.50	10		03/20/19 21:39	14797-55-8	
Nitrate-Nitrite (as N)	4.7	mg/L	0.50	10		03/20/19 21:39	7727-37-9	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Sample: GM-26I		Lab ID: 7082918002		Collected: 03/20/19 09:15	Received: 03/20/19 12:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		03/20/19 20:15	14797-65-0	
Phenolics, Total Recoverable		Analytical Method: EPA 420.1 Preparation Method: EPA 420.1						
Phenolics, Total Recoverable	4.3J	ug/L	5.0	1	03/25/19 12:00	03/25/19 16:19		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	<0.10	mg/L	0.10	1		03/29/19 15:21	7664-41-7	
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	1.9	mg/L	1.0	1		03/25/19 17:47	7440-44-0	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Sample: GM-27	Lab ID: 7082918003	Collected: 03/20/19 10:28	Received: 03/20/19 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	03/22/19 14:20	03/24/19 11:39	7440-43-9	
Calcium	72600	ug/L	200	1	03/22/19 14:20	03/24/19 11:39	7440-70-2	
Iron	3370	ug/L	20.0	1	03/22/19 14:20	03/24/19 11:39	7439-89-6	
Lead	8.8	ug/L	5.0	1	03/22/19 14:20	03/24/19 11:39	7439-92-1	
Magnesium	15300	ug/L	200	1	03/22/19 14:20	03/24/19 11:39	7439-95-4	
Manganese	214	ug/L	10.0	1	03/22/19 14:20	03/24/19 11:39	7439-96-5	
Potassium	44000	ug/L	5000	1	03/22/19 14:20	03/24/19 11:39	7440-09-7	
Sodium	266000	ug/L	5000	1	03/22/19 14:20	03/24/19 11:39	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.36	ug/L	0.23	1	03/25/19 17:46	03/27/19 19:33	123-91-1	B
<i>Surrogates</i>								
1,4-Dioxane-d8 (S)	34	%	30-125	1	03/25/19 17:46	03/27/19 19:33		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	20.6	NTU	5.0	5		03/20/19 18:06		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	424	mg/L	1.0	1		03/25/19 15:29		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	250	mg/L	5.0	1		03/25/19 14:47		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	956	mg/L	40.0	1		03/26/19 13:40		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	196	mg/L	10.0	1	03/27/19 09:10	03/27/19 11:55		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	38.9	mg/L	10.0	5	03/21/19 12:38	03/26/19 11:05		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	2.5	mg/L	0.50	1		03/28/19 22:06	24959-67-9	
Chloride	468	mg/L	40.0	20		03/28/19 22:23	16887-00-6	
Sulfate	<5.0	mg/L	5.0	1		03/28/19 22:06	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	36.2	mg/L	1.0	10	03/29/19 05:56	03/29/19 12:46	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	0.034J	mg/L	0.050	1		03/20/19 21:40	14797-55-8	
Nitrate-Nitrite (as N)	<0.050	mg/L	0.050	1		03/20/19 21:40	7727-37-9	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: GM-27								
Lab ID: 7082918003								
Collected: 03/20/19 10:28 Received: 03/20/19 12:00 Matrix: Water								
353.2 Nitrogen, NO2								
Analytical Method: EPA 353.2								
Nitrite as N	<0.050	mg/L	0.050	1		03/20/19 20:16	14797-65-0	
Phenolics, Total Recoverable								
Analytical Method: EPA 420.1 Preparation Method: EPA 420.1								
Phenolics, Total Recoverable	46.6	ug/L	10.0	2	03/25/19 12:00	03/25/19 16:26		
4500 Ammonia Water								
Analytical Method: SM22 4500 NH3 H								
Nitrogen, Ammonia	29.5	mg/L	2.0	20		03/29/19 15:22	7664-41-7	
5310B TOC as NPOC								
Analytical Method: SM22 5310B								
Total Organic Carbon	63.2	mg/L	1.0	1		03/25/19 18:01	7440-44-0	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Sample: GM-271	Lab ID: 7082918004	Collected: 03/20/19 10:08	Received: 03/20/19 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	03/22/19 14:20	03/24/19 11:44	7440-43-9	
Calcium	63200	ug/L	200	1	03/22/19 14:20	03/24/19 11:44	7440-70-2	
Iron	2750	ug/L	20.0	1	03/22/19 14:20	03/24/19 11:44	7439-89-6	
Lead	5.3	ug/L	5.0	1	03/22/19 14:20	03/24/19 11:44	7439-92-1	
Magnesium	4470	ug/L	200	1	03/22/19 14:20	03/24/19 11:44	7439-95-4	
Manganese	120	ug/L	10.0	1	03/22/19 14:20	03/24/19 11:44	7439-96-5	
Potassium	16200	ug/L	5000	1	03/22/19 14:20	03/24/19 11:44	7440-09-7	
Sodium	144000	ug/L	5000	1	03/22/19 14:20	03/24/19 11:44	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.26J	ug/L	0.28	1	03/25/19 17:46	03/27/19 19:54	123-91-1	B
Surrogates								
1,4-Dioxane-d8 (S)	39	%	30-125	1	03/25/19 17:46	03/27/19 19:54		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	15.3	NTU	5.0	5		03/20/19 18:00		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	183	mg/L	1.0	1		03/25/19 15:53		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	160	mg/L	5.0	1		03/25/19 14:49		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	736	mg/L	40.0	1		03/26/19 13:54		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	72.0	mg/L	10.0	1	03/27/19 09:10	03/27/19 11:55		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	17.1	mg/L	4.0	2	03/21/19 12:38	03/26/19 11:08		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	1.5	mg/L	0.50	1		03/28/19 22:40	24959-67-9	
Chloride	343	mg/L	40.0	20		03/28/19 22:57	16887-00-6	
Sulfate	9.3	mg/L	5.0	1		03/28/19 22:40	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	12.8	mg/L	1.0	10	03/29/19 05:56	03/29/19 12:47	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	0.086	mg/L	0.050	1		03/20/19 21:42	14797-55-8	
Nitrate-Nitrite (as N)	0.086	mg/L	0.050	1		03/20/19 21:42	7727-37-9	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Sample: GM-271		Lab ID: 7082918004		Collected: 03/20/19 10:08	Received: 03/20/19 12:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		03/20/19 20:17	14797-65-0	
Phenolics, Total Recoverable		Analytical Method: EPA 420.1 Preparation Method: EPA 420.1						
Phenolics, Total Recoverable	12.0	ug/L	5.0	1	03/25/19 12:00	03/25/19 16:26		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	11.0	mg/L	1.0	10		03/29/19 15:23	7664-41-7	
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	23.3	mg/L	1.0	1		03/25/19 18:15	7440-44-0	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Sample: GM-28	Lab ID: 7082918005	Collected: 03/20/19 11:25	Received: 03/20/19 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	03/22/19 14:20	03/24/19 11:50	7440-43-9	
Calcium	384000	ug/L	200	1	03/22/19 14:20	03/24/19 11:50	7440-70-2	
Iron	13500	ug/L	20.0	1	03/22/19 14:20	03/24/19 11:50	7439-89-6	
Lead	9.5	ug/L	5.0	1	03/22/19 14:20	03/24/19 11:50	7439-92-1	
Magnesium	80300	ug/L	200	1	03/22/19 14:20	03/24/19 11:50	7439-95-4	
Manganese	2740	ug/L	10.0	1	03/22/19 14:20	03/24/19 11:50	7439-96-5	
Potassium	58200	ug/L	5000	1	03/22/19 14:20	03/24/19 11:50	7440-09-7	
Sodium	197000	ug/L	5000	1	03/22/19 14:20	03/24/19 11:50	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.24	ug/L	0.23	1	03/25/19 17:46	03/27/19 20:15	123-91-1	B
<i>Surrogates</i>								
1,4-Dioxane-d8 (S)	34	%	30-125	1	03/25/19 17:46	03/27/19 20:15		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	72.0	NTU	5.0	5		03/20/19 18:10		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	1060	mg/L	5.0	1		03/26/19 08:37		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	1240	mg/L	5.0	1		03/25/19 14:51		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	1670	mg/L	40.0	1		03/26/19 13:54		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	107	mg/L	10.0	1	03/27/19 09:10	03/27/19 11:56		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	4.4	mg/L	4.0	2	03/21/19 12:38	03/26/19 11:10		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	1.0	mg/L	0.50	1		03/28/19 23:13	24959-67-9	
Chloride	217	mg/L	20.0	10		03/28/19 23:30	16887-00-6	
Sulfate	<5.0	mg/L	5.0	1		03/28/19 23:13	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	10.8	mg/L	1.0	10	03/29/19 05:56	03/29/19 12:48	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	0.022J	mg/L	0.050	1		03/20/19 21:43	14797-55-8	
Nitrate-Nitrite (as N)	<0.050	mg/L	0.050	1		03/20/19 21:43	7727-37-9	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
Sample: GM-28								
Lab ID: 7082918005								
Collected: 03/20/19 11:25 Received: 03/20/19 12:00 Matrix: Water								
353.2 Nitrogen, NO2								
Analytical Method: EPA 353.2								
Nitrite as N	<0.050	mg/L	0.050	1		03/20/19 20:18	14797-65-0	
Phenolics, Total Recoverable								
Analytical Method: EPA 420.1 Preparation Method: EPA 420.1								
Phenolics, Total Recoverable	12.5	ug/L	5.0	1	03/25/19 12:00	03/25/19 16:27		
4500 Ammonia Water								
Analytical Method: SM22 4500 NH3 H								
Nitrogen, Ammonia	8.8	mg/L	1.0	10		03/29/19 15:24	7664-41-7	
5310B TOC as NPOC								
Analytical Method: SM22 5310B								
Total Organic Carbon	33.5	mg/L	1.0	1		03/25/19 18:28	7440-44-0	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

Sample: GM-281	Lab ID: 7082918006	Collected: 03/20/19 11:15	Received: 03/20/19 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	03/22/19 14:20	03/24/19 12:06	7440-43-9	
Calcium	35300	ug/L	200	1	03/22/19 14:20	03/24/19 12:06	7440-70-2	
Iron	2940	ug/L	20.0	1	03/22/19 14:20	03/24/19 12:06	7439-89-6	
Lead	5.2	ug/L	5.0	1	03/22/19 14:20	03/24/19 12:06	7439-92-1	
Magnesium	2580	ug/L	200	1	03/22/19 14:20	03/24/19 12:06	7439-95-4	
Manganese	320	ug/L	10.0	1	03/22/19 14:20	03/24/19 12:06	7439-96-5	
Potassium	42700	ug/L	5000	1	03/22/19 14:20	03/24/19 12:06	7440-09-7	
Sodium	85200	ug/L	5000	1	03/22/19 14:20	03/24/19 12:06	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.22J	ug/L	0.23	1	03/25/19 17:46	03/27/19 20:35	123-91-1	B
<i>Surrogates</i>								
1,4-Dioxane-d8 (S)	34	%	30-125	1	03/25/19 17:46	03/27/19 20:35		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	15.6	NTU	1.0	1		03/20/19 18:08		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	103	mg/L	1.0	1		03/25/19 16:41		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	92.0	mg/L	5.0	1		03/25/19 14:52		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	464	mg/L	20.0	1		03/26/19 13:54		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	21.2	mg/L	10.0	1	03/27/19 09:10	03/27/19 11:56		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	12.1	mg/L	4.0	2	03/21/19 12:39	03/26/19 11:12		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	1.4	mg/L	0.50	1		03/29/19 00:20	24959-67-9	
Chloride	248	mg/L	10.0	5		03/29/19 00:37	16887-00-6	
Sulfate	15.2	mg/L	5.0	1		03/29/19 00:20	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	3.8	mg/L	1.0	10	03/29/19 05:56	03/29/19 12:49	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	0.051	mg/L	0.050	1		03/20/19 21:46	14797-55-8	
Nitrate-Nitrite (as N)	0.051	mg/L	0.050	1		03/20/19 21:46	7727-37-9	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Sample: GM-28I		Lab ID: 7082918006		Collected: 03/20/19 11:15	Received: 03/20/19 12:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		03/20/19 20:20	14797-65-0	
Phenolics, Total Recoverable		Analytical Method: EPA 420.1 Preparation Method: EPA 420.1						
Phenolics, Total Recoverable	13.6	ug/L	5.0	1	03/25/19 12:00	03/25/19 16:27		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	7.3	mg/L	1.0	10		03/29/19 15:25	7664-41-7	
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	4.3	mg/L	1.0	1		03/25/19 18:41	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Sample: DUP	Lab ID: 7082918007	Collected: 03/20/19 10:10	Received: 03/20/19 12:00	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Cadmium	<2.5	ug/L	2.5	1	03/22/19 14:20	03/24/19 12:12	7440-43-9	
Calcium	70600	ug/L	200	1	03/22/19 14:20	03/24/19 12:12	7440-70-2	
Iron	2980	ug/L	20.0	1	03/22/19 14:20	03/24/19 12:12	7439-89-6	
Lead	4.2J	ug/L	5.0	1	03/22/19 14:20	03/24/19 12:12	7439-92-1	
Magnesium	5070	ug/L	200	1	03/22/19 14:20	03/24/19 12:12	7439-95-4	
Manganese	179	ug/L	10.0	1	03/22/19 14:20	03/24/19 12:12	7439-96-5	
Potassium	21300	ug/L	5000	1	03/22/19 14:20	03/24/19 12:12	7440-09-7	
Sodium	164000	ug/L	5000	1	03/22/19 14:20	03/24/19 12:12	7440-23-5	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.16J	ug/L	0.25	1	03/25/19 17:46	03/27/19 20:56	123-91-1	B
<i>Surrogates</i>								
1,4-Dioxane-d8 (S)	47	%	30-125	1	03/25/19 17:46	03/27/19 20:56		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	15.0	NTU	5.0	5		03/20/19 18:03		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	196	mg/L	1.0	1		03/25/19 17:09		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	180	mg/L	5.0	1		03/25/19 14:54		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	648	mg/L	40.0	1		03/26/19 13:54		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	52.1	mg/L	10.0	1	03/27/19 09:10	03/27/19 11:57		
5210B BOD, 5 day								
Analytical Method: SM22 5210B Preparation Method: SM22 5210B								
BOD, 5 day	19.5	mg/L	4.0	2	03/21/19 12:39	03/26/19 11:14		
300.0 IC Anions 28 Days								
Analytical Method: EPA 300.0								
Bromide	1.4	mg/L	0.50	1		03/29/19 00:54	24959-67-9	
Chloride	340	mg/L	20.0	10		03/29/19 01:10	16887-00-6	
Sulfate	9.9	mg/L	5.0	1		03/29/19 00:54	14808-79-8	
351.2 Total Kjeldahl Nitrogen								
Analytical Method: EPA 351.2 Preparation Method: EPA 351.2								
Nitrogen, Kjeldahl, Total	10.1	mg/L	1.0	10	03/29/19 05:56	03/29/19 12:50	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres								
Analytical Method: EPA 353.2								
Nitrate as N	0.063	mg/L	0.050	1		03/20/19 21:48	14797-55-8	
Nitrate-Nitrite (as N)	0.063	mg/L	0.050	1		03/20/19 21:48	7727-37-9	

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ANALYTICAL RESULTS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Sample: DUP		Lab ID: 7082918007		Collected: 03/20/19 10:10	Received: 03/20/19 12:00	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
353.2 Nitrogen, NO2		Analytical Method: EPA 353.2						
Nitrite as N	<0.050	mg/L	0.050	1		03/20/19 20:21	14797-65-0	
Phenolics, Total Recoverable		Analytical Method: EPA 420.1 Preparation Method: EPA 420.1						
Phenolics, Total Recoverable	13.1	ug/L	5.0	1	03/25/19 12:00	03/25/19 16:28		
4500 Ammonia Water		Analytical Method: SM22 4500 NH3 H						
Nitrogen, Ammonia	9.8	mg/L	1.0	10		03/29/19 15:27	7664-41-7	
5310B TOC as NPOC		Analytical Method: SM22 5310B						
Total Organic Carbon	17.7	mg/L	1.0	1		03/25/19 18:54	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

QC Batch: 106564 Analysis Method: EPA 6010C
 QC Batch Method: EPA 3005A Analysis Description: 6010 MET Water
 Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 492797 Matrix: Water
 Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Cadmium	ug/L	<2.5	2.5	03/24/19 11:01	
Calcium	ug/L	<200	200	03/24/19 11:01	
Iron	ug/L	<20.0	20.0	03/24/19 11:01	
Lead	ug/L	<5.0	5.0	03/24/19 11:01	
Magnesium	ug/L	<200	200	03/24/19 11:01	
Manganese	ug/L	<10.0	10.0	03/24/19 11:01	
Potassium	ug/L	<5000	5000	03/24/19 11:01	
Sodium	ug/L	<5000	5000	03/24/19 11:01	

LABORATORY CONTROL SAMPLE: 492798

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	50	51.6	103	80-120	
Calcium	ug/L	25000	25800	103	80-120	
Iron	ug/L	2000	2010	100	80-120	
Lead	ug/L	500	520	104	80-120	
Magnesium	ug/L	25000	25500	102	80-120	
Manganese	ug/L	250	266	106	80-120	
Potassium	ug/L	50000	49000	98	80-120	
Sodium	ug/L	50000	49600	99	80-120	

MATRIX SPIKE SAMPLE: 492800

Parameter	Units	7083110004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Cadmium	ug/L	<2.5	50	52.2	104	75-125	
Calcium	ug/L	5760	25000	31500	103	75-125	
Iron	ug/L	15.8J	2000	2050	102	75-125	
Lead	ug/L	<5.0	500	526	105	75-125	
Magnesium	ug/L	4310	25000	29800	102	75-125	
Manganese	ug/L	128	250	390	105	75-125	
Potassium	ug/L	<5000	50000	51800	99	75-125	
Sodium	ug/L	17900	50000	67400	99	75-125	

SAMPLE DUPLICATE: 492799

Parameter	Units	7083110004 Result	Dup Result	RPD	Qualifiers
Cadmium	ug/L	<2.5	<2.5		

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

SAMPLE DUPLICATE: 492799

Parameter	Units	7083110004 Result	Dup Result	RPD	Qualifiers
Calcium	ug/L	5760	5750	0	
Iron	ug/L	15.8J	14.6J		
Lead	ug/L	<5.0	<5.0		
Magnesium	ug/L	4310	4360	1	
Manganese	ug/L	128	128	0	
Potassium	ug/L	<5000	<5000		
Sodium	ug/L	17900	17700	1	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

QC Batch: 595547

Analysis Method: EPA 8270D by SIM

QC Batch Method: EPA 3510

Analysis Description: 8270D Water 14 Dioxane by SIM

Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 3219789

Matrix: Water

Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
1,4-Dioxane (SIM)	ug/L	0.13J	0.25	03/27/19 17:49	
1,4-Dioxane-d8 (S)	%.	35	30-125	03/27/19 17:49	

LABORATORY CONTROL SAMPLE & LCSD: 3219790

3219791

Parameter	Units	Spike Conc.	LCS Result	LCSD Result	LCS % Rec	LCSD % Rec	% Rec Limits	RPD	Max RPD	Qualifiers
1,4-Dioxane (SIM)	ug/L	10	8.1	9.2	81	92	40-125	13	20	
1,4-Dioxane-d8 (S)	%.				32	35	30-125			

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

QC Batch: 106224 Analysis Method: EPA 180.1
QC Batch Method: EPA 180.1 Analysis Description: 180.1 Turbidity
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 491074 Matrix: Water
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	<1.0	1.0	03/20/19 17:34	

LABORATORY CONTROL SAMPLE: 491075

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	10	9.6	96	90-110	

SAMPLE DUPLICATE: 491076

Parameter	Units	7082924007 Result	Dup Result	RPD	Qualifiers
Turbidity	NTU	<1.0	<1.0		

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

QC Batch: 106702 Analysis Method: SM22 2320B
QC Batch Method: SM22 2320B Analysis Description: 2320B Alkalinity
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918006, 7082918007

METHOD BLANK: 493512 Matrix: Water
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<1.0	1.0	03/25/19 13:44	

LABORATORY CONTROL SAMPLE: 493513

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	25	25.7	103	80-120	

MATRIX SPIKE SAMPLE: 493558

Parameter	Units	7082918006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	103	25	128	99	75-125	

SAMPLE DUPLICATE: 493557

Parameter	Units	7082918006 Result	Dup Result	RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	103	103	0	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

QC Batch: 106799	Analysis Method: SM22 2320B
QC Batch Method: SM22 2320B	Analysis Description: 2320B Alkalinity, High Level
Associated Lab Samples: 7082918005	

METHOD BLANK: 493913 Matrix: Water

Associated Lab Samples: 7082918005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<5.0	5.0	03/26/19 08:26	

LABORATORY CONTROL SAMPLE: 493914

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	125	125	100	80-120	

MATRIX SPIKE SAMPLE: 493916

Parameter	Units	7083350001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	4000	312	4280	91	75-125	

SAMPLE DUPLICATE: 493915

Parameter	Units	7083350001 Result	Dup Result	RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	4000	4070	2	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

QC Batch: 106686

Analysis Method: SM22 2340C

QC Batch Method: SM22 2340C

Analysis Description: 2340C Hardness, Total

Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 493447

Matrix: Water

Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	<5.0	5.0	03/25/19 14:40	

LABORATORY CONTROL SAMPLE: 493448

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	1000	990	99	90-110	

MATRIX SPIKE SAMPLE: 493449

Parameter	Units	7082918001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	250	1000	1270	102	75-125	

SAMPLE DUPLICATE: 493450

Parameter	Units	7082918001 Result	Dup Result	RPD	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	250	250	0	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

QC Batch: 106852 Analysis Method: SM22 2540C
QC Batch Method: SM22 2540C Analysis Description: 2540C Total Dissolved Solids
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 494090 Matrix: Water
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<10.0	10.0	03/26/19 13:18	

LABORATORY CONTROL SAMPLE: 494091

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	496	99	85-115	

MATRIX SPIKE SAMPLE: 494093

Parameter	Units	7082888001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	300	600	934	106	75-125	

MATRIX SPIKE SAMPLE: 494095

Parameter	Units	7083110004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	78.0	300	310	77	75-125	

SAMPLE DUPLICATE: 494092

Parameter	Units	7082888001 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	300	316	5	

SAMPLE DUPLICATE: 494094

Parameter	Units	7083110004 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	78.0	80.0	3	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

QC Batch: 106956 Analysis Method: EPA 410.4
 QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
 Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 494825 Matrix: Water
 Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	10.0	03/27/19 11:53	

LABORATORY CONTROL SAMPLE: 494826

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	531	106	90-110	

MATRIX SPIKE SAMPLE: 494827

Parameter	Units	7082918001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	34.5	1000	1050	101	90-110	

MATRIX SPIKE SAMPLE: 494829

Parameter	Units	7083179001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	63.1	1000	1140	107	90-110	

SAMPLE DUPLICATE: 494828

Parameter	Units	7082918001 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	34.5	34.5	0	

SAMPLE DUPLICATE: 494830

Parameter	Units	7083179001 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	63.1	60.9	4	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

QC Batch: 106332

Analysis Method: SM22 5210B

QC Batch Method: SM22 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 491627

Matrix: Water

Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	03/26/19 10:10	

LABORATORY CONTROL SAMPLE: 491628

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	190	96	84.5-115.4	

SAMPLE DUPLICATE: 491629

Parameter	Units	7083001001 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	54.4	59.8	9	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

QC Batch: 107252 Analysis Method: EPA 300.0
 QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
 Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 496206 Matrix: Water
 Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	mg/L	<0.50	0.50	03/28/19 19:53	
Chloride	mg/L	<2.0	2.0	03/28/19 19:53	
Sulfate	mg/L	<5.0	5.0	03/28/19 19:53	

LABORATORY CONTROL SAMPLE: 496207

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	1.0	100	90-110	
Chloride	mg/L	10	10.3	103	90-110	
Sulfate	mg/L	10	10.5	105	90-110	

MATRIX SPIKE SAMPLE: 496208

Parameter	Units	7083425001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	<0.50	1	1.1	110	80-120	
Chloride	mg/L	102	50	155	106	80-120	
Sulfate	mg/L	32.4	10	43.3	108	80-120	

MATRIX SPIKE SAMPLE: 496210

Parameter	Units	7083551002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	<0.50	1	1.1	102	80-120	
Chloride	mg/L	11.4	10	21.6	102	80-120	
Sulfate	mg/L	<5.0	10	10.5	99	80-120	

SAMPLE DUPLICATE: 496209

Parameter	Units	7083425001 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	<0.50	<0.50		
Chloride	mg/L	102	103	1	
Sulfate	mg/L	32.4	32.6	1	

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

SAMPLE DUPLICATE: 496211

Parameter	Units	7083551002 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	<0.50	0.072J		
Chloride	mg/L	11.4	11.5	1	
Sulfate	mg/L	<5.0	<5.0		

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

QC Batch: 107272 Analysis Method: EPA 351.2
QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 496384 Matrix: Water
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	0.10	03/29/19 12:31	

LABORATORY CONTROL SAMPLE: 496385

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.1	102	90-110	

MATRIX SPIKE SAMPLE: 496386

Parameter	Units	7083751001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	4	2.5	60	90-110	M1

MATRIX SPIKE SAMPLE: 496388

Parameter	Units	7083477002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	3.9	4	9.1	129	90-110	M1

SAMPLE DUPLICATE: 496387

Parameter	Units	7083751001 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	<0.10		

SAMPLE DUPLICATE: 496389

Parameter	Units	7083477002 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	3.9	3.9	1	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

QC Batch:	106235	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrite, Unpres.
Associated Lab Samples:	7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007		

METHOD BLANK:	491260	Matrix:	Water
Associated Lab Samples:	7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.050	0.050	03/20/19 20:05	

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	1	1.0	104	90-110	

Parameter	Units	7082856001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.53	107	90-110	H1

Parameter	Units	7082918001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.53	107	90-110	

Parameter	Units	7082856001 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		H1

Parameter	Units	7082918001 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

QC Batch: 106242 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate, Unpres.
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005

METHOD BLANK: 491336 Matrix: Water
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.050	03/20/19 21:08	

LABORATORY CONTROL SAMPLE: 491337

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	0.97	97	90-110	

MATRIX SPIKE SAMPLE: 491338

Parameter	Units	7082967001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	9.9	5	13.9	81	90-110	M6

MATRIX SPIKE SAMPLE: 491340

Parameter	Units	7082918001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	8.0	5	12.1	83	90-110	M6

SAMPLE DUPLICATE: 491339

Parameter	Units	7082967001 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	9.9	9.9	0	

SAMPLE DUPLICATE: 491341

Parameter	Units	7082918001 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	8.0	8.7	9	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

QC Batch: 106243 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrate, Unpres.
Associated Lab Samples: 7082918006, 7082918007

METHOD BLANK: 491342 Matrix: Water
Associated Lab Samples: 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.050	03/20/19 21:44	

LABORATORY CONTROL SAMPLE: 491343

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	103	90-110	

MATRIX SPIKE SAMPLE: 491344

Parameter	Units	7082856001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.23	0.5	0.78	111	90-110	H1,M1

MATRIX SPIKE SAMPLE: 491346

Parameter	Units	7082954001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	10.6	5	15.2	93	90-110	

SAMPLE DUPLICATE: 491345

Parameter	Units	7082856001 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.23	0.23	3	H1

SAMPLE DUPLICATE: 491347

Parameter	Units	7082954001 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	10.6	12.1	13	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE
Pace Project No.: 7082918

QC Batch: 106656 Analysis Method: EPA 420.1
QC Batch Method: EPA 420.1 Analysis Description: 420.1 Phenolics Macro
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 493348 Matrix: Water
Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Phenolics, Total Recoverable	ug/L	<5.0	5.0	03/25/19 16:05	

LABORATORY CONTROL SAMPLE: 493349

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	30	30.5	102	90-110	

MATRIX SPIKE SAMPLE: 493350

Parameter	Units	7082870001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	14.6	20	32.0	87	75-125	

MATRIX SPIKE SAMPLE: 493352

Parameter	Units	7082918007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Phenolics, Total Recoverable	ug/L	13.1	20	28.4	77	75-125	

SAMPLE DUPLICATE: 493351

Parameter	Units	7082870001 Result	Dup Result	RPD	Qualifiers
Phenolics, Total Recoverable	ug/L	14.6	16.6	13	

SAMPLE DUPLICATE: 493353

Parameter	Units	7082918007 Result	Dup Result	RPD	Qualifiers
Phenolics, Total Recoverable	ug/L	13.1	15.6	18	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

QC Batch: 107325

Analysis Method: SM22 4500 NH3 H

QC Batch Method: SM22 4500 NH3 H

Analysis Description: 4500 Ammonia

Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 496531

Matrix: Water

Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	<0.10	0.10	03/29/19 14:58	

LABORATORY CONTROL SAMPLE: 496532

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 496533

Parameter	Units	7083120001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	21.7	10	31.9	102	75-125	

SAMPLE DUPLICATE: 496534

Parameter	Units	7083120001 Result	Dup Result	RPD	Qualifiers
Nitrogen, Ammonia	mg/L	21.7	22.4	3	

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QUALITY CONTROL DATA

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

QC Batch: 106695 Analysis Method: SM22 5310B
 QC Batch Method: SM22 5310B Analysis Description: 5310B TOC
 Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

METHOD BLANK: 493480 Matrix: Water
 Associated Lab Samples: 7082918001, 7082918002, 7082918003, 7082918004, 7082918005, 7082918006, 7082918007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<1.0	1.0	03/25/19 15:54	

LABORATORY CONTROL SAMPLE: 493481

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	10.1	101	85-115	

MATRIX SPIKE SAMPLE: 493483

Parameter	Units	7082918001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	4.1	10	12.3	82	75-125	

SAMPLE DUPLICATE: 493482

Parameter	Units	7082918001 Result	Dup Result	RPD	Qualifiers
Total Organic Carbon	mg/L	4.1	4.1	0	

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REPORT OF LABORATORY ANALYSIS

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QUALIFIERS

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

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.

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

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

TNI - The NELAC Institute.

LABORATORIES

PACE-MV Pace Analytical Services - Melville

PASI-M Pace Analytical Services - Minneapolis

BATCH QUALIFIERS

Batch: 596093

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

ANALYTE QUALIFIERS

B Analyte was detected in the associated method blank.

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.

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

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7082918001	GM-26	EPA 3005A	106564	EPA 6010C	106566
7082918002	GM-26I	EPA 3005A	106564	EPA 6010C	106566
7082918003	GM-27	EPA 3005A	106564	EPA 6010C	106566
7082918004	GM-27I	EPA 3005A	106564	EPA 6010C	106566
7082918005	GM-28	EPA 3005A	106564	EPA 6010C	106566
7082918006	GM-28I	EPA 3005A	106564	EPA 6010C	106566
7082918007	DUP	EPA 3005A	106564	EPA 6010C	106566
7082918001	GM-26	EPA 3510	595547	EPA 8270D by SIM	596093
7082918002	GM-26I	EPA 3510	595547	EPA 8270D by SIM	596093
7082918003	GM-27	EPA 3510	595547	EPA 8270D by SIM	596093
7082918004	GM-27I	EPA 3510	595547	EPA 8270D by SIM	596093
7082918005	GM-28	EPA 3510	595547	EPA 8270D by SIM	596093
7082918006	GM-28I	EPA 3510	595547	EPA 8270D by SIM	596093
7082918007	DUP	EPA 3510	595547	EPA 8270D by SIM	596093
7082918001	GM-26	EPA 180.1	106224		
7082918002	GM-26I	EPA 180.1	106224		
7082918003	GM-27	EPA 180.1	106224		
7082918004	GM-27I	EPA 180.1	106224		
7082918005	GM-28	EPA 180.1	106224		
7082918006	GM-28I	EPA 180.1	106224		
7082918007	DUP	EPA 180.1	106224		
7082918001	GM-26	SM22 2320B	106702		
7082918002	GM-26I	SM22 2320B	106702		
7082918003	GM-27	SM22 2320B	106702		
7082918004	GM-27I	SM22 2320B	106702		
7082918006	GM-28I	SM22 2320B	106702		
7082918007	DUP	SM22 2320B	106702		
7082918005	GM-28	SM22 2320B	106799		
7082918001	GM-26	SM22 2340C	106686		
7082918002	GM-26I	SM22 2340C	106686		
7082918003	GM-27	SM22 2340C	106686		
7082918004	GM-27I	SM22 2340C	106686		
7082918005	GM-28	SM22 2340C	106686		
7082918006	GM-28I	SM22 2340C	106686		
7082918007	DUP	SM22 2340C	106686		
7082918001	GM-26	SM22 2540C	106852		
7082918002	GM-26I	SM22 2540C	106852		
7082918003	GM-27	SM22 2540C	106852		
7082918004	GM-27I	SM22 2540C	106852		
7082918005	GM-28	SM22 2540C	106852		
7082918006	GM-28I	SM22 2540C	106852		
7082918007	DUP	SM22 2540C	106852		
7082918001	GM-26	EPA 410.4	106956	EPA 410.4	106976
7082918002	GM-26I	EPA 410.4	106956	EPA 410.4	106976
7082918003	GM-27	EPA 410.4	106956	EPA 410.4	106976

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7082918004	GM-27I	EPA 410.4	106956	EPA 410.4	106976
7082918005	GM-28	EPA 410.4	106956	EPA 410.4	106976
7082918006	GM-28I	EPA 410.4	106956	EPA 410.4	106976
7082918007	DUP	EPA 410.4	106956	EPA 410.4	106976
7082918001	GM-26	SM22 5210B	106332	SM22 5210B	107157
7082918002	GM-26I	SM22 5210B	106332	SM22 5210B	107157
7082918003	GM-27	SM22 5210B	106332	SM22 5210B	107157
7082918004	GM-27I	SM22 5210B	106332	SM22 5210B	107157
7082918005	GM-28	SM22 5210B	106332	SM22 5210B	107157
7082918006	GM-28I	SM22 5210B	106332	SM22 5210B	107157
7082918007	DUP	SM22 5210B	106332	SM22 5210B	107157
7082918001	GM-26	EPA 300.0	107252		
7082918002	GM-26I	EPA 300.0	107252		
7082918003	GM-27	EPA 300.0	107252		
7082918004	GM-27I	EPA 300.0	107252		
7082918005	GM-28	EPA 300.0	107252		
7082918006	GM-28I	EPA 300.0	107252		
7082918007	DUP	EPA 300.0	107252		
7082918001	GM-26	EPA 351.2	107272	EPA 351.2	107286
7082918002	GM-26I	EPA 351.2	107272	EPA 351.2	107286
7082918003	GM-27	EPA 351.2	107272	EPA 351.2	107286
7082918004	GM-27I	EPA 351.2	107272	EPA 351.2	107286
7082918005	GM-28	EPA 351.2	107272	EPA 351.2	107286
7082918006	GM-28I	EPA 351.2	107272	EPA 351.2	107286
7082918007	DUP	EPA 351.2	107272	EPA 351.2	107286
7082918001	GM-26	EPA 353.2	106242		
7082918002	GM-26I	EPA 353.2	106242		
7082918003	GM-27	EPA 353.2	106242		
7082918004	GM-27I	EPA 353.2	106242		
7082918005	GM-28	EPA 353.2	106242		
7082918006	GM-28I	EPA 353.2	106243		
7082918007	DUP	EPA 353.2	106243		
7082918001	GM-26	EPA 353.2	106235		
7082918002	GM-26I	EPA 353.2	106235		
7082918003	GM-27	EPA 353.2	106235		
7082918004	GM-27I	EPA 353.2	106235		
7082918005	GM-28	EPA 353.2	106235		
7082918006	GM-28I	EPA 353.2	106235		
7082918007	DUP	EPA 353.2	106235		
7082918001	GM-26	EPA 420.1	106656	EPA 420.1	106723
7082918002	GM-26I	EPA 420.1	106656	EPA 420.1	106723
7082918003	GM-27	EPA 420.1	106656	EPA 420.1	106723
7082918004	GM-27I	EPA 420.1	106656	EPA 420.1	106723
7082918005	GM-28	EPA 420.1	106656	EPA 420.1	106723
7082918006	GM-28I	EPA 420.1	106656	EPA 420.1	106723

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: WELL CLUSTER 26,27,28 ROUTINE

Pace Project No.: 7082918

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7082918007	DUP	EPA 420.1	106656	EPA 420.1	106723
7082918001	GM-26	SM22 4500 NH3 H	107325		
7082918002	GM-26I	SM22 4500 NH3 H	107325		
7082918003	GM-27	SM22 4500 NH3 H	107325		
7082918004	GM-27I	SM22 4500 NH3 H	107325		
7082918005	GM-28	SM22 4500 NH3 H	107325		
7082918006	GM-28I	SM22 4500 NH3 H	107325		
7082918007	DUP	SM22 4500 NH3 H	107325		
7082918001	GM-26	SM22 5310B	106695		
7082918002	GM-26I	SM22 5310B	106695		
7082918003	GM-27	SM22 5310B	106695		
7082918004	GM-27I	SM22 5310B	106695		
7082918005	GM-28	SM22 5310B	106695		
7082918006	GM-28I	SM22 5310B	106695		
7082918007	DUP	SM22 5310B	106695		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

Client Name: JOHN W. BABY

Project

WO#: 7082918

PM: JSA Due Date: 04/03/19

CLIENT: BAB-ECO

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____

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

Temperature Blank Present: Yes No

Packing Material: Bubble Wrap Bubble Bags Ziploc None Other

Type of Ice: Wet Blue None

Thermometer Used: TH091

Correction Factor: 0.0

Samples on ice, cooling process has begun

Cooler Temperature (°C): 1, 2, 4, 5

Cooler Temperature Corrected (°C): 1, 2, 4, 5

Date/Time 5035A kits placed in freezer _____

Temp should be above freezing to 6.0°C

USDA Regulated Soil (N/A, water sample)

Date and Initials of person examining contents: JK 3/20/19

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? YES NO

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

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

		COMMENTS:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	7.
Sufficient Volume: (Triple volume provided for MS/MSD):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	12.
-Includes date/time/ID/Analysis Matrix SL WT OIL		
All containers needing preservation have been checked	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
pH paper Lot # <u>HC857406</u>		Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl, NaOH > 9 Sulfide, NaOH > 12 Cyanide)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A	Initial when completed: _____ Lot # of added preservative: _____ Date/Time preservative added: _____
Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis		
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	14.
KI starch test strips Lot #		Positive for Res. Chlorine? Y N
Residual chlorine strips Lot #		
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A	
Pace Trip Blank Lot # (if applicable): _____		

Client Notification/ Resolution:

Field Data Required? Y / N

Person Contacted: _____

Date/Time: _____

Comments/ Resolution: _____

ANALYTICAL REPORT

Eurofins TestAmerica, Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

Laboratory Job ID: 320-48635-1
Client Project/Site: Pace PFAS Testing

For:
Pace Analytical Services, LLC
575 Broad Hollow Road
Melville, New York 11747

Attn: Jennifer Aracri



Authorized for release by:
4/4/2019 3:51:01 PM

Jill Kellmann, Manager of Project Management
(916)374-4402
jill.kellmann@testamericainc.com

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The test results in this report meet all 2003 NELAC and 2009 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Table of Contents

Cover Page	1
Table of Contents	2
Definitions/Glossary	3
Case Narrative	4
Detection Summary	5
Client Sample Results	8
Isotope Dilution Summary	15
QC Sample Results	17
QC Association Summary	21
Lab Chronicle	22
Certification Summary	24
Method Summary	25
Sample Summary	26
Chain of Custody	27
Receipt Checklists	28

Definitions/Glossary

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Qualifiers

LCMS

Qualifier	Qualifier Description
*	Isotope Dilution analyte is outside acceptance limits.
B	Compound was found in the blank and sample.
I	Value is EMPC (estimated maximum possible concentration).
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
α	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains No Free Liquid
DER	Duplicate Error Ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL	Detection Limit (DoD/DOE)
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision Level Concentration (Radiochemistry)
EDL	Estimated Detection Limit (Dioxin)
LOD	Limit of Detection (DoD/DOE)
LOQ	Limit of Quantitation (DoD/DOE)
MDA	Minimum Detectable Activity (Radiochemistry)
MDC	Minimum Detectable Concentration (Radiochemistry)
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not Detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative Error Ratio (Radiochemistry)
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Case Narrative

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Job ID: 320-48635-1

Laboratory: Eurofins TestAmerica, Sacramento

Narrative

Receipt

The samples were received on 3/23/2019 9:15 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.8° C.

LCMS

Method(s) 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-8:2 FTS in the following sample: GM-27I (320-48635-4) and DUP (320-48635-7). The samples were re-analyzed with concurring results. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

Method(s) 537 (modified): Isotope Dilution Analyte (IDA) recovery is above the method recommended limit for M2-6:2 FTS and M2-8:2 FTS in the following sample: GM-27 (320-48635-3) and GM-28 (320-48635-5). The samples were re-analyzed with concurring results. Quantitation by isotope dilution generally precludes any adverse effect on data quality due to elevated IDA recoveries.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Organic Prep

Method(s) 3535: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with preparation batch 320-284798.

Method(s) 3535: The following samples were observed to be a light yellow color and contained sediment at the bottom of the samples containers prior to extraction: GM-26 (320-48635-1), GM-26I (320-48635-2), GM-27 (320-48635-3), GM-27I (320-48635-4), GM-28 (320-48635-5), GM-28I (320-48635-6) and DUP (320-48635-7).

Method(s) 3535: The following samples had non-settleable particulates, which clogged the solid-phase extraction column: GM-26 (320-48635-1) and GM-26I (320-48635-2). The samples were slightly cloudy after extraction.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: GM-26

Lab Sample ID: 320-48635-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid	43		2.1	0.36	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	120		2.1	0.51	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	84		2.1	0.60	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid	33		2.1	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	36		2.1	0.88	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	11		2.1	0.28	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.6	J I	2.1	0.32	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	3.1		2.1	1.1	ng/L	1		537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.42	J B	2.1	0.30	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	6.5		2.1	0.21	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	16	B	2.1	0.18	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.52	J	2.1	0.20	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	39		2.1	0.56	ng/L	1		537 (modified)	Total/NA
6:2 FTS	7.7	J	21	2.1	ng/L	1		537 (modified)	Total/NA

Client Sample ID: GM-26I

Lab Sample ID: 320-48635-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid	43		2.1	0.36	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	110		2.1	0.50	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	67		2.1	0.60	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid	36		2.1	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	26		2.1	0.87	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	8.8		2.1	0.28	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	1.0	J	2.1	0.32	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	2.5		2.1	1.1	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.9		2.1	0.21	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	11	B	2.1	0.17	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.66	J	2.1	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	25		2.1	0.55	ng/L	1		537 (modified)	Total/NA
6:2 FTS	10	J	21	2.1	ng/L	1		537 (modified)	Total/NA

Client Sample ID: GM-27

Lab Sample ID: 320-48635-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid	140		1.9	0.34	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	120		1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	220	I	1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid	98		1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	200		1.9	0.82	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	76		1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	28		1.9	0.30	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	4.1		1.9	1.1	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	9.5		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	45	B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	2.1		1.9	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	160		1.9	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	5.1		1.9	0.34	ng/L	1		537 (modified)	Total/NA
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	7.3	J	19	3.0	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Detection Summary

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: GM-27 (Continued)

Lab Sample ID: 320-48635-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	14	J	19	1.8	ng/L	1		537 (modified)	Total/NA
6:2 FTS	11	J	19	1.9	ng/L	1		537 (modified)	Total/NA
8:2 FTS	3.4	J	19	1.9	ng/L	1		537 (modified)	Total/NA

Client Sample ID: GM-271

Lab Sample ID: 320-48635-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid	58		2.0	0.36	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	55		2.0	0.50	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	58		2.0	0.59	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid	43		2.0	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	74		2.0	0.87	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	28		2.0	0.28	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	7.8		2.0	0.32	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	2.0		2.0	1.1	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.9		2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	19	B	2.0	0.17	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	48		2.0	0.55	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	1.3	J	2.0	0.36	ng/L	1		537 (modified)	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.7	J	20	1.9	ng/L	1		537 (modified)	Total/NA
6:2 FTS	11	J	20	2.0	ng/L	1		537 (modified)	Total/NA

Client Sample ID: GM-28

Lab Sample ID: 320-48635-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid	81		1.9	0.34	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	190		1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	160		1.9	0.56	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid	130		1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	340		1.9	0.82	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	57		1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	15		1.9	0.30	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	4.8		1.9	1.1	ng/L	1		537 (modified)	Total/NA
Perfluorotetradecanoic acid (PFTeA)	0.33	J B	1.9	0.28	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	22		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	140	B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	3.9		1.9	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	150		1.9	0.52	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	0.68	J	1.9	0.34	ng/L	1		537 (modified)	Total/NA
6:2 FTS	7.4	J	19	1.9	ng/L	1		537 (modified)	Total/NA
8:2 FTS	2.3	J	19	1.9	ng/L	1		537 (modified)	Total/NA

Client Sample ID: GM-281

Lab Sample ID: 320-48635-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid	22		1.9	0.33	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	44		1.9	0.47	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	33		1.9	0.55	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid	19		1.9	0.24	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	45		1.9	0.81	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Euofins TestAmerica, Sacramento

Detection Summary

Client: Pace Analytical Services, LLC
 Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: GM-28I (Continued)

Lab Sample ID: 320-48635-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorononanoic acid (PFNA)	14		1.9	0.26	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	7.3		1.9	0.30	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	5.5		1.9	1.0	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	3.4		1.9	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	14	B	1.9	0.16	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.75	J	1.9	0.18	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	57		1.9	0.51	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	2.4		1.9	0.33	ng/L	1		537 (modified)	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	5.5	J	19	1.8	ng/L	1		537 (modified)	Total/NA
6:2 FTS	52		19	1.9	ng/L	1		537 (modified)	Total/NA

Client Sample ID: DUP

Lab Sample ID: 320-48635-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Perfluorobutanoic acid	62		2.0	0.35	ng/L	1		537 (modified)	Total/NA
Perfluoropentanoic acid (PFPeA)	61		2.0	0.49	ng/L	1		537 (modified)	Total/NA
Perfluorohexanoic acid (PFHxA)	62		2.0	0.58	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanoic acid	44		2.0	0.25	ng/L	1		537 (modified)	Total/NA
Perfluorooctanoic acid (PFOA)	80		2.0	0.85	ng/L	1		537 (modified)	Total/NA
Perfluorononanoic acid (PFNA)	30		2.0	0.27	ng/L	1		537 (modified)	Total/NA
Perfluorodecanoic acid (PFDA)	9.1		2.0	0.31	ng/L	1		537 (modified)	Total/NA
Perfluoroundecanoic acid (PFUnA)	2.1		2.0	1.1	ng/L	1		537 (modified)	Total/NA
Perfluorobutanesulfonic acid (PFBS)	4.5		2.0	0.20	ng/L	1		537 (modified)	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	20	B	2.0	0.17	ng/L	1		537 (modified)	Total/NA
Perfluoroheptanesulfonic Acid (PFHpS)	0.82	J	2.0	0.19	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonic acid (PFOS)	49		2.0	0.54	ng/L	1		537 (modified)	Total/NA
Perfluorooctanesulfonamide (FOSA)	1.5	J	2.0	0.35	ng/L	1		537 (modified)	Total/NA
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	4.6	J	20	1.9	ng/L	1		537 (modified)	Total/NA
6:2 FTS	14	J	20	2.0	ng/L	1		537 (modified)	Total/NA

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: GM-26

Lab Sample ID: 320-48635-1

Date Collected: 03/20/19 09:05

Matrix: Water

Date Received: 03/23/19 09:15

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid	43		2.1	0.36	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluoropentanoic acid (PFPeA)	120		2.1	0.51	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorohexanoic acid (PFHxA)	84		2.1	0.60	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluoroheptanoic acid	33		2.1	0.26	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorooctanoic acid (PFOA)	36		2.1	0.88	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorononanoic acid (PFNA)	11		2.1	0.28	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorodecanoic acid (PFDA)	1.6	J I	2.1	0.32	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluoroundecanoic acid (PFUnA)	3.1		2.1	1.1	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorododecanoic acid (PFDoA)	ND		2.1	0.57	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorotridecanoic acid (PFTriA)	ND		2.1	1.4	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorotetradecanoic acid (PFTeA)	0.42	J B	2.1	0.30	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorobutanesulfonic acid (PFBS)	6.5		2.1	0.21	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorohexanesulfonic acid (PFHxS)	16	B	2.1	0.18	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.52	J	2.1	0.20	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorooctanesulfonic acid (PFOS)	39		2.1	0.56	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.1	0.33	ng/L		03/29/19 05:22	03/30/19 03:20	1
Perfluorooctanesulfonamide (FOSA)	ND		2.1	0.36	ng/L		03/29/19 05:22	03/30/19 03:20	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		21	3.2	ng/L		03/29/19 05:22	03/30/19 03:20	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		21	2.0	ng/L		03/29/19 05:22	03/30/19 03:20	1
6:2 FTS	7.7	J	21	2.1	ng/L		03/29/19 05:22	03/30/19 03:20	1
8:2 FTS	ND		21	2.1	ng/L		03/29/19 05:22	03/30/19 03:20	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	63		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C5 PFPeA	74		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C2 PFHxA	81		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C4 PFHpA	84		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C4 PFOA	82		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C5 PFNA	82		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C2 PFDA	83		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C2 PFUnA	73		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C2 PFDoA	59		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C2 PFTeDA	67		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C3 PFBS	81		25 - 150	03/29/19 05:22	03/30/19 03:20	1
18O2 PFHxS	87		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C4 PFOS	77		25 - 150	03/29/19 05:22	03/30/19 03:20	1
13C8 FOSA	79		25 - 150	03/29/19 05:22	03/30/19 03:20	1
d3-NMeFOSAA	78		25 - 150	03/29/19 05:22	03/30/19 03:20	1
d5-NEtFOSAA	73		25 - 150	03/29/19 05:22	03/30/19 03:20	1
M2-6:2 FTS	108		25 - 150	03/29/19 05:22	03/30/19 03:20	1
M2-8:2 FTS	100		25 - 150	03/29/19 05:22	03/30/19 03:20	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: GM-26I

Lab Sample ID: 320-48635-2

Date Collected: 03/20/19 09:15

Matrix: Water

Date Received: 03/23/19 09:15

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid	43		2.1	0.36	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluoropentanoic acid (PFPeA)	110		2.1	0.50	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorohexanoic acid (PFHxA)	67		2.1	0.60	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluoroheptanoic acid	36		2.1	0.26	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorooctanoic acid (PFOA)	26		2.1	0.87	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorononanoic acid (PFNA)	8.8		2.1	0.28	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorodecanoic acid (PFDA)	1.0	J	2.1	0.32	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluoroundecanoic acid (PFUnA)	2.5		2.1	1.1	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorododecanoic acid (PFDoA)	ND		2.1	0.56	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorotridecanoic acid (PFTriA)	ND		2.1	1.3	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.1	0.30	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorobutanesulfonic acid (PFBS)	3.9		2.1	0.21	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorohexanesulfonic acid (PFHxS)	11	B	2.1	0.17	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.66	J	2.1	0.19	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorooctanesulfonic acid (PFOS)	25		2.1	0.55	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.1	0.33	ng/L		03/29/19 05:22	03/30/19 03:27	1
Perfluorooctanesulfonamide (FOSA)	ND		2.1	0.36	ng/L		03/29/19 05:22	03/30/19 03:27	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		21	3.2	ng/L		03/29/19 05:22	03/30/19 03:27	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		21	1.9	ng/L		03/29/19 05:22	03/30/19 03:27	1
6:2 FTS	10	J	21	2.1	ng/L		03/29/19 05:22	03/30/19 03:27	1
8:2 FTS	ND		21	2.1	ng/L		03/29/19 05:22	03/30/19 03:27	1
Isotope Dilution	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
13C4 PFBA	74		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C5 PFPeA	83		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C2 PFHxA	90		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C4 PFHpA	93		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C4 PFOA	89		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C5 PFNA	92		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C2 PFDA	90		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C2 PFUnA	79		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C2 PFDoA	64		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C2 PFTeDA	64		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C3 PFBS	88		25 - 150				03/29/19 05:22	03/30/19 03:27	1
18O2 PFHxS	98		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C4 PFOS	86		25 - 150				03/29/19 05:22	03/30/19 03:27	1
13C8 FOSA	77		25 - 150				03/29/19 05:22	03/30/19 03:27	1
d3-NMeFOSAA	78		25 - 150				03/29/19 05:22	03/30/19 03:27	1
d5-NEtFOSAA	75		25 - 150				03/29/19 05:22	03/30/19 03:27	1
M2-6:2 FTS	99		25 - 150				03/29/19 05:22	03/30/19 03:27	1
M2-8:2 FTS	101		25 - 150				03/29/19 05:22	03/30/19 03:27	1

Client Sample Results

Client: Pace Analytical Services, LLC
 Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: GM-27

Lab Sample ID: 320-48635-3

Date Collected: 03/20/19 10:28

Matrix: Water

Date Received: 03/23/19 09:15

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid	140		1.9	0.34	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluoropentanoic acid (PFPeA)	120		1.9	0.47	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorohexanoic acid (PFHxA)	220	I	1.9	0.56	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluoroheptanoic acid	98		1.9	0.24	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorooctanoic acid (PFOA)	200		1.9	0.82	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorononanoic acid (PFNA)	76		1.9	0.26	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorodecanoic acid (PFDA)	28		1.9	0.30	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluoroundecanoic acid (PFUnA)	4.1		1.9	1.1	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.53	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	1.3	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.28	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorobutanesulfonic acid (PFBS)	9.5		1.9	0.19	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorohexanesulfonic acid (PFHxS)	45	B	1.9	0.16	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluoroheptanesulfonic Acid (PFHpS)	2.1		1.9	0.18	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorooctanesulfonic acid (PFOS)	160		1.9	0.52	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.31	ng/L		03/29/19 05:22	03/30/19 03:35	1
Perfluorooctanesulfonamide (FOSA)	5.1		1.9	0.34	ng/L		03/29/19 05:22	03/30/19 03:35	1
N-methylperfluorooctanesulfonamide (NMeFOSAA)	7.3	J	19	3.0	ng/L		03/29/19 05:22	03/30/19 03:35	1
N-ethylperfluorooctanesulfonamide (NEtFOSAA)	14	J	19	1.8	ng/L		03/29/19 05:22	03/30/19 03:35	1
6:2 FTS	11	J	19	1.9	ng/L		03/29/19 05:22	03/30/19 03:35	1
8:2 FTS	3.4	J	19	1.9	ng/L		03/29/19 05:22	03/30/19 03:35	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	32		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C5 PFPeA	51		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C2 PFHxA	68		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C4 PFHpA	80		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C4 PFOA	90		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C5 PFNA	86		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C2 PFDA	116		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C2 PFUnA	125		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C2 PFDoA	126		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C2 PFTeDA	107		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C3 PFBS	95		25 - 150	03/29/19 05:22	03/30/19 03:35	1
18O2 PFHxS	112		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C4 PFOS	106		25 - 150	03/29/19 05:22	03/30/19 03:35	1
13C8 FOSA	88		25 - 150	03/29/19 05:22	03/30/19 03:35	1
d3-NMeFOSAA	114		25 - 150	03/29/19 05:22	03/30/19 03:35	1
d5-NEtFOSAA	139		25 - 150	03/29/19 05:22	03/30/19 03:35	1
M2-6:2 FTS	280	*	25 - 150	03/29/19 05:22	03/30/19 03:35	1
M2-8:2 FTS	220	*	25 - 150	03/29/19 05:22	03/30/19 03:35	1

Client Sample Results

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: GM-271

Lab Sample ID: 320-48635-4

Date Collected: 03/20/19 10:08

Matrix: Water

Date Received: 03/23/19 09:15

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid	58		2.0	0.36	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluoropentanoic acid (PFPeA)	55		2.0	0.50	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorohexanoic acid (PFHxA)	58		2.0	0.59	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluoroheptanoic acid	43		2.0	0.25	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorooctanoic acid (PFOA)	74		2.0	0.87	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorononanoic acid (PFNA)	28		2.0	0.28	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorodecanoic acid (PFDA)	7.8		2.0	0.32	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluoroundecanoic acid (PFUnA)	2.0		2.0	1.1	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.56	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	1.3	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.30	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorobutanesulfonic acid (PFBS)	3.9		2.0	0.20	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorohexanesulfonic acid (PFHxS)	19	B	2.0	0.17	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorooctanesulfonic acid (PFOS)	48		2.0	0.55	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.33	ng/L		03/29/19 05:22	04/02/19 09:53	1
Perfluorooctanesulfonamide (FOSA)	1.3	J	2.0	0.36	ng/L		03/29/19 05:22	04/02/19 09:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	3.2	ng/L		03/29/19 05:22	04/02/19 09:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	3.7	J	20	1.9	ng/L		03/29/19 05:22	04/02/19 09:53	1
6:2 FTS	11	J	20	2.0	ng/L		03/29/19 05:22	04/02/19 09:53	1
8:2 FTS	ND		20	2.0	ng/L		03/29/19 05:22	04/02/19 09:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	38		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C5 PFPeA	66		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C2 PFHxA	70		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C4 PFHpA	76		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C4 PFOA	97		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C5 PFNA	101		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C2 PFDA	122		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C2 PFUnA	126		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C2 PFDoA	119		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C2 PFTeDA	112		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C3 PFBS	89		25 - 150	03/29/19 05:22	04/02/19 09:53	1
18O2 PFHxS	91		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C4 PFOS	98		25 - 150	03/29/19 05:22	04/02/19 09:53	1
13C8 FOSA	89		25 - 150	03/29/19 05:22	04/02/19 09:53	1
d3-NMeFOSAA	128		25 - 150	03/29/19 05:22	04/02/19 09:53	1
d5-NEtFOSAA	139		25 - 150	03/29/19 05:22	04/02/19 09:53	1
M2-6:2 FTS	147		25 - 150	03/29/19 05:22	04/02/19 09:53	1
M2-8:2 FTS	176	*	25 - 150	03/29/19 05:22	04/02/19 09:53	1

Eurofins TestAmerica, Sacramento

Client Sample Results

Client: Pace Analytical Services, LLC
 Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: GM-28

Lab Sample ID: 320-48635-5

Date Collected: 03/20/19 11:25

Matrix: Water

Date Received: 03/23/19 09:15

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid	81		1.9	0.34	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluoropentanoic acid (PFPeA)	190		1.9	0.47	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorohexanoic acid (PFHxA)	160		1.9	0.56	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluoroheptanoic acid	130		1.9	0.24	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorooctanoic acid (PFOA)	340		1.9	0.82	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorononanoic acid (PFNA)	57		1.9	0.26	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorodecanoic acid (PFDA)	15		1.9	0.30	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluoroundecanoic acid (PFUnA)	4.8		1.9	1.1	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.53	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	1.3	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorotetradecanoic acid (PFTeA)	0.33	J B	1.9	0.28	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorobutanesulfonic acid (PFBS)	22		1.9	0.19	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorohexanesulfonic acid (PFHxS)	140	B	1.9	0.16	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluoroheptanesulfonic Acid (PFHpS)	3.9		1.9	0.18	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorooctanesulfonic acid (PFOS)	150		1.9	0.52	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.31	ng/L		03/29/19 05:22	03/30/19 03:50	1
Perfluorooctanesulfonamide (FOSA)	0.68	J	1.9	0.34	ng/L		03/29/19 05:22	03/30/19 03:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19	3.0	ng/L		03/29/19 05:22	03/30/19 03:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		19	1.8	ng/L		03/29/19 05:22	03/30/19 03:50	1
6:2 FTS	7.4	J	19	1.9	ng/L		03/29/19 05:22	03/30/19 03:50	1
8:2 FTS	2.3	J	19	1.9	ng/L		03/29/19 05:22	03/30/19 03:50	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	33		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C5 PFPeA	54		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C2 PFHxA	73		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C4 PFHpA	91		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C4 PFOA	96		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C5 PFNA	111		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C2 PFDA	127		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C2 PFUnA	135		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C2 PFDoA	127		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C2 PFTeDA	130		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C3 PFBS	84		25 - 150	03/29/19 05:22	03/30/19 03:50	1
18O2 PFHxS	110		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C4 PFOS	112		25 - 150	03/29/19 05:22	03/30/19 03:50	1
13C8 FOSA	108		25 - 150	03/29/19 05:22	03/30/19 03:50	1
d3-NMeFOSAA	123		25 - 150	03/29/19 05:22	03/30/19 03:50	1
d5-NEtFOSAA	142		25 - 150	03/29/19 05:22	03/30/19 03:50	1
M2-6:2 FTS	237	*	25 - 150	03/29/19 05:22	03/30/19 03:50	1
M2-8:2 FTS	194	*	25 - 150	03/29/19 05:22	03/30/19 03:50	1

Client Sample Results

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: GM-28I

Lab Sample ID: 320-48635-6

Date Collected: 03/20/19 11:15

Matrix: Water

Date Received: 03/23/19 09:15

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid	22		1.9	0.33	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluoropentanoic acid (PFPeA)	44		1.9	0.47	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorohexanoic acid (PFHxA)	33		1.9	0.55	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluoroheptanoic acid	19		1.9	0.24	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorooctanoic acid (PFOA)	45		1.9	0.81	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorononanoic acid (PFNA)	14		1.9	0.26	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorodecanoic acid (PFDA)	7.3		1.9	0.30	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluoroundecanoic acid (PFUnA)	5.5		1.9	1.0	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorododecanoic acid (PFDoA)	ND		1.9	0.52	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorotridecanoic acid (PFTriA)	ND		1.9	1.2	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorotetradecanoic acid (PFTeA)	ND		1.9	0.28	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorobutanesulfonic acid (PFBS)	3.4		1.9	0.19	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorohexanesulfonic acid (PFHxS)	14 B		1.9	0.16	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.75 J		1.9	0.18	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorooctanesulfonic acid (PFOS)	57		1.9	0.51	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorodecanesulfonic acid (PFDS)	ND		1.9	0.30	ng/L		03/29/19 05:22	04/02/19 10:08	1
Perfluorooctanesulfonamide (FOSA)	2.4		1.9	0.33	ng/L		03/29/19 05:22	04/02/19 10:08	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		19	3.0	ng/L		03/29/19 05:22	04/02/19 10:08	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	5.5 J		19	1.8	ng/L		03/29/19 05:22	04/02/19 10:08	1
6:2 FTS	52		19	1.9	ng/L		03/29/19 05:22	04/02/19 10:08	1
8:2 FTS	ND		19	1.9	ng/L		03/29/19 05:22	04/02/19 10:08	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	52		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C5 PFPeA	74		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C2 PFHxA	75		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C4 PFHpA	85		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C4 PFOA	93		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C5 PFNA	99		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C2 PFDA	116		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C2 PFUnA	105		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C2 PFDoA	103		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C2 PFTeDA	106		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C3 PFBS	88		25 - 150	03/29/19 05:22	04/02/19 10:08	1
18O2 PFHxS	93		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C4 PFOS	92		25 - 150	03/29/19 05:22	04/02/19 10:08	1
13C8 FOSA	95		25 - 150	03/29/19 05:22	04/02/19 10:08	1
d3-NMeFOSAA	111		25 - 150	03/29/19 05:22	04/02/19 10:08	1
d5-NEtFOSAA	116		25 - 150	03/29/19 05:22	04/02/19 10:08	1
M2-6:2 FTS	136		25 - 150	03/29/19 05:22	04/02/19 10:08	1
M2-8:2 FTS	147		25 - 150	03/29/19 05:22	04/02/19 10:08	1

Client Sample Results

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: DUP

Lab Sample ID: 320-48635-7

Date Collected: 03/20/19 10:10

Matrix: Water

Date Received: 03/23/19 09:15

Method: 537 (modified) - Fluorinated Alkyl Substances

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanoic acid	62		2.0	0.35	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluoropentanoic acid (PFPeA)	61		2.0	0.49	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorohexanoic acid (PFHxA)	62		2.0	0.58	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluoroheptanoic acid	44		2.0	0.25	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorooctanoic acid (PFOA)	80		2.0	0.85	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorononanoic acid (PFNA)	30		2.0	0.27	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorodecanoic acid (PFDA)	9.1		2.0	0.31	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluoroundecanoic acid (PFUnA)	2.1		2.0	1.1	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	1.3	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorotetradecanoic acid (PFTeA)	ND		2.0	0.29	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorobutanesulfonic acid (PFBS)	4.5		2.0	0.20	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorohexanesulfonic acid (PFHxS)	20	B	2.0	0.17	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluoroheptanesulfonic Acid (PFHpS)	0.82	J	2.0	0.19	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorooctanesulfonic acid (PFOS)	49		2.0	0.54	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		03/29/19 05:22	04/02/19 10:15	1
Perfluorooctanesulfonamide (FOSA)	1.5	J	2.0	0.35	ng/L		03/29/19 05:22	04/02/19 10:15	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		03/29/19 05:22	04/02/19 10:15	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	4.6	J	20	1.9	ng/L		03/29/19 05:22	04/02/19 10:15	1
6:2 FTS	14	J	20	2.0	ng/L		03/29/19 05:22	04/02/19 10:15	1
8:2 FTS	ND		20	2.0	ng/L		03/29/19 05:22	04/02/19 10:15	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C4 PFBA	35		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C5 PFPeA	66		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C2 PFHxA	72		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C4 PFHpA	79		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C4 PFOA	93		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C5 PFNA	100		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C2 PFDA	125		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C2 PFUnA	129		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C2 PFDoA	125		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C2 PFTeDA	129		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C3 PFBS	95		25 - 150	03/29/19 05:22	04/02/19 10:15	1
18O2 PFHxS	94		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C4 PFOS	102		25 - 150	03/29/19 05:22	04/02/19 10:15	1
13C8 FOSA	89		25 - 150	03/29/19 05:22	04/02/19 10:15	1
d3-NMeFOSAA	142		25 - 150	03/29/19 05:22	04/02/19 10:15	1
d5-NEtFOSAA	144		25 - 150	03/29/19 05:22	04/02/19 10:15	1
M2-6:2 FTS	148		25 - 150	03/29/19 05:22	04/02/19 10:15	1
M2-8:2 FTS	177	*	25 - 150	03/29/19 05:22	04/02/19 10:15	1

Isotope Dilution Summary

Client: Pace Analytical Services, LLC
 Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFBA (25-150)	PFPeA (25-150)	PFHxA (25-150)	PFHpA (25-150)	PFOA (25-150)	PFNA (25-150)	PFDA (25-150)	PFUnA (25-150)
320-48635-1	GM-26	63	74	81	84	82	82	83	73
320-48635-2	GM-26I	74	83	90	93	89	92	90	79
320-48635-3	GM-27	32	51	68	80	90	86	116	125
320-48635-4	GM-27I	38	66	70	76	97	101	122	126
320-48635-5	GM-28	33	54	73	91	96	111	127	135
320-48635-6	GM-28I	52	74	75	85	93	99	116	105
320-48635-7	DUP	35	66	72	79	93	100	125	129
LCS 320-284798/2-A	Lab Control Sample	98	97	96	93	95	96	104	102
LCSD 320-284798/3-A	Lab Control Sample Dup	96	99	96	95	97	101	101	97
MB 320-284798/1-A	Method Blank	99	99	94	98	98	101	100	97

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	PFDaA (25-150)	PFTDA (25-150)	3C3-PFB (25-150)	PFHxS (25-150)	PFOS (25-150)	PFOSA (25-150)	-NMeFOS (25-150)	-NEtFOS (25-150)
320-48635-1	GM-26	59	67	81	87	77	79	78	73
320-48635-2	GM-26I	64	64	88	98	86	77	78	75
320-48635-3	GM-27	126	107	95	112	106	88	114	139
320-48635-4	GM-27I	119	112	89	91	98	89	128	139
320-48635-5	GM-28	127	130	84	110	112	108	123	142
320-48635-6	GM-28I	103	106	88	93	92	95	111	116
320-48635-7	DUP	125	129	95	94	102	89	142	144
LCS 320-284798/2-A	Lab Control Sample	94	113	97	102	97	95	113	107
LCSD 320-284798/3-A	Lab Control Sample Dup	93	111	96	99	91	90	107	104
MB 320-284798/1-A	Method Blank	86	103	98	101	92	88	105	101

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	M262Fts (25-150)	M282Fts (25-150)
320-48635-1	GM-26	108	100
320-48635-2	GM-26I	99	101
320-48635-3	GM-27	280 *	220 *
320-48635-4	GM-27I	147	176 *
320-48635-5	GM-28	237 *	194 *
320-48635-6	GM-28I	136	147
320-48635-7	DUP	148	177 *
LCS 320-284798/2-A	Lab Control Sample	108	116
LCSD 320-284798/3-A	Lab Control Sample Dup	104	111
MB 320-284798/1-A	Method Blank	105	121

Surrogate Legend

- PFBA = 13C4 PFBA
- PFPeA = 13C5 PFPeA
- PFHxA = 13C2 PFHxA
- PFHpA = 13C4 PFHpA
- PFOA = 13C4 PFOA
- PFNA = 13C5 PFNA
- PFDA = 13C2 PFDA
- PFUnA = 13C2 PFUnA
- PFDaA = 13C2 PFDaA
- PFTDA = 13C2 PFTeDA
- 13C3-PFBS = 13C3 PFBS

Isotope Dilution Summary

Client: Pace Analytical Services, LLC

Project/Site: Pace PFAS Testing

PFHxS = 18O2 PFHxS

PFOS = 13C4 PFOS

PFOSA = 13C8 FOSA

d3-NMeFOSAA = d3-NMeFOSAA

d5-NEtFOSAA = d5-NEtFOSAA

M262FTS = M2-6:2 FTS

M282FTS = M2-8:2 FTS

Job ID: 320-48635-1

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QC Sample Results

Client: Pace Analytical Services, LLC
 Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Method: 537 (modified) - Fluorinated Alkyl Substances

Lab Sample ID: MB 320-284798/1-A
Matrix: Water
Analysis Batch: 284990

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 284798

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Perfluorobutanoic acid	ND		2.0	0.35	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluoropentanoic acid (PFPeA)	ND		2.0	0.49	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorohexanoic acid (PFHxA)	ND		2.0	0.58	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluoroheptanoic acid	ND		2.0	0.25	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorooctanoic acid (PFOA)	ND		2.0	0.85	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorononanoic acid (PFNA)	ND		2.0	0.27	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorodecanoic acid (PFDA)	ND		2.0	0.31	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluoroundecanoic acid (PFUnA)	ND		2.0	1.1	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorododecanoic acid (PFDoA)	ND		2.0	0.55	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorotridecanoic acid (PFTriA)	ND		2.0	1.3	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorotetradecanoic acid (PFTeA)	0.455	J I	2.0	0.29	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorobutanesulfonic acid (PFBS)	ND		2.0	0.20	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorohexanesulfonic acid (PFHxS)	0.301	J	2.0	0.17	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluoroheptanesulfonic Acid (PFHpS)	ND		2.0	0.19	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorooctanesulfonic acid (PFOS)	ND		2.0	0.54	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorodecanesulfonic acid (PFDS)	ND		2.0	0.32	ng/L		03/29/19 05:22	03/30/19 01:42	1
Perfluorooctanesulfonamide (FOSA)	ND		2.0	0.35	ng/L		03/29/19 05:22	03/30/19 01:42	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	ND		20	3.1	ng/L		03/29/19 05:22	03/30/19 01:42	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	ND		20	1.9	ng/L		03/29/19 05:22	03/30/19 01:42	1
6:2 FTS	ND		20	2.0	ng/L		03/29/19 05:22	03/30/19 01:42	1
8:2 FTS	ND		20	2.0	ng/L		03/29/19 05:22	03/30/19 01:42	1

Isotope Dilution	MB	MB	Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
13C4 PFBA	99		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C5 PFPeA	99		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C2 PFHxA	94		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C4 PFHpA	98		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C4 PFOA	98		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C5 PFNA	101		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C2 PFDA	100		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C2 PFUnA	97		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C2 PFDoA	86		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C2 PFTeDA	103		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C3 PFBS	98		25 - 150	03/29/19 05:22	03/30/19 01:42	1
18O2 PFHxS	101		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C4 PFOS	92		25 - 150	03/29/19 05:22	03/30/19 01:42	1
13C8 FOSA	88		25 - 150	03/29/19 05:22	03/30/19 01:42	1
d3-NMeFOSAA	105		25 - 150	03/29/19 05:22	03/30/19 01:42	1
d5-NEtFOSAA	101		25 - 150	03/29/19 05:22	03/30/19 01:42	1
M2-6:2 FTS	105		25 - 150	03/29/19 05:22	03/30/19 01:42	1
M2-8:2 FTS	121		25 - 150	03/29/19 05:22	03/30/19 01:42	1

QC Sample Results

Client: Pace Analytical Services, LLC
 Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-284798/2-A
Matrix: Water
Analysis Batch: 284990

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 284798

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Perfluorobutanoic acid	40.0	42.4		ng/L		106	70 - 130
Perfluoropentanoic acid (PFPeA)	40.0	41.1		ng/L		103	66 - 126
Perfluorohexanoic acid (PFHxA)	40.0	40.2		ng/L		100	66 - 126
Perfluoroheptanoic acid	40.0	41.3		ng/L		103	66 - 126
Perfluorooctanoic acid (PFOA)	40.0	42.0		ng/L		105	64 - 124
Perfluorononanoic acid (PFNA)	40.0	42.8		ng/L		107	68 - 128
Perfluorodecanoic acid (PFDA)	40.0	42.8		ng/L		107	69 - 129
Perfluoroundecanoic acid (PFUnA)	40.0	38.4		ng/L		96	60 - 120
Perfluorododecanoic acid (PFDoA)	40.0	42.8		ng/L		107	71 - 131
Perfluorotridecanoic acid (PFTriA)	40.0	48.3		ng/L		121	72 - 132
Perfluorotetradecanoic acid (PFTeA)	40.0	39.3		ng/L		98	68 - 128
Perfluorobutanesulfonic acid (PFBS)	35.4	37.3		ng/L		105	73 - 133
Perfluorohexanesulfonic acid (PFHxS)	36.4	34.5		ng/L		95	63 - 123
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	41.3		ng/L		108	68 - 128
Perfluorooctanesulfonic acid (PFOS)	37.1	37.7		ng/L		101	67 - 127
Perfluorodecanesulfonic acid (PFDS)	38.6	39.2		ng/L		102	68 - 128
Perfluorooctanesulfonamide (FOSA)	40.0	42.1		ng/L		105	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	38.6		ng/L		97	67 - 127
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	38.9		ng/L		97	65 - 125
6:2 FTS	37.9	36.2		ng/L		95	66 - 126
8:2 FTS	38.3	36.8		ng/L		96	67 - 127

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C4 PFBA	98		25 - 150
13C5 PFPeA	97		25 - 150
13C2 PFHxA	96		25 - 150
13C4 PFHpA	93		25 - 150
13C4 PFOA	95		25 - 150
13C5 PFNA	96		25 - 150
13C2 PFDA	104		25 - 150
13C2 PFUnA	102		25 - 150
13C2 PFDoA	94		25 - 150
13C2 PFTeDA	113		25 - 150
13C3 PFBS	97		25 - 150
18O2 PFHxS	102		25 - 150
13C4 PFOS	97		25 - 150
13C8 FOSA	95		25 - 150
d3-NMeFOSAA	113		25 - 150
d5-NEtFOSAA	107		25 - 150

QC Sample Results

Client: Pace Analytical Services, LLC
 Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCS 320-284798/2-A
Matrix: Water
Analysis Batch: 284990

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 284798

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
M2-6:2 FTS	108		25 - 150
M2-8:2 FTS	116		25 - 150

Lab Sample ID: LCSD 320-284798/3-A
Matrix: Water
Analysis Batch: 284990

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 284798

<i>Analyte</i>	<i>Spike Added</i>	<i>LCSD Result</i>	<i>LCSD Qualifier</i>	<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec. Limits</i>	<i>RPD</i>	<i>RPD Limit</i>
Perfluorobutanoic acid	40.0	42.6		ng/L		107	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	40.0	39.4		ng/L		99	66 - 126	4	30
Perfluorohexanoic acid (PFHxA)	40.0	41.4		ng/L		104	66 - 126	3	30
Perfluoroheptanoic acid	40.0	39.5		ng/L		99	66 - 126	4	30
Perfluorooctanoic acid (PFOA)	40.0	40.8		ng/L		102	64 - 124	3	30
Perfluorononanoic acid (PFNA)	40.0	40.0		ng/L		100	68 - 128	7	30
Perfluorodecanoic acid (PFDA)	40.0	41.8		ng/L		104	69 - 129	2	30
Perfluoroundecanoic acid (PFUnA)	40.0	37.5		ng/L		94	60 - 120	2	30
Perfluorododecanoic acid (PFDoA)	40.0	40.8		ng/L		102	71 - 131	5	30
Perfluorotridecanoic acid (PFTriA)	40.0	48.3		ng/L		121	72 - 132	0	30
Perfluorotetradecanoic acid (PFTeA)	40.0	40.6		ng/L		102	68 - 128	3	30
Perfluorobutanesulfonic acid (PFBS)	35.4	35.9		ng/L		102	73 - 133	4	30
Perfluorohexanesulfonic acid (PFHxS)	36.4	35.7		ng/L		98	63 - 123	3	30
Perfluoroheptanesulfonic Acid (PFHpS)	38.1	42.6		ng/L		112	68 - 128	3	30
Perfluorooctanesulfonic acid (PFOS)	37.1	38.3		ng/L		103	67 - 127	2	30
Perfluorodecanesulfonic acid (PFDS)	38.6	39.8		ng/L		103	68 - 128	1	30
Perfluorooctanesulfonamide (FOSA)	40.0	43.8		ng/L		109	70 - 130	4	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	40.0	37.3		ng/L		93	67 - 127	3	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	40.0	37.3		ng/L		93	65 - 125	4	30
6:2 FTS	37.9	39.1		ng/L		103	66 - 126	8	30
8:2 FTS	38.3	36.1		ng/L		94	67 - 127	2	30

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
13C4 PFBA	96		25 - 150
13C5 PFPeA	99		25 - 150
13C2 PFHxA	96		25 - 150
13C4 PFHpA	95		25 - 150
13C4 PFOA	97		25 - 150
13C5 PFNA	101		25 - 150
13C2 PFDA	101		25 - 150
13C2 PFUnA	97		25 - 150
13C2 PFDoA	93		25 - 150

Eurofins TestAmerica, Sacramento

QC Sample Results

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Method: 537 (modified) - Fluorinated Alkyl Substances (Continued)

Lab Sample ID: LCSD 320-284798/3-A
Matrix: Water
Analysis Batch: 284990

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 284798

<i>Isotope Dilution</i>	<i>LCSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
<i>13C2 PFTeDA</i>	111		25 - 150
<i>13C3 PFBS</i>	96		25 - 150
<i>18O2 PFHxS</i>	99		25 - 150
<i>13C4 PFOS</i>	91		25 - 150
<i>13C8 FOSA</i>	90		25 - 150
<i>d3-NMeFOSAA</i>	107		25 - 150
<i>d5-NEtFOSAA</i>	104		25 - 150
<i>M2-6:2 FTS</i>	104		25 - 150
<i>M2-8:2 FTS</i>	111		25 - 150

QC Association Summary

Client: Pace Analytical Services, LLC
 Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

LCMS

Prep Batch: 284798

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-48635-1	GM-26	Total/NA	Water	3535	
320-48635-2	GM-26I	Total/NA	Water	3535	
320-48635-3	GM-27	Total/NA	Water	3535	
320-48635-4	GM-27I	Total/NA	Water	3535	
320-48635-5	GM-28	Total/NA	Water	3535	
320-48635-6	GM-28I	Total/NA	Water	3535	
320-48635-7	DUP	Total/NA	Water	3535	
MB 320-284798/1-A	Method Blank	Total/NA	Water	3535	
LCS 320-284798/2-A	Lab Control Sample	Total/NA	Water	3535	
LCSD 320-284798/3-A	Lab Control Sample Dup	Total/NA	Water	3535	

Analysis Batch: 284990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-48635-1	GM-26	Total/NA	Water	537 (modified)	284798
320-48635-2	GM-26I	Total/NA	Water	537 (modified)	284798
320-48635-3	GM-27	Total/NA	Water	537 (modified)	284798
320-48635-5	GM-28	Total/NA	Water	537 (modified)	284798
MB 320-284798/1-A	Method Blank	Total/NA	Water	537 (modified)	284798
LCS 320-284798/2-A	Lab Control Sample	Total/NA	Water	537 (modified)	284798
LCSD 320-284798/3-A	Lab Control Sample Dup	Total/NA	Water	537 (modified)	284798

Analysis Batch: 285468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
320-48635-4	GM-27I	Total/NA	Water	537 (modified)	284798
320-48635-6	GM-28I	Total/NA	Water	537 (modified)	284798
320-48635-7	DUP	Total/NA	Water	537 (modified)	284798

Lab Chronicle

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: GM-26

Date Collected: 03/20/19 09:05

Date Received: 03/23/19 09:15

Lab Sample ID: 320-48635-1

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			240.7 mL	10.00 mL	284798	03/29/19 05:22	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			284990	03/30/19 03:20	S1M	TAL SAC

Client Sample ID: GM-26I

Date Collected: 03/20/19 09:15

Date Received: 03/23/19 09:15

Lab Sample ID: 320-48635-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			243.6 mL	10.00 mL	284798	03/29/19 05:22	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			284990	03/30/19 03:27	S1M	TAL SAC

Client Sample ID: GM-27

Date Collected: 03/20/19 10:28

Date Received: 03/23/19 09:15

Lab Sample ID: 320-48635-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			259.9 mL	10.00 mL	284798	03/29/19 05:22	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			284990	03/30/19 03:35	S1M	TAL SAC

Client Sample ID: GM-27I

Date Collected: 03/20/19 10:08

Date Received: 03/23/19 09:15

Lab Sample ID: 320-48635-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			245.1 mL	10.00 mL	284798	03/29/19 05:22	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			285468	04/02/19 09:53	S1M	TAL SAC

Client Sample ID: GM-28

Date Collected: 03/20/19 11:25

Date Received: 03/23/19 09:15

Lab Sample ID: 320-48635-5

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			258.6 mL	10.00 mL	284798	03/29/19 05:22	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			284990	03/30/19 03:50	S1M	TAL SAC

Client Sample ID: GM-28I

Date Collected: 03/20/19 11:15

Date Received: 03/23/19 09:15

Lab Sample ID: 320-48635-6

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			262.4 mL	10.00 mL	284798	03/29/19 05:22	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			285468	04/02/19 10:08	S1M	TAL SAC

Lab Chronicle

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Client Sample ID: DUP

Lab Sample ID: 320-48635-7

Date Collected: 03/20/19 10:10

Matrix: Water

Date Received: 03/23/19 09:15

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3535			250.2 mL	10.00 mL	284798	03/29/19 05:22	MNV	TAL SAC
Total/NA	Analysis	537 (modified)		1			285468	04/02/19 10:15	S1M	TAL SAC

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Accreditation/Certification Summary

Client: Pace Analytical Services, LLC
 Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Laboratory: Eurofins TestAmerica, Sacramento

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
New York	NELAP	2	11666	03-31-19 *

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
537 (modified)	3535	Water	6:2 FTS
537 (modified)	3535	Water	8:2 FTS
537 (modified)	3535	Water	N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)
537 (modified)	3535	Water	N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)
537 (modified)	3535	Water	Perfluorobutanesulfonic acid (PFBS)
537 (modified)	3535	Water	Perfluorobutanoic acid
537 (modified)	3535	Water	Perfluorodecanesulfonic acid (PFDS)
537 (modified)	3535	Water	Perfluorodecanoic acid (PFDA)
537 (modified)	3535	Water	Perfluorododecanoic acid (PFDoA)
537 (modified)	3535	Water	Perfluoroheptanesulfonic Acid (PFHpS)
537 (modified)	3535	Water	Perfluoroheptanoic acid
537 (modified)	3535	Water	Perfluorohexanesulfonic acid (PFHxS)
537 (modified)	3535	Water	Perfluorohexanoic acid (PFHxA)
537 (modified)	3535	Water	Perfluorononanoic acid (PFNA)
537 (modified)	3535	Water	Perfluorooctanesulfonamide (FOSA)
537 (modified)	3535	Water	Perfluorooctanesulfonic acid (PFOS)
537 (modified)	3535	Water	Perfluorooctanoic acid (PFOA)
537 (modified)	3535	Water	Perfluoropentanoic acid (PFPeA)
537 (modified)	3535	Water	Perfluorotetradecanoic acid (PFTeA)
537 (modified)	3535	Water	Perfluorotridecanoic acid (PFTriA)
537 (modified)	3535	Water	Perfluoroundecanoic acid (PFUnA)

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Method Summary

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Method	Method Description	Protocol	Laboratory
537 (modified)	Fluorinated Alkyl Substances	EPA	TAL SAC
3535	Solid-Phase Extraction (SPE)	SW846	TAL SAC

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAC = Eurofins TestAmerica, Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600



Sample Summary

Client: Pace Analytical Services, LLC
Project/Site: Pace PFAS Testing

Job ID: 320-48635-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
320-48635-1	GM-26	Water	03/20/19 09:05	03/23/19 09:15
320-48635-2	GM-26I	Water	03/20/19 09:15	03/23/19 09:15
320-48635-3	GM-27	Water	03/20/19 10:28	03/23/19 09:15
320-48635-4	GM-27I	Water	03/20/19 10:08	03/23/19 09:15
320-48635-5	GM-28	Water	03/20/19 11:25	03/23/19 09:15
320-48635-6	GM-28I	Water	03/20/19 11:15	03/23/19 09:15
320-48635-7	DUP	Water	03/20/19 10:10	03/23/19 09:15

Chain of Custody



Workorder: 7082918 Workorder Name: WELL CLUSTER 26.27.28 ROUTINE Results Requested By: 4/3/2019

Report / Invoice To: Subcontract To:
 Jennifer Aracri
 Pace Analytical Melville
 575 Broad Hollow Road
 Melville, NY 11747
 Phone (631)694-3040
 Email: jennifer.aracri@pacelabs.com

Test America-Sacramento P.O. 7082918JSA
 880 Riverside Pkwy
 West Sacramento, CA 95605

State of Sample Origin: NY

Item	Sample ID	Collect Date/Time	Lab ID	Matrix	Preserved Containers		PFOA/PFOS NY List	Requested Analysis	LAB USE ONLY
					Unpreserved	Preserved			
1	GM-26	3/20/2019 09:05	7082918001	Water			X		
2	GM-26i	3/20/2019 09:15	7082918002	Water			X		
3	GM-27	3/20/2019 10:28	7082918003	Water			X		
4	GM-27i	3/20/2019 10:08	7082918004	Water			X		
5	GM-28	3/20/2019 11:25	7082918005	Water			X		
6	GM-28i	3/20/2019 11:15	7082918006	Water			X		
7	DUP	3/20/2019 10:10	7082918007	Water			X		

Transfers	Released By	Date/Time	Received By	Date/Time	Received on Ice	Y or N	Y or N	Y or N	Samples Intact	Y or N
1	<i>J Aracri</i>	3/22/19 18:00	<i>Subcontractor J Aracri</i>	3/23/19 9:15						
2										
3										

Cooler Temperature on Receipt: _____ °C

1.8°C



320-48635 Chain of Custody



Login Sample Receipt Checklist

Client: Pace Analytical Services, LLC

Job Number: 320-48635-1

Login Number: 48635

List Source: Eurofins TestAmerica, Sacramento

List Number: 1

Creator: Her, David A

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

July 18, 2019

Joe Guarino
Town of Babylon
281 Phelps Lane
North Babylon, NY 11703

RE: Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Dear Joe Guarino:

Enclosed are the analytical results for sample(s) received by the laboratory on June 11, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,



Jennifer Aracri
jennifer.aracri@pacelabs.com
(631)694-3040
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

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CERTIFICATIONS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485

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

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 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 #: CL101

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

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747

New York Certification #: 10478 Primary Accrediting Body

New Jersey Certification #: NY158

Pennsylvania Certification #: 68-00350

Connecticut Certification #: PH-0435

Maryland Certification #: 208

Rhode Island Certification #: LAO00340

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7093107001	GM-2D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
7093107002	GM-4D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
7093107003	GM-5D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7093107004	GM-6D	EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
EPA 353.2	SDO	1	PACE-MV		
SM22 4500 NH3 H	BNK	1	PACE-MV		
SM22 5310B	KM1	1	PACE-MV		
7093107005	GM-7D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7093107006	GM-15D	SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
7093107007	GM-16D	SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
EPA 353.2	SDO	1	PACE-MV		
7093107008	GM-17D	SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
SM22 2340C	AK1	1	PACE-MV		

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SAMPLE ANALYTE COUNT

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
7093107009	GM-18D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
7093107010	GM-19D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV

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SAMPLE ANALYTE COUNT

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 6010C

Description: 6010 MET ICP

Client: Town of Babylon

Date: July 18, 2019

General Information:

10 samples were analyzed for EPA 6010C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

QC Batch: 117823

B: Analyte was detected in the associated method blank.

- BLANK for HBN 117823 [MPRP/785 (Lab ID: 558052)]
- Thallium

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 7470A

Description: 7470 Mercury

Client: Town of Babylon

Date: July 18, 2019

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 8270D by SIM

Description: 8270D MSSV 14 Dioxane By SIM

Client: Town of Babylon

Date: July 18, 2019

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

Laboratory Control Spike:

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

QC Batch: 613702

R1: RPD value was outside control limits.

- LCSD (Lab ID: 3315789)
- 1,4-Dioxane (SIM)

Matrix Spikes:

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

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Method: EPA 180.1
Description: 180.1 Turbidity
Client: Town of Babylon
Date: July 18, 2019

General Information:

10 samples were analyzed for EPA 180.1. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: SM22 2320B

Description: 2320B Alkalinity

Client: Town of Babylon

Date: July 18, 2019

General Information:

10 samples were analyzed for SM22 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Method: SM22 2340C
Description: 2340C Hardness, Total
Client: Town of Babylon
Date: July 18, 2019

General Information:

10 samples were analyzed for SM22 2340C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Method: SM22 2540C
Description: 2540C Total Dissolved Solids
Client: Town of Babylon
Date: July 18, 2019

General Information:

10 samples were analyzed for SM22 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 118003

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

- DUP (Lab ID: 559705)
- Total Dissolved Solids

QC Batch: 118004

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

- DUP (Lab ID: 559709)
- Total Dissolved Solids
- DUP (Lab ID: 559711)
- Total Dissolved Solids

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 410.4

Description: 410.4 COD

Client: Town of Babylon

Date: July 18, 2019

General Information:

10 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: SM22 5210B

Description: 5210B BOD, 5 day

Client: Town of Babylon

Date: July 18, 2019

General Information:

10 samples were analyzed for SM22 5210B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with SM22 5210B with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 300.0

Description: 300.0 IC Anions 28 Days

Client: Town of Babylon

Date: July 18, 2019

General Information:

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

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 351.2

Description: 351.2 Total Kjeldahl Nitrogen

Client: Town of Babylon

Date: July 18, 2019

General Information:

10 samples were analyzed for EPA 351.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 119268

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7092926001,7093723002

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

- MS (Lab ID: 566777)
- Nitrogen, Kjeldahl, Total

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 119268

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

- DUP (Lab ID: 566780)
- Nitrogen, Kjeldahl, Total

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 353.2

Description: 353.2 Nitrogen, NO₂/NO₃ unpres

Client: Town of Babylon

Date: July 18, 2019

General Information:

10 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 117328

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7093035001,7093139001

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

- MS (Lab ID: 555675)
- Nitrate-Nitrite (as N)

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 353.2

Description: 353.2 Nitrogen, NO2

Client: Town of Babylon

Date: July 18, 2019

General Information:

10 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 117323

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7093101001,7093107001

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

- MS (Lab ID: 555564)
- Nitrite as N

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: SM22 4500 NH3 H

Description: 4500 Ammonia Water

Client: Town of Babylon

Date: July 18, 2019

General Information:

10 samples were analyzed for SM22 4500 NH3 H. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

QC Batch: 119281

B: Analyte was detected in the associated method blank.

- BLANK for HBN 119281 [WETA/191 (Lab ID: 566889)
- Nitrogen, Ammonia

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 119281

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7093468001

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

- MS (Lab ID: 566891)
- Nitrogen, Ammonia

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 119281

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

- DUP (Lab ID: 566892)
- Nitrogen, Ammonia

Additional Comments:

REPORT OF LABORATORY ANALYSIS

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: SM22 5310B

Description: 5310B TOC as NPOC

Client: Town of Babylon

Date: July 18, 2019

General Information:

10 samples were analyzed for SM22 5310B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-2D	Lab ID: 7093107001	Collected: 06/11/19 13:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A						
Aluminum	236	ug/L	200	1	06/14/19 09:04	06/24/19 18:36	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 18:36	7440-36-0	
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7440-38-2	
Barium	<200	ug/L	200	1	06/14/19 09:04	06/24/19 18:36	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:36	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 18:36	7440-43-9	
Calcium	20800	ug/L	200	1	06/14/19 09:04	06/24/19 18:36	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:36	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 18:36	7440-50-8	
Iron	1020	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:36	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:36	7439-92-1	
Magnesium	4750	ug/L	200	1	06/14/19 09:04	06/24/19 18:36	7439-95-4	
Manganese	71.7	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 18:36	7440-02-0	
Potassium	<5000	ug/L	5000	1	06/14/19 09:04	06/24/19 18:36	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7440-22-4	
Sodium	11600	ug/L	5000	1	06/14/19 09:04	06/24/19 18:36	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7440-28-0	
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:36	7440-62-2	
Zinc	<20.0	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:36	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A						
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:31	7439-97-6	
8270D MSSV 14 Dioxane By SIM		Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510						
1,4-Dioxane (SIM)	0.13J	ug/L	0.25	1	06/18/19 11:20	06/21/19 20:39	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	44	%	30-125	1	06/18/19 11:20	06/21/19 20:39		
180.1 Turbidity		Analytical Method: EPA 180.1						
Turbidity	3.0	NTU	1.0	1		06/12/19 15:11		
2320B Alkalinity		Analytical Method: SM22 2320B						
Alkalinity, Total as CaCO3	24.2	mg/L	1.0	1		06/22/19 02:44		
2340C Hardness, Total		Analytical Method: SM22 2340C						
Tot Hardness asCaCO3 (SM 2340B)	60.0	mg/L	5.0	1		06/24/19 15:17		
2540C Total Dissolved Solids		Analytical Method: SM22 2540C						
Total Dissolved Solids	129	mg/L	10.0	1		06/17/19 10:34		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:39		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Sample: GM-2D	Lab ID: 7093107001	Collected: 06/11/19 13:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	1.4J	mg/L	2.0	1	06/13/19 10:33	06/18/19 10:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	0.12J	mg/L	0.50	1		06/26/19 23:56	24959-67-9	
Chloride	16.4	mg/L	2.0	1		06/26/19 23:56	16887-00-6	
Sulfate	44.4	mg/L	5.0	1		06/26/19 23:56	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	0.34	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:00	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.049J	mg/L	0.050	1		06/11/19 22:43	14797-55-8	
Nitrate-Nitrite (as N)	0.049J	mg/L	0.050	1		06/11/19 22:43	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:47	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.093J	mg/L	0.10	1		06/25/19 14:24	7664-41-7	B
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	0.98J	mg/L	1.0	1		06/18/19 16:07	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-4D	Lab ID: 7093107002	Collected: 06/11/19 10:45	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	<200	ug/L	200	1	06/14/19 09:04	06/24/19 18:41	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 18:41	7440-36-0	
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7440-38-2	
Barium	24.7J	ug/L	200	1	06/14/19 09:04	06/24/19 18:41	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:41	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 18:41	7440-43-9	
Calcium	18700	ug/L	200	1	06/14/19 09:04	06/24/19 18:41	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:41	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 18:41	7440-50-8	
Iron	318	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:41	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:41	7439-92-1	
Magnesium	3890	ug/L	200	1	06/14/19 09:04	06/24/19 18:41	7439-95-4	
Manganese	112	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 18:41	7440-02-0	
Potassium	4930J	ug/L	5000	1	06/14/19 09:04	06/24/19 18:41	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7440-22-4	
Sodium	22700	ug/L	5000	1	06/14/19 09:04	06/24/19 18:41	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7440-28-0	
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:41	7440-62-2	
Zinc	<20.0	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:41	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:33	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.14J	ug/L	0.25	1	06/18/19 11:20	06/21/19 19:20	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	47	%	30-125	1	06/18/19 11:20	06/21/19 19:20		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	4.6	NTU	1.0	1		06/12/19 15:10		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	32.9	mg/L	1.0	1		06/22/19 02:52		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	50.0	mg/L	5.0	1		06/24/19 17:04		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	175	mg/L	10.0	1		06/17/19 10:34		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	38.9	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:39		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Sample: GM-4D	Lab ID: 7093107002	Collected: 06/11/19 10:45	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	6.1	mg/L	2.0	1	06/13/19 10:33	06/18/19 10:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	2.5	mg/L	0.50	1		06/27/19 00:12	24959-67-9	
Chloride	183	mg/L	10.0	5		06/27/19 19:38	16887-00-6	
Sulfate	36.7	mg/L	5.0	1		06/27/19 00:12	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	0.86	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:01	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.62	mg/L	0.050	1		06/11/19 22:45	14797-55-8	
Nitrate-Nitrite (as N)	0.62	mg/L	0.050	1		06/11/19 22:45	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:50	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.44	mg/L	0.10	1		06/25/19 14:25	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	12.6	mg/L	1.0	1		06/18/19 17:05	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-5D	Lab ID: 7093107003	Collected: 06/11/19 11:20	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	37.0J	ug/L	200	1	06/14/19 09:04	06/25/19 15:01	7429-90-5	
Antimony	13.7J	ug/L	60.0	1	06/14/19 09:04	06/25/19 15:01	7440-36-0	
Arsenic	15.4	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7440-38-2	
Barium	85.7J	ug/L	200	1	06/14/19 09:04	06/25/19 15:01	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/25/19 15:01	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/25/19 15:01	7440-43-9	
Calcium	22100	ug/L	200	1	06/14/19 09:04	06/25/19 15:01	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/25/19 15:01	7440-48-4	
Copper	15.6J	ug/L	25.0	1	06/14/19 09:04	06/25/19 15:01	7440-50-8	
Iron	27000	ug/L	20.0	1	06/14/19 09:04	06/25/19 15:01	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/25/19 15:01	7439-92-1	
Magnesium	3460	ug/L	200	1	06/14/19 09:04	06/25/19 15:01	7439-95-4	
Manganese	8060	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7439-96-5	
Nickel	5.0J	ug/L	40.0	1	06/14/19 09:04	06/25/19 15:01	7440-02-0	
Potassium	6800	ug/L	5000	1	06/14/19 09:04	06/25/19 15:01	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7440-22-4	
Sodium	112000	ug/L	5000	1	06/14/19 09:04	06/25/19 15:01	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7440-28-0	
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/25/19 15:01	7440-62-2	
Zinc	7.0J	ug/L	20.0	1	06/14/19 09:04	06/25/19 15:01	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:35	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.084J	ug/L	0.25	1	06/18/19 11:20	06/21/19 19:40	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	43	%	30-125	1	06/18/19 11:20	06/21/19 19:40		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	22.0	NTU	2.0	2		06/12/19 15:10		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	51.2	mg/L	1.0	1		06/22/19 02:59		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	80.0	mg/L	5.0	1		06/26/19 12:06		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	472	mg/L	20.0	1		06/17/19 10:35		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	21.2	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:40		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Sample: GM-5D	Lab ID: 7093107003	Collected: 06/11/19 11:20	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	2.4J	mg/L	4.0	2	06/13/19 10:33	06/18/19 10:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	0.23J	mg/L	0.50	1		06/27/19 00:29	24959-67-9	
Chloride	221	mg/L	20.0	10		06/27/19 19:54	16887-00-6	
Sulfate	41.2	mg/L	5.0	1		06/27/19 00:29	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	0.46	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:02	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.10	mg/L	0.050	1		06/11/19 22:46	14797-55-8	
Nitrate-Nitrite (as N)	0.10	mg/L	0.050	1		06/11/19 22:46	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:51	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.072J	mg/L	0.10	1		06/25/19 14:27	7664-41-7	B
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	5.9	mg/L	1.0	1		06/18/19 17:21	7440-44-0	

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-6D	Lab ID: 7093107004	Collected: 06/11/19 12:00	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	105J	ug/L	200	1	06/14/19 09:04	06/24/19 18:52	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 18:52	7440-36-0	
Arsenic	32.8	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7440-38-2	
Barium	196J	ug/L	200	1	06/14/19 09:04	06/24/19 18:52	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:52	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 18:52	7440-43-9	
Calcium	92100	ug/L	200	1	06/14/19 09:04	06/24/19 18:52	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:52	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 18:52	7440-50-8	
Iron	17300	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:52	7439-89-6	
Lead	4.5J	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:52	7439-92-1	
Magnesium	10400	ug/L	200	1	06/14/19 09:04	06/24/19 18:52	7439-95-4	
Manganese	279	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 18:52	7440-02-0	
Potassium	16700	ug/L	5000	1	06/14/19 09:04	06/24/19 18:52	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7440-22-4	
Sodium	44100	ug/L	5000	1	06/14/19 09:04	06/24/19 18:52	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7440-28-0	
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:52	7440-62-2	
Zinc	<20.0	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:52	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:36	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	5.0	ug/L	0.25	1	06/18/19 11:20	06/21/19 20:00	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	46	%	30-125	1	06/18/19 11:20	06/21/19 20:00		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	17.1	NTU	2.0	2		06/12/19 15:10		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	262	mg/L	1.0	1		06/22/19 03:12		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	260	mg/L	5.0	1		06/26/19 12:09		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	456	mg/L	20.0	1		06/17/19 10:35		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	47.7	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:40		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Sample: GM-6D	Lab ID: 7093107004	Collected: 06/11/19 12:00	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	22.2	mg/L	2.0	1	06/13/19 10:33	06/18/19 10:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	1.5	mg/L	0.50	1		06/27/19 00:46	24959-67-9	
Chloride	106	mg/L	20.0	10		06/27/19 20:11	16887-00-6	
Sulfate	16.0	mg/L	5.0	1		06/27/19 00:46	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	9.6	mg/L	0.50	5	06/25/19 13:02	06/26/19 08:38	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.054	mg/L	0.050	1		06/11/19 22:49	14797-55-8	
Nitrate-Nitrite (as N)	0.054	mg/L	0.050	1		06/11/19 22:49	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:53	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	8.1	mg/L	0.50	5		06/25/19 16:19	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	15.1	mg/L	1.0	1		06/18/19 17:37	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-7D		Lab ID: 7093107005		Collected: 06/11/19 12:35	Received: 06/11/19 15:56	Matrix: Water		
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A						
Aluminum	892	ug/L	200	1	06/14/19 09:04	06/24/19 18:58	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 18:58	7440-36-0	
Arsenic	6.9J	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7440-38-2	
Barium	136J	ug/L	200	1	06/14/19 09:04	06/24/19 18:58	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:58	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 18:58	7440-43-9	
Calcium	171000	ug/L	200	1	06/14/19 09:04	06/24/19 18:58	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7440-47-3	
Cobalt	3.8J	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:58	7440-48-4	
Copper	36.2	ug/L	25.0	1	06/14/19 09:04	06/24/19 18:58	7440-50-8	
Iron	5230	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:58	7439-89-6	
Lead	13.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:58	7439-92-1	
Magnesium	26600	ug/L	200	1	06/14/19 09:04	06/24/19 18:58	7439-95-4	
Manganese	2220	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7439-96-5	
Nickel	5.6J	ug/L	40.0	1	06/14/19 09:04	06/24/19 18:58	7440-02-0	
Potassium	9720	ug/L	5000	1	06/14/19 09:04	06/24/19 18:58	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7440-22-4	
Sodium	10100	ug/L	5000	1	06/14/19 09:04	06/24/19 18:58	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7440-28-0	
Vanadium	10.9J	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:58	7440-62-2	
Zinc	27.4	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:58	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A						
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:38	7439-97-6	
8270D MSSV 14 Dioxane By SIM		Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510						
1,4-Dioxane (SIM)	<0.25	ug/L	0.25	1	06/18/19 11:20	06/21/19 20:19	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	44	%	30-125	1	06/18/19 11:20	06/21/19 20:19		
180.1 Turbidity		Analytical Method: EPA 180.1						
Turbidity	9.4	NTU	2.0	2		06/12/19 15:11		
2320B Alkalinity		Analytical Method: SM22 2320B						
Alkalinity, Total as CaCO3	470	mg/L	1.0	1		06/22/19 03:46		
2340C Hardness, Total		Analytical Method: SM22 2340C						
Tot Hardness asCaCO3 (SM 2340B)	450	mg/L	5.0	1		06/24/19 17:15		
2540C Total Dissolved Solids		Analytical Method: SM22 2540C						
Total Dissolved Solids	570	mg/L	20.0	1		06/17/19 10:36		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	72.0	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:40		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-7D	Lab ID: 7093107005	Collected: 06/11/19 12:35	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	1.2J	mg/L	2.0	1	06/13/19 10:33	06/18/19 10:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	0.075J	mg/L	0.50	1		06/27/19 20:28	24959-67-9	
Chloride	5.8	mg/L	2.0	1		06/27/19 20:28	16887-00-6	
Sulfate	49.9	mg/L	5.0	1		06/27/19 20:28	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	1.9	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:06	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.13	mg/L	0.050	1		06/11/19 22:51	14797-55-8	
Nitrate-Nitrite (as N)	0.13	mg/L	0.050	1		06/11/19 22:51	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:54	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.12	mg/L	0.10	1		06/25/19 14:29	7664-41-7	B
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	15.9	mg/L	1.0	1		06/18/19 18:05	7440-44-0	

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-15D	Lab ID: 7093107006	Collected: 06/11/19 15:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	429	ug/L	200	1	06/14/19 09:04	06/24/19 19:03	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 19:03	7440-36-0	
Arsenic	11.5	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7440-38-2	
Barium	230	ug/L	200	1	06/14/19 09:04	06/24/19 19:03	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:03	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 19:03	7440-43-9	
Calcium	57000	ug/L	200	1	06/14/19 09:04	06/24/19 19:03	7440-70-2	
Chromium	5.3J	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7440-47-3	
Cobalt	7.5J	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:03	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 19:03	7440-50-8	
Iron	21200	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:03	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:03	7439-92-1	
Magnesium	9180	ug/L	200	1	06/14/19 09:04	06/24/19 19:03	7439-95-4	
Manganese	578	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7439-96-5	
Nickel	3.3J	ug/L	40.0	1	06/14/19 09:04	06/24/19 19:03	7440-02-0	
Potassium	22900	ug/L	5000	1	06/14/19 09:04	06/24/19 19:03	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7440-22-4	
Sodium	141000	ug/L	5000	1	06/14/19 09:04	06/24/19 19:03	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7440-28-0	
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:03	7440-62-2	
Zinc	15.5J	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:03	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:40	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	16.2	ug/L	0.25	1	06/18/19 11:20	06/21/19 22:17	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	46	%	30-125	1	06/18/19 11:20	06/21/19 22:17		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	144	NTU	10.0	10		06/12/19 15:12		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	372	mg/L	1.0	1		06/22/19 04:03		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	100	mg/L	5.0	1		06/24/19 17:50		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	6.0J	mg/L	10.0	1		06/17/19 10:36		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	123	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:40		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Sample: GM-15D	Lab ID: 7093107006	Collected: 06/11/19 15:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	19.9	mg/L	4.0	2	06/13/19 10:33	06/18/19 11:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	3.0	mg/L	0.50	1		06/27/19 20:45	24959-67-9	
Chloride	177	mg/L	10.0	5		06/27/19 21:01	16887-00-6	
Sulfate	<5.0	mg/L	5.0	1		06/27/19 20:45	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	25.8	mg/L	1.0	10	06/25/19 13:02	06/26/19 08:39	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.044J	mg/L	0.050	1		06/11/19 22:52	14797-55-8	
Nitrate-Nitrite (as N)	0.044J	mg/L	0.050	1		06/11/19 22:52	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:57	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	22.0	mg/L	1.0	10		06/25/19 16:21	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	33.6	mg/L	1.0	1		06/18/19 18:22	7440-44-0	

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-16D	Lab ID: 7093107007	Collected: 06/11/19 14:50	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	338	ug/L	200	1	06/14/19 09:04	06/24/19 19:08	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 19:08	7440-36-0	
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7440-38-2	
Barium	79.9J	ug/L	200	1	06/14/19 09:04	06/24/19 19:08	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:08	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 19:08	7440-43-9	
Calcium	18000	ug/L	200	1	06/14/19 09:04	06/24/19 19:08	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7440-47-3	
Cobalt	26.8J	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:08	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 19:08	7440-50-8	
Iron	24100	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:08	7439-89-6	
Lead	4.1J	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:08	7439-92-1	
Magnesium	3070	ug/L	200	1	06/14/19 09:04	06/24/19 19:08	7439-95-4	
Manganese	4690	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 19:08	7440-02-0	
Potassium	4490J	ug/L	5000	1	06/14/19 09:04	06/24/19 19:08	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7440-22-4	
Sodium	15900	ug/L	5000	1	06/14/19 09:04	06/24/19 19:08	7440-23-5	
Thallium	6.4J	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7440-28-0	B
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:08	7440-62-2	
Zinc	126	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:08	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:41	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.087J	ug/L	0.25	1	06/18/19 11:20	06/21/19 21:57	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	48	%	30-125	1	06/18/19 11:20	06/21/19 21:57		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	18.4	NTU	2.0	2		06/12/19 15:11		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	44.6	mg/L	1.0	1		06/24/19 12:18		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	60.0	mg/L	5.0	1		06/26/19 12:10		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	259	mg/L	10.0	1		06/17/19 10:50		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	52.1	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:40		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Sample: GM-16D	Lab ID: 7093107007	Collected: 06/11/19 14:50	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	5.6	mg/L	2.0	1	06/13/19 10:33	06/18/19 11:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	0.83	mg/L	0.50	1		06/27/19 21:18	24959-67-9	
Chloride	35.4	mg/L	2.0	1		06/27/19 21:18	16887-00-6	
Sulfate	22.6	mg/L	5.0	1		06/27/19 21:18	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	2.1	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:07	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.046J	mg/L	0.050	1		06/11/19 22:53	14797-55-8	
Nitrate-Nitrite (as N)	0.046J	mg/L	0.050	1		06/11/19 22:53	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:59	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.37	mg/L	0.10	1		06/25/19 14:34	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	12.5	mg/L	1.0	1		06/18/19 19:05	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-17D		Lab ID: 7093107008		Collected: 06/11/19 14:35		Received: 06/11/19 15:56		Matrix: Water	
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual	
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A							
Aluminum	<200	ug/L	200	1	06/14/19 09:04	06/24/19 19:14	7429-90-5		
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 19:14	7440-36-0		
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7440-38-2		
Barium	25.6J	ug/L	200	1	06/14/19 09:04	06/24/19 19:14	7440-39-3		
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:14	7440-41-7		
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 19:14	7440-43-9		
Calcium	12100	ug/L	200	1	06/14/19 09:04	06/24/19 19:14	7440-70-2		
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7440-47-3		
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:14	7440-48-4		
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 19:14	7440-50-8		
Iron	249	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:14	7439-89-6		
Lead	3.1J	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:14	7439-92-1		
Magnesium	6440	ug/L	200	1	06/14/19 09:04	06/24/19 19:14	7439-95-4		
Manganese	26.5	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7439-96-5		
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 19:14	7440-02-0		
Potassium	<5000	ug/L	5000	1	06/14/19 09:04	06/24/19 19:14	7440-09-7		
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7782-49-2		
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7440-22-4		
Sodium	11500	ug/L	5000	1	06/14/19 09:04	06/24/19 19:14	7440-23-5		
Thallium	4.1J	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7440-28-0	B	
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:14	7440-62-2		
Zinc	18.9J	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:14	7440-66-6		
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A							
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:43	7439-97-6		
8270D MSSV 14 Dioxane By SIM		Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510							
1,4-Dioxane (SIM)	0.077J	ug/L	0.25	1	06/18/19 11:20	06/21/19 21:38	123-91-1		
Surrogates									
1,4-Dioxane-d8 (S)	49	%	30-125	1	06/18/19 11:20	06/21/19 21:38			
180.1 Turbidity		Analytical Method: EPA 180.1							
Turbidity	1.2	NTU	1.0	1		06/12/19 15:11			
2320B Alkalinity		Analytical Method: SM22 2320B							
Alkalinity, Total as CaCO3	26.7	mg/L	1.0	1		06/24/19 12:39			
2340C Hardness, Total		Analytical Method: SM22 2340C							
Tot Hardness asCaCO3 (SM 2340B)	40.0	mg/L	5.0	1		06/24/19 17:22			
2540C Total Dissolved Solids		Analytical Method: SM22 2540C							
Total Dissolved Solids	118	mg/L	10.0	1		06/17/19 10:50			
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4							
Chemical Oxygen Demand	30.0	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:41			

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-17D	Lab ID: 7093107008	Collected: 06/11/19 14:35	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	1.0J	mg/L	2.0	1	06/13/19 10:33	06/18/19 11:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	1.1	mg/L	0.50	1		06/27/19 21:35	24959-67-9	
Chloride	23.7	mg/L	2.0	1		06/27/19 21:35	16887-00-6	
Sulfate	36.2	mg/L	5.0	1		06/27/19 21:35	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	1.7	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:08	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.028J	mg/L	0.050	1		06/11/19 22:54	14797-55-8	
Nitrate-Nitrite (as N)	<0.050	mg/L	0.050	1		06/11/19 22:54	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 21:00	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.87	mg/L	0.10	1		06/25/19 14:35	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	10	mg/L	1.0	1		06/18/19 19:21	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-18D	Lab ID: 7093107009	Collected: 06/11/19 14:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A						
Aluminum	137J	ug/L	200	1	06/14/19 09:04	06/24/19 19:30	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 19:30	7440-36-0	
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7440-38-2	
Barium	136J	ug/L	200	1	06/14/19 09:04	06/24/19 19:30	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:30	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 19:30	7440-43-9	
Calcium	52400	ug/L	200	1	06/14/19 09:04	06/24/19 19:30	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:30	7440-48-4	
Copper	12.7J	ug/L	25.0	1	06/14/19 09:04	06/24/19 19:30	7440-50-8	
Iron	213	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:30	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:30	7439-92-1	
Magnesium	4670	ug/L	200	1	06/14/19 09:04	06/24/19 19:30	7439-95-4	
Manganese	3350	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 19:30	7440-02-0	
Potassium	25400	ug/L	5000	1	06/14/19 09:04	06/24/19 19:30	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7440-22-4	
Sodium	67300	ug/L	5000	1	06/14/19 09:04	06/24/19 19:30	7440-23-5	
Thallium	9.1J	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7440-28-0	B
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:30	7440-62-2	
Zinc	37.9	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:30	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A						
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:49	7439-97-6	
8270D MSSV 14 Dioxane By SIM		Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510						
1,4-Dioxane (SIM)	0.15J	ug/L	0.25	1	06/18/19 11:20	06/21/19 21:18	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	46	%	30-125	1	06/18/19 11:20	06/21/19 21:18		
180.1 Turbidity		Analytical Method: EPA 180.1						
Turbidity	1.6	NTU	1.0	1		06/12/19 15:11		
2320B Alkalinity		Analytical Method: SM22 2320B						
Alkalinity, Total as CaCO3	136	mg/L	1.0	1		06/24/19 12:48		
2340C Hardness, Total		Analytical Method: SM22 2340C						
Tot Hardness asCaCO3 (SM 2340B)	140	mg/L	5.0	1		06/24/19 17:51		
2540C Total Dissolved Solids		Analytical Method: SM22 2540C						
Total Dissolved Solids	408	mg/L	20.0	1		06/17/19 10:52		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	16.8	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:42		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-18D	Lab ID: 7093107009	Collected: 06/11/19 14:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	5.8	mg/L	2.0	1	06/13/19 10:33	06/18/19 11:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	1.1	mg/L	0.50	1		06/27/19 22:25	24959-67-9	
Chloride	172	mg/L	10.0	5		06/27/19 22:42	16887-00-6	
Sulfate	10.3	mg/L	5.0	1		06/27/19 22:25	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	3.1	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:09	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.032J	mg/L	0.050	1		06/11/19 22:55	14797-55-8	
Nitrate-Nitrite (as N)	<0.050	mg/L	0.050	1		06/11/19 22:55	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 21:01	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	2.5	mg/L	0.10	1		06/25/19 14:36	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	4.0	mg/L	1.0	1		06/18/19 19:37	7440-44-0	

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-19D	Lab ID: 7093107010	Collected: 06/11/19 13:40	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	220	ug/L	200	1	06/14/19 09:04	06/24/19 19:35	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 19:35	7440-36-0	
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7440-38-2	
Barium	76.1J	ug/L	200	1	06/14/19 09:04	06/24/19 19:35	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:35	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 19:35	7440-43-9	
Calcium	30100	ug/L	200	1	06/14/19 09:04	06/24/19 19:35	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:35	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 19:35	7440-50-8	
Iron	248	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:35	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:35	7439-92-1	
Magnesium	4490	ug/L	200	1	06/14/19 09:04	06/24/19 19:35	7439-95-4	
Manganese	12.5	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 19:35	7440-02-0	
Potassium	5370	ug/L	5000	1	06/14/19 09:04	06/24/19 19:35	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7440-22-4	
Sodium	32600	ug/L	5000	1	06/14/19 09:04	06/24/19 19:35	7440-23-5	
Thallium	3.9J	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7440-28-0	B
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:35	7440-62-2	
Zinc	13.0J	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:35	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:51	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.16J	ug/L	0.25	1	06/18/19 11:20	06/21/19 20:59	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	42	%	30-125	1	06/18/19 11:20	06/21/19 20:59		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	2.0	NTU	1.0	1		06/12/19 15:11		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	6.2	mg/L	1.0	1		06/24/19 12:52		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	80.0	mg/L	5.0	1		06/24/19 17:51		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	324	mg/L	10.0	1		06/17/19 11:03		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	12.4	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:42		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-19D	Lab ID: 7093107010	Collected: 06/11/19 13:40	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	1.7J	mg/L	2.0	1	06/13/19 10:33	06/18/19 11:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	1.3	mg/L	0.50	1		06/27/19 22:58	24959-67-9	
Chloride	107	mg/L	10.0	5		06/27/19 23:15	16887-00-6	
Sulfate	26.9	mg/L	5.0	1		06/27/19 22:58	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	0.91	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:10	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	3.2	mg/L	0.50	10		06/11/19 22:56	14797-55-8	
Nitrate-Nitrite (as N)	3.2	mg/L	0.50	10		06/11/19 22:56	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 21:02	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.065J	mg/L	0.10	1		06/25/19 14:37	7664-41-7	B
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	2.6	mg/L	1.0	1		06/18/19 19:52	7440-44-0	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 118862

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 564845

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.20	0.20	06/21/19 18:28	

LABORATORY CONTROL SAMPLE: 564846

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	1	1.0	101	80-120	

MATRIX SPIKE SAMPLE: 564847

Parameter	Units	7093441002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.20	1	0.81	78	75-125	

SAMPLE DUPLICATE: 564848

Parameter	Units	7093441002 Result	Dup Result	RPD	Qualifiers
Mercury	ug/L	<0.20	<0.20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 117823 Analysis Method: EPA 6010C
 QC Batch Method: EPA 3005A Analysis Description: 6010 MET Water
 Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 558052 Matrix: Water
 Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	<200	200	06/24/19 18:25	
Antimony	ug/L	<60.0	60.0	06/24/19 18:25	
Arsenic	ug/L	<10.0	10.0	06/24/19 18:25	
Barium	ug/L	<200	200	06/24/19 18:25	
Beryllium	ug/L	<5.0	5.0	06/24/19 18:25	
Cadmium	ug/L	<2.5	2.5	06/24/19 18:25	
Calcium	ug/L	<200	200	06/24/19 18:25	
Chromium	ug/L	<10.0	10.0	06/24/19 18:25	
Cobalt	ug/L	<50.0	50.0	06/24/19 18:25	
Copper	ug/L	<25.0	25.0	06/24/19 18:25	
Iron	ug/L	<20.0	20.0	06/24/19 18:25	
Lead	ug/L	<5.0	5.0	06/24/19 18:25	
Magnesium	ug/L	<200	200	06/24/19 18:25	
Manganese	ug/L	<10.0	10.0	06/24/19 18:25	
Nickel	ug/L	<40.0	40.0	06/24/19 18:25	
Potassium	ug/L	<5000	5000	06/24/19 18:25	
Selenium	ug/L	<10.0	10.0	06/24/19 18:25	
Silver	ug/L	<10.0	10.0	06/24/19 18:25	
Sodium	ug/L	<5000	5000	06/24/19 18:25	
Thallium	ug/L	5.3J	10.0	06/24/19 18:25	
Vanadium	ug/L	<50.0	50.0	06/24/19 18:25	
Zinc	ug/L	<20.0	20.0	06/24/19 18:25	

LABORATORY CONTROL SAMPLE: 558053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	5030	101	80-120	
Antimony	ug/L	750	780	104	80-120	
Arsenic	ug/L	500	508	102	80-120	
Barium	ug/L	500	519	104	80-120	
Beryllium	ug/L	50	53.0	106	80-120	
Cadmium	ug/L	50	52.2	104	80-120	
Calcium	ug/L	25000	26400	106	80-120	
Chromium	ug/L	250	261	105	80-120	
Cobalt	ug/L	500	526	105	80-120	
Copper	ug/L	250	264	106	80-120	
Iron	ug/L	2000	2090	104	80-120	
Lead	ug/L	500	523	105	80-120	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

LABORATORY CONTROL SAMPLE: 558053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	ug/L	25000	26100	104	80-120	
Manganese	ug/L	250	260	104	80-120	
Nickel	ug/L	250	264	106	80-120	
Potassium	ug/L	50000	50700	101	80-120	
Selenium	ug/L	750	765	102	80-120	
Silver	ug/L	250	252	101	80-120	
Sodium	ug/L	50000	51500	103	80-120	
Thallium	ug/L	750	776	103	80-120	
Vanadium	ug/L	500	516	103	80-120	
Zinc	ug/L	1000	1040	104	80-120	

MATRIX SPIKE SAMPLE: 558055

Parameter	Units	7093379002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	<200	5000	4910	98	75-125	
Antimony	ug/L	<60.0	750	760	101	75-125	
Arsenic	ug/L	<10.0	500	499	100	75-125	
Barium	ug/L	<200	500	526	100	75-125	
Beryllium	ug/L	<5.0	50	51.8	104	75-125	
Cadmium	ug/L	<2.5	50	50.6	101	75-125	
Calcium	ug/L	77200	25000	102000	99	75-125	
Chromium	ug/L	16.1	250	265	99	75-125	
Cobalt	ug/L	<50.0	500	497	99	75-125	
Copper	ug/L	<25.0	250	252	99	75-125	
Iron	ug/L	299	2000	2320	101	75-125	
Lead	ug/L	<5.0	500	515	102	75-125	
Magnesium	ug/L	17100	25000	42400	101	75-125	
Manganese	ug/L	28.5	250	261	93	75-125	
Nickel	ug/L	46.9	250	294	99	75-125	
Potassium	ug/L	<5000	50000	51600	94	75-125	
Selenium	ug/L	<10.0	750	760	101	75-125	
Silver	ug/L	<10.0	250	242	97	75-125	
Sodium	ug/L	6640	50000	55400	98	75-125	
Thallium	ug/L	<10.0	750	762	102	75-125	
Vanadium	ug/L	<50.0	500	496	99	75-125	
Zinc	ug/L	<20.0	1000	1010	100	75-125	

SAMPLE DUPLICATE: 558054

Parameter	Units	7093379002 Result	Dup Result	RPD	Qualifiers
Aluminum	ug/L	<200	<200		
Antimony	ug/L	<60.0	<60.0		
Arsenic	ug/L	<10.0	<10.0		
Barium	ug/L	<200	25.3J		

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

SAMPLE DUPLICATE: 558054

Parameter	Units	7093379002 Result	Dup Result	RPD	Qualifiers
Beryllium	ug/L	<5.0	<5.0		
Cadmium	ug/L	<2.5	<2.5		
Calcium	ug/L	77200	81700	6	
Chromium	ug/L	16.1	17.7	9	
Cobalt	ug/L	<50.0	<50.0		
Copper	ug/L	<25.0	<25.0		
Iron	ug/L	299	351	16	
Lead	ug/L	<5.0	2.7J		
Magnesium	ug/L	17100	18200	6	
Manganese	ug/L	28.5	8.0J		
Nickel	ug/L	46.9	49.4	5	
Potassium	ug/L	<5000	4840J		
Selenium	ug/L	<10.0	<10.0		
Silver	ug/L	<10.0	<10.0		
Sodium	ug/L	6640	6860	3	
Thallium	ug/L	<10.0	<10.0		
Vanadium	ug/L	<50.0	<50.0		
Zinc	ug/L	<20.0	<20.0		

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 117421

Analysis Method: EPA 180.1

QC Batch Method: EPA 180.1

Analysis Description: 180.1 Turbidity

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 556069

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	<1.0	1.0	06/12/19 15:09	

LABORATORY CONTROL SAMPLE: 556070

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	10	10.1	101	90-110	

SAMPLE DUPLICATE: 556071

Parameter	Units	7093035001 Result	Dup Result	RPD	Qualifiers
Turbidity	NTU	<1.0	<1.0		

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 118942

Analysis Method: SM22 2320B

QC Batch Method: SM22 2320B

Analysis Description: 2320B Alkalinity

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006

METHOD BLANK: 565421

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<1.0	1.0	06/21/19 23:40	

LABORATORY CONTROL SAMPLE: 565422

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	25	26.2	105	85-115	

MATRIX SPIKE SAMPLE: 565424

Parameter	Units	7092454017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	16.5	25	44.9	114	75-125	

SAMPLE DUPLICATE: 565423

Parameter	Units	7092454017 Result	Dup Result	RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	16.5	16.6	1	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 119110 Analysis Method: SM22 2320B
 QC Batch Method: SM22 2320B Analysis Description: 2320B Alkalinity
 Associated Lab Samples: 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 566023 Matrix: Water
 Associated Lab Samples: 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<1.0	1.0	06/24/19 11:56	

LABORATORY CONTROL SAMPLE: 566024

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	25	26.1	104	85-115	

MATRIX SPIKE SAMPLE: 566025

Parameter	Units	7093107007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	44.6	25	71.3	107	75-125	

SAMPLE DUPLICATE: 566026

Parameter	Units	7093107007 Result	Dup Result	RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	44.6	45.7	2	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 119111

Analysis Method: SM22 2340C

QC Batch Method: SM22 2340C

Analysis Description: 2340C Hardness, Total

Associated Lab Samples: 7093107001, 7093107002, 7093107005, 7093107006, 7093107008, 7093107009, 7093107010

METHOD BLANK: 566027

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107005, 7093107006, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	<5.0	5.0	06/24/19 13:46	

LABORATORY CONTROL SAMPLE: 566028

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	100	99.0	99	90-110	

MATRIX SPIKE SAMPLE: 566415

Parameter	Units	7093107008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	40.0	667	700	99	75-125	

SAMPLE DUPLICATE: 566416

Parameter	Units	7093107008 Result	Dup Result	RPD	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	40.0	33.3	18	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

QC Batch: 119500 Analysis Method: SM22 2340C
QC Batch Method: SM22 2340C Analysis Description: 2340C Hardness, Total
Associated Lab Samples: 7093107003, 7093107004, 7093107007

METHOD BLANK: 567889 Matrix: Water
Associated Lab Samples: 7093107003, 7093107004, 7093107007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	<5.0	5.0	06/26/19 12:05	

LABORATORY CONTROL SAMPLE: 567890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	100	99.0	99	90-110	

MATRIX SPIKE SAMPLE: 567891

Parameter	Units	7093107003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	80.0	2000	2060	99	75-125	

SAMPLE DUPLICATE: 567892

Parameter	Units	7093107003 Result	Dup Result	RPD	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	80.0	80.0	0	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 118003 Analysis Method: SM22 2540C
 QC Batch Method: SM22 2540C Analysis Description: 2540C Total Dissolved Solids
 Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008

METHOD BLANK: 559701 Matrix: Water
 Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<10.0	10.0	06/17/19 09:42	

LABORATORY CONTROL SAMPLE: 559702

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	568	114	85-115	

MATRIX SPIKE SAMPLE: 559704

Parameter	Units	7092927006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	596	600	1130	89	75-125	

MATRIX SPIKE SAMPLE: 559706

Parameter	Units	7092454017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	211	300	490	93	75-125	

SAMPLE DUPLICATE: 559703

Parameter	Units	7092927006 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	596	602	1	

SAMPLE DUPLICATE: 559705

Parameter	Units	7092454017 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	211	223	6 D6	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 118004

Analysis Method: SM22 2540C

QC Batch Method: SM22 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 7093107009, 7093107010

METHOD BLANK: 559707

Matrix: Water

Associated Lab Samples: 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<10.0	10.0	06/17/19 10:51	

LABORATORY CONTROL SAMPLE: 559708

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	540	108	85-115	

MATRIX SPIKE SAMPLE: 559710

Parameter	Units	7093107009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	408	600	980	95	75-125	

MATRIX SPIKE SAMPLE: 559712

Parameter	Units	7093263004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	162	300	454	97	75-125	

SAMPLE DUPLICATE: 559709

Parameter	Units	7093107009 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	408	480	16 D6	

SAMPLE DUPLICATE: 559711

Parameter	Units	7093263004 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	162	175	8 D6	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

QC Batch: 118376 Analysis Method: EPA 410.4
QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 562201 Matrix: Water
Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	10.0	06/19/19 11:37	

LABORATORY CONTROL SAMPLE: 562202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	531	106	90-110	

MATRIX SPIKE SAMPLE: 562203

Parameter	Units	7093107001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	1000	1010	100	90-110	

MATRIX SPIKE SAMPLE: 562205

Parameter	Units	7093260004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	1000	1050	105	90-110	

SAMPLE DUPLICATE: 562204

Parameter	Units	7093107001 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	<10.0		

SAMPLE DUPLICATE: 562206

Parameter	Units	7093260004 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	<10.0		

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 117575

Analysis Method: SM22 5210B

QC Batch Method: SM22 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 556869

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	06/18/19 10:34	

LABORATORY CONTROL SAMPLE: 556870

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	176	89	84.5-115.4	

SAMPLE DUPLICATE: 556871

Parameter	Units	7093221001 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	202	188	7	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

QC Batch: 119378 Analysis Method: EPA 300.0
QC Batch Method: EPA 300.0 Analysis Description: 300.0 IC Anions
Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 567505 Matrix: Water
Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	mg/L	<0.50	0.50	06/26/19 23:22	
Chloride	mg/L	<2.0	2.0	06/26/19 23:22	
Sulfate	mg/L	<5.0	5.0	06/26/19 23:22	

LABORATORY CONTROL SAMPLE: 567506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	1.1	108	90-110	
Chloride	mg/L	10	10.2	102	90-110	
Sulfate	mg/L	10	10.3	103	90-110	

MATRIX SPIKE SAMPLE: 567507

Parameter	Units	7094769001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	ND	1	1.1	105	80-120	
Chloride	mg/L	10.9	10	20.5	96	80-120	
Sulfate	mg/L	<5.0	10	15.1	102	80-120	

SAMPLE DUPLICATE: 567508

Parameter	Units	7094769001 Result	Dup Result	RPD	Qualifiers
Bromide	mg/L	ND	<0.50		
Chloride	mg/L	10.9	10.8	0	
Sulfate	mg/L	<5.0	4.7J		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 119268 Analysis Method: EPA 351.2
 QC Batch Method: EPA 351.2 Analysis Description: 351.2 TKN
 Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 566775 Matrix: Water
 Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	0.10	06/26/19 07:51	

LABORATORY CONTROL SAMPLE: 566776

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.0	99	90-110	

MATRIX SPIKE SAMPLE: 566777

Parameter	Units	7092926001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	97.9	20	94.6	-16	90-110	M6

MATRIX SPIKE SAMPLE: 566779

Parameter	Units	7093723002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4.7	4	9.1	110	90-110	

SAMPLE DUPLICATE: 566778

Parameter	Units	7092926001 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	97.9	91.2	7	

SAMPLE DUPLICATE: 566780

Parameter	Units	7093723002 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4.7	3.8	22	D6

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

QC Batch: 117323 Analysis Method: EPA 353.2
QC Batch Method: EPA 353.2 Analysis Description: 353.2 Nitrite, Unpres.
Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 555560 Matrix: Water
Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.050	0.050	06/11/19 20:34	

LABORATORY CONTROL SAMPLE: 555561

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	1	1.0	104	90-110	

MATRIX SPIKE SAMPLE: 555562

Parameter	Units	7093101001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.55	110	90-110	

MATRIX SPIKE SAMPLE: 555564

Parameter	Units	7093107001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.56	112	90-110	M1

SAMPLE DUPLICATE: 555563

Parameter	Units	7093101001 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

SAMPLE DUPLICATE: 555565

Parameter	Units	7093107001 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch:	117328	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrate, Unpres.
Associated Lab Samples:	7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010		

METHOD BLANK:	555671	Matrix:	Water
Associated Lab Samples:	7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.050	06/11/19 22:25	

LABORATORY CONTROL SAMPLE:	555672					
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	102	90-110	

MATRIX SPIKE SAMPLE:	555673						
Parameter	Units	7093035001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	4.0	5	8.5	91	90-110	

MATRIX SPIKE SAMPLE:	555675						
Parameter	Units	7093139001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.69	0.5	1.1	86	90-110	M1

SAMPLE DUPLICATE:	555674					
Parameter	Units	7093035001 Result	Dup Result	RPD	Qualifiers	
Nitrate-Nitrite (as N)	mg/L	4.0	4.0	1		

SAMPLE DUPLICATE:	555676					
Parameter	Units	7093139001 Result	Dup Result	RPD	Qualifiers	
Nitrate-Nitrite (as N)	mg/L	0.69	0.69	1		

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 119281

Analysis Method: SM22 4500 NH3 H

QC Batch Method: SM22 4500 NH3 H

Analysis Description: 4500 Ammonia

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 566889

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.036J	0.10	06/25/19 14:09	

LABORATORY CONTROL SAMPLE: 566890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 566891

Parameter	Units	7093468001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	22.4	10	29.0	67	75-125	M6

SAMPLE DUPLICATE: 566892

Parameter	Units	7093468001 Result	Dup Result	RPD	Qualifiers
Nitrogen, Ammonia	mg/L	22.4	17.7	23	D6

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 118154

Analysis Method: SM22 5310B

QC Batch Method: SM22 5310B

Analysis Description: 5310B TOC

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 560764

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<1.0	1.0	06/18/19 15:35	

LABORATORY CONTROL SAMPLE: 560765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.2	92	85-115	

MATRIX SPIKE SAMPLE: 560767

Parameter	Units	7093107001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	0.98J	10	11.1	101	75-125	

SAMPLE DUPLICATE: 560766

Parameter	Units	7093107001 Result	Dup Result	RPD	Qualifiers
Total Organic Carbon	mg/L	0.98J	0.86J		

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QUALIFIERS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

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.

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

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

TNI - The NELAC Institute.

LABORATORIES

PACE-MV Pace Analytical Services - Melville

PASI-M Pace Analytical Services - Minneapolis

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.

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

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7093107001	GM-2D	EPA 3005A	117823	EPA 6010C	117836
7093107002	GM-4D	EPA 3005A	117823	EPA 6010C	117836
7093107003	GM-5D	EPA 3005A	117823	EPA 6010C	117836
7093107004	GM-6D	EPA 3005A	117823	EPA 6010C	117836
7093107005	GM-7D	EPA 3005A	117823	EPA 6010C	117836
7093107006	GM-15D	EPA 3005A	117823	EPA 6010C	117836
7093107007	GM-16D	EPA 3005A	117823	EPA 6010C	117836
7093107008	GM-17D	EPA 3005A	117823	EPA 6010C	117836
7093107009	GM-18D	EPA 3005A	117823	EPA 6010C	117836
7093107010	GM-19D	EPA 3005A	117823	EPA 6010C	117836
7093107001	GM-2D	EPA 7470A	118862	EPA 7470A	118885
7093107002	GM-4D	EPA 7470A	118862	EPA 7470A	118885
7093107003	GM-5D	EPA 7470A	118862	EPA 7470A	118885
7093107004	GM-6D	EPA 7470A	118862	EPA 7470A	118885
7093107005	GM-7D	EPA 7470A	118862	EPA 7470A	118885
7093107006	GM-15D	EPA 7470A	118862	EPA 7470A	118885
7093107007	GM-16D	EPA 7470A	118862	EPA 7470A	118885
7093107008	GM-17D	EPA 7470A	118862	EPA 7470A	118885
7093107009	GM-18D	EPA 7470A	118862	EPA 7470A	118885
7093107010	GM-19D	EPA 7470A	118862	EPA 7470A	118885
7093107001	GM-2D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107002	GM-4D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107003	GM-5D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107004	GM-6D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107005	GM-7D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107006	GM-15D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107007	GM-16D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107008	GM-17D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107009	GM-18D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107010	GM-19D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107001	GM-2D	EPA 180.1	117421		
7093107002	GM-4D	EPA 180.1	117421		
7093107003	GM-5D	EPA 180.1	117421		
7093107004	GM-6D	EPA 180.1	117421		
7093107005	GM-7D	EPA 180.1	117421		
7093107006	GM-15D	EPA 180.1	117421		
7093107007	GM-16D	EPA 180.1	117421		
7093107008	GM-17D	EPA 180.1	117421		
7093107009	GM-18D	EPA 180.1	117421		
7093107010	GM-19D	EPA 180.1	117421		
7093107001	GM-2D	SM22 2320B	118942		
7093107002	GM-4D	SM22 2320B	118942		
7093107003	GM-5D	SM22 2320B	118942		
7093107004	GM-6D	SM22 2320B	118942		
7093107005	GM-7D	SM22 2320B	118942		
7093107006	GM-15D	SM22 2320B	118942		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7093107007	GM-16D	SM22 2320B	119110		
7093107008	GM-17D	SM22 2320B	119110		
7093107009	GM-18D	SM22 2320B	119110		
7093107010	GM-19D	SM22 2320B	119110		
7093107001	GM-2D	SM22 2340C	119111		
7093107002	GM-4D	SM22 2340C	119111		
7093107003	GM-5D	SM22 2340C	119500		
7093107004	GM-6D	SM22 2340C	119500		
7093107005	GM-7D	SM22 2340C	119111		
7093107006	GM-15D	SM22 2340C	119111		
7093107007	GM-16D	SM22 2340C	119500		
7093107008	GM-17D	SM22 2340C	119111		
7093107009	GM-18D	SM22 2340C	119111		
7093107010	GM-19D	SM22 2340C	119111		
7093107001	GM-2D	SM22 2540C	118003		
7093107002	GM-4D	SM22 2540C	118003		
7093107003	GM-5D	SM22 2540C	118003		
7093107004	GM-6D	SM22 2540C	118003		
7093107005	GM-7D	SM22 2540C	118003		
7093107006	GM-15D	SM22 2540C	118003		
7093107007	GM-16D	SM22 2540C	118003		
7093107008	GM-17D	SM22 2540C	118003		
7093107009	GM-18D	SM22 2540C	118004		
7093107010	GM-19D	SM22 2540C	118004		
7093107001	GM-2D	EPA 410.4	118376	EPA 410.4	118422
7093107002	GM-4D	EPA 410.4	118376	EPA 410.4	118422
7093107003	GM-5D	EPA 410.4	118376	EPA 410.4	118422
7093107004	GM-6D	EPA 410.4	118376	EPA 410.4	118422
7093107005	GM-7D	EPA 410.4	118376	EPA 410.4	118422
7093107006	GM-15D	EPA 410.4	118376	EPA 410.4	118422
7093107007	GM-16D	EPA 410.4	118376	EPA 410.4	118422
7093107008	GM-17D	EPA 410.4	118376	EPA 410.4	118422
7093107009	GM-18D	EPA 410.4	118376	EPA 410.4	118422
7093107010	GM-19D	EPA 410.4	118376	EPA 410.4	118422
7093107001	GM-2D	SM22 5210B	117575	SM22 5210B	118399
7093107002	GM-4D	SM22 5210B	117575	SM22 5210B	118399
7093107003	GM-5D	SM22 5210B	117575	SM22 5210B	118399
7093107004	GM-6D	SM22 5210B	117575	SM22 5210B	118399
7093107005	GM-7D	SM22 5210B	117575	SM22 5210B	118399
7093107006	GM-15D	SM22 5210B	117575	SM22 5210B	118399
7093107007	GM-16D	SM22 5210B	117575	SM22 5210B	118399
7093107008	GM-17D	SM22 5210B	117575	SM22 5210B	118399
7093107009	GM-18D	SM22 5210B	117575	SM22 5210B	118399
7093107010	GM-19D	SM22 5210B	117575	SM22 5210B	118399

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7093107001	GM-2D	EPA 300.0	119378		
7093107002	GM-4D	EPA 300.0	119378		
7093107003	GM-5D	EPA 300.0	119378		
7093107004	GM-6D	EPA 300.0	119378		
7093107005	GM-7D	EPA 300.0	119378		
7093107006	GM-15D	EPA 300.0	119378		
7093107007	GM-16D	EPA 300.0	119378		
7093107008	GM-17D	EPA 300.0	119378		
7093107009	GM-18D	EPA 300.0	119378		
7093107010	GM-19D	EPA 300.0	119378		
7093107001	GM-2D	EPA 351.2	119268	EPA 351.2	119309
7093107002	GM-4D	EPA 351.2	119268	EPA 351.2	119309
7093107003	GM-5D	EPA 351.2	119268	EPA 351.2	119309
7093107004	GM-6D	EPA 351.2	119268	EPA 351.2	119309
7093107005	GM-7D	EPA 351.2	119268	EPA 351.2	119309
7093107006	GM-15D	EPA 351.2	119268	EPA 351.2	119309
7093107007	GM-16D	EPA 351.2	119268	EPA 351.2	119309
7093107008	GM-17D	EPA 351.2	119268	EPA 351.2	119309
7093107009	GM-18D	EPA 351.2	119268	EPA 351.2	119309
7093107010	GM-19D	EPA 351.2	119268	EPA 351.2	119309
7093107001	GM-2D	EPA 353.2	117328		
7093107002	GM-4D	EPA 353.2	117328		
7093107003	GM-5D	EPA 353.2	117328		
7093107004	GM-6D	EPA 353.2	117328		
7093107005	GM-7D	EPA 353.2	117328		
7093107006	GM-15D	EPA 353.2	117328		
7093107007	GM-16D	EPA 353.2	117328		
7093107008	GM-17D	EPA 353.2	117328		
7093107009	GM-18D	EPA 353.2	117328		
7093107010	GM-19D	EPA 353.2	117328		
7093107001	GM-2D	EPA 353.2	117323		
7093107002	GM-4D	EPA 353.2	117323		
7093107003	GM-5D	EPA 353.2	117323		
7093107004	GM-6D	EPA 353.2	117323		
7093107005	GM-7D	EPA 353.2	117323		
7093107006	GM-15D	EPA 353.2	117323		
7093107007	GM-16D	EPA 353.2	117323		
7093107008	GM-17D	EPA 353.2	117323		
7093107009	GM-18D	EPA 353.2	117323		
7093107010	GM-19D	EPA 353.2	117323		
7093107001	GM-2D	SM22 4500 NH3 H	119281		
7093107002	GM-4D	SM22 4500 NH3 H	119281		
7093107003	GM-5D	SM22 4500 NH3 H	119281		
7093107004	GM-6D	SM22 4500 NH3 H	119281		
7093107005	GM-7D	SM22 4500 NH3 H	119281		
7093107006	GM-15D	SM22 4500 NH3 H	119281		
7093107007	GM-16D	SM22 4500 NH3 H	119281		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7093107008	GM-17D	SM22 4500 NH3 H	119281		
7093107009	GM-18D	SM22 4500 NH3 H	119281		
7093107010	GM-19D	SM22 4500 NH3 H	119281		
7093107001	GM-2D	SM22 5310B	118154		
7093107002	GM-4D	SM22 5310B	118154		
7093107003	GM-5D	SM22 5310B	118154		
7093107004	GM-6D	SM22 5310B	118154		
7093107005	GM-7D	SM22 5310B	118154		
7093107006	GM-15D	SM22 5310B	118154		
7093107007	GM-16D	SM22 5310B	118154		
7093107008	GM-17D	SM22 5310B	118154		
7093107009	GM-18D	SM22 5310B	118154		
7093107010	GM-19D	SM22 5310B	118154		

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Sample Condition Upon Receipt

WO#: 7093107
PM: JSA Due Date: 06/25/19
CLIENT: BAB-ECO

Client Name: Babylon

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #:
Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Ziploc None Other

Thermometer Used: TH091 Correction Factor: +0.2

Cooler Temperature (°C): 2.0 Cooler Temperature Corrected (°C): 2.8

Temp should be above freezing to 6.0°C

USDA Regulated Soil (N/A, water sample)

Date and Initials of person examining contents: 6/11/19 JSP

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? YES NO

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

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

Table with 16 rows and 3 columns. Columns: Question, Yes/No/N/A, and COMMENTS. Rows include Chain of Custody Present, Chain of Custody Filled Out, Chain of Custody Relinquished, Sampler Name & Signature on COC, Samples Arrived within Hold Time, Short Hold Time Analysis (<72hr), Rush Turn Around Time Requested, Sufficient Volume: (Triple volume provided for MS/MSD), Correct Containers Used, Containers Intact, Filtered volume received for Dissolved tests, Sample Labels match COC, All containers needing preservation have been checked, pH paper Lot # HC603463, All containers needing preservation are found to be in compliance with EPA recommendation?, Samples checked for dechlorination, KI starch test strips Lot #, Residual chlorine strips Lot #, Headspace in VOA Vials (>6mm), Trip Blank Present, Trip Blank Custody Seals Present, Pace Trip Blank Lot # (if applicable).

Client Notification/ Resolution: Field Data Required? Y / N

Person Contacted: Date/Time:

Comments/ Resolution:

* PM (Project Manager) review is documented electronically in LIMS.

ANALYTICAL REPORT

Job Number: 420-155308-1

SDG Number: 7093107

Job Description: Pace Analytical Sevices, Inc.-Mellville

For:

Pace Analytical Mellville
575 Broadhollow Road
Melville, NY 11747

Attention: James Murphy

Laura Marciano

Laura L Marciano
Customer Service Manager
lmarciano@envirotestlaboratories.com
06/25/2019

cc: Ms. Jen Aracri
Betty Harrison
Accounts Payable
Sophia Sparkes

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified in the Certification Information section of this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOH PH-0554

EXECUTIVE SUMMARY - Detections

Client: Pace Analytical Melville

Job Number: 420-155308-1

Sdg Number: 7093107

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
420-155308-5 Phenolics, Total Recoverable	GM-7D	0.016	0.010	mg/L	420.4 Rev. 1.0
420-155308-7 Phenolics, Total Recoverable	GM-16D	0.012	0.010	mg/L	420.4 Rev. 1.0
420-155308-9 Phenolics, Total Recoverable	GM-18D	0.013	0.010	mg/L	420.4 Rev. 1.0

METHOD SUMMARY

Client: Pace Analytical Mellville

Job Number: 420-155308-1

SDG Number: 7093107

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Phenols Semi-Automated	EnvTest	EPA 420.4 Rev. 1.0	
Distillation/Phenolics	EnvTest		Distill/Phenol

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

METHOD / ANALYST SUMMARY

Client: Pace Analytical Melville

Job Number: 420-155308-1

SDG Number: 7093107

Method	Analyst	Analyst ID
EPA 420.4 Rev. 1.0	Mastrobuono, Danielle	DM

SAMPLE SUMMARY

Client: Pace Analytical Mellville

Job Number: 420-155308-1

SDG Number: 7093107

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-155308-1	GM-2D	Water	06/11/2019 1310	06/14/2019 1015
420-155308-2	GM-4D	Water	06/11/2019 1045	06/14/2019 1015
420-155308-3	GM-5D	Water	06/11/2019 1120	06/14/2019 1015
420-155308-4	GM-6D	Water	06/11/2019 1200	06/14/2019 1015
420-155308-5	GM-7D	Water	06/11/2019 1235	06/14/2019 1015
420-155308-6	GM-15D	Water	06/11/2019 1510	06/14/2019 1015
420-155308-7	GM-16D	Water	06/11/2019 1450	06/14/2019 1015
420-155308-8	GM-17D	Water	06/11/2019 1435	06/14/2019 1015
420-155308-9	GM-18D	Water	06/11/2019 1410	06/14/2019 1015
420-155308-10	GM-19D	Water	06/11/2019 1340	06/14/2019 1015

SAMPLE RESULTS

Analytical Data

Client: Pace Analytical Melville

Job Number: 420-155308-1

Sdg Number: 7093107

General Chemistry

Client Sample ID: GM-2D

Lab Sample ID: 420-155308-1

Client Matrix: Water

Date Sampled: 06/11/2019 1310

Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1602			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-4D

Lab Sample ID: 420-155308-2

Client Matrix: Water

Date Sampled: 06/11/2019 1045

Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1603			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-5D

Lab Sample ID: 420-155308-3

Client Matrix: Water

Date Sampled: 06/11/2019 1120

Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1603			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-6D

Lab Sample ID: 420-155308-4

Client Matrix: Water

Date Sampled: 06/11/2019 1200

Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1604			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-7D

Lab Sample ID: 420-155308-5

Client Matrix: Water

Date Sampled: 06/11/2019 1235

Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.016		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1615			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Analytical Data

Client: Pace Analytical Melville

Job Number: 420-155308-1

Sdg Number: 7093107

General Chemistry

Client Sample ID: GM-15D

Lab Sample ID: 420-155308-6
Client Matrix: Water

Date Sampled: 06/11/2019 1510
Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1605			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-16D

Lab Sample ID: 420-155308-7
Client Matrix: Water

Date Sampled: 06/11/2019 1450
Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.012		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1616			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-17D

Lab Sample ID: 420-155308-8
Client Matrix: Water

Date Sampled: 06/11/2019 1435
Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1611			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-18D

Lab Sample ID: 420-155308-9
Client Matrix: Water

Date Sampled: 06/11/2019 1410
Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.013		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1612			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-19D

Lab Sample ID: 420-155308-10
Client Matrix: Water

Date Sampled: 06/11/2019 1340
Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1612			
Prep Batch:		Date Prepared:	06/19/2019	0946			

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description
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Certification Information

The following analytes are Not Part of the ELAP scope of accreditation:

Sulfur, Tungsten, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Solids (Fixed), Solids (Percent), Solids (Percent Moisture), Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, 1,2,4,5-Tetramethylbenzene, 4-Ethyl toluene, p-Diethylbenzene, Iron Bacteria, Salmonella, Sulfur Reducing Bacteria, & UOD (Ultimate Oxygen Demand).

The following analytes are Not Part of ELAP Potable Water scope of accreditation:

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), o-Xylene (502.2, 524), Sulfide (SM4500SD), Acenaphthene (525.2), Acenaphthylene (525.2), Fluoranthene (525.2), Fluorene (525.2), Phenanthrene (525.2), Anthracene (525.2), Pyrene (525.2), Benzo[a]anthracene (525.2), Benzo[b]fluoranthene (525.2), Benzo[g,h,i]perylene (525.2), Benzo[k]fluoranthene (525.2), Indeno[1,2,3-cd]pyrene (525.2), & Dibenz(a,h)anthracene (525.2).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation:

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation:

Dissolved Organic Carbon (5310C), Mecoprop (8151A), MCPA (8151A), Propylene Glycol (8015D).

Definitions and Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points.

QUALITY CONTROL RESULTS

Quality Control Results

Client: Pace Analytical Mellville

Job Number: 420-155308-1

Sdg Number: 7093107

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 420-132681					
LCS 420-132681/28-A	Lab Control Spike	T	Water	Distill/Phenol	
MB 420-132681/27-A	Method Blank	T	Water	Distill/Phenol	
420-155302-A-2-B DU	Duplicate	T	Water	Distill/Phenol	
420-155302-A-2-C MS	Matrix Spike	T	Water	Distill/Phenol	
420-155308-1	GM-2D	T	Water	Distill/Phenol	
420-155308-2	GM-4D	T	Water	Distill/Phenol	
420-155308-3	GM-5D	T	Water	Distill/Phenol	
420-155308-4	GM-6D	T	Water	Distill/Phenol	
420-155308-5	GM-7D	T	Water	Distill/Phenol	
420-155308-6	GM-15D	T	Water	Distill/Phenol	
420-155308-7	GM-16D	T	Water	Distill/Phenol	
420-155308-7DU	Duplicate	T	Water	Distill/Phenol	
420-155308-7MS	Matrix Spike	T	Water	Distill/Phenol	
420-155308-8	GM-17D	T	Water	Distill/Phenol	
420-155308-9	GM-18D	T	Water	Distill/Phenol	
420-155308-10	GM-19D	T	Water	Distill/Phenol	
Analysis Batch:420-132707					
LCS 420-132681/28-A	Lab Control Spike	T	Water	420.4 Rev. 1.0	420-132681
MB 420-132681/27-A	Method Blank	T	Water	420.4 Rev. 1.0	420-132681
420-155302-A-2-B DU	Duplicate	T	Water	420.4 Rev. 1.0	420-132681
420-155302-A-2-C MS	Matrix Spike	T	Water	420.4 Rev. 1.0	420-132681
420-155308-1	GM-2D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-2	GM-4D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-3	GM-5D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-4	GM-6D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-5	GM-7D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-6	GM-15D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-7	GM-16D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-7DU	Duplicate	T	Water	420.4 Rev. 1.0	420-132681
420-155308-7MS	Matrix Spike	T	Water	420.4 Rev. 1.0	420-132681
420-155308-8	GM-17D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-9	GM-18D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-10	GM-19D	T	Water	420.4 Rev. 1.0	420-132681

Report Basis

T = Total

Quality Control Results

Client: Pace Analytical Melville

Job Number: 420-155308-1
Sdg Number: 7093107

Method Blank - Batch: 420-132681

Lab Sample ID: MB 420-132681/27-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1601
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Method: 420.4 Rev. 1.0 Preparation: Distill/Phenol

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Result	Qual	RL	RL
Phenolics, Total Recoverable	<0.010		0.010	0.010

Lab Control Spike - Batch: 420-132681

Lab Sample ID: LCS 420-132681/28-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1601
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Method: 420.4 Rev. 1.0 Preparation: Distill/Phenol

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Phenolics, Total Recoverable	0.0500	0.056	112	57 - 123	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Pace Analytical Mellville

Job Number: 420-155308-1
Sdg Number: 7093107

Matrix Spike - Batch: 420-132681

Method: 420.4 Rev. 1.0
Preparation: Distill/Phenol

Lab Sample ID: 420-155302-A-2-C MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1540
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Phenolics, Total Recoverable	0.011	0.0300	0.039	94	55 - 136	

Matrix Spike - Batch: 420-132681

Method: 420.4 Rev. 1.0
Preparation: Distill/Phenol

Lab Sample ID: 420-155308-7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1607
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Phenolics, Total Recoverable	0.012	0.0300	0.038	87	55 - 136	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Pace Analytical Mellville

Job Number: 420-155308-1
Sdg Number: 7093107

Duplicate - Batch: 420-132681

Lab Sample ID: 420-155302-A-2-B DU
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1539
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Method: 420.4 Rev. 1.0 Preparation: Distill/Phenol

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Phenolics, Total Recoverable	0.011	0.011	0	15	

Duplicate - Batch: 420-132681

Lab Sample ID: 420-155308-7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1606
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Method: 420.4 Rev. 1.0 Preparation: Distill/Phenol

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Phenolics, Total Recoverable	0.012	0.012	1	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Pace Analytical Melville

Job Number: 420-155308-1

SDG Number: 7093107

Login Number: 155308

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	2.4 C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

TestAmerica Sacramento
880 Riverside Parkway
West Sacramento CA 95605

Report Date: July 16, 2019 14:16

Project: Pace PFAS Testing

Account #: 01042
Group Number: 2049636
SDG: TAC05
State of Sample Origin: NY

Electronic Copy To TestAmerica

Attn: Cesar C Cortes

Respectfully Submitted,



Kay Hower

(717) 556-7364

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

<u>Client Sample Description</u>	<u>Sample Collection Date/Time</u>	<u>ELLE#</u>
GM-2D (320-51333-1) Water	06/11/2019 13:10	1083882
GM-4D (320-51333-2) Water	06/11/2019 10:45	1083883
GM-5D (320-51333-3) Water	06/11/2019 11:20	1083884
GM-6D (320-51333-4) Water	06/11/2019 12:00	1083885
GM-7D (320-51333-5) Water	06/11/2019 12:35	1083886
GM-15D (320-51333-6) Water	06/11/2019 15:10	1083887
GM-16D (320-51333-7) Water	06/11/2019 14:50	1083888
GM-17D (320-51333-8) Water	06/11/2019 14:35	1083889
GM-18D (320-51333-9) Water	06/11/2019 14:10	1083890
GM-19D (320-51333-10) Water	06/11/2019 13:40	1083891

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: GM-2D (320-51333-1) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083882
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submission Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 13:10
SDG#: TAC05-01

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified			ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.98	2.0	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	2.0	5.9	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.98	2.9	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.98	2.9	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	0.77 J	0.29	0.98	1
14473	Perfluorobutanoic Acid ¹	375-22-4	2.8 J	2.0	5.9	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.59	2.0	1
14473	Perfluorodecanoic Acid ¹	335-76-2	N.D.	0.88	2.0	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.49	2.0	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.39	2.0	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	1.2	0.39	0.98	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	1.5 J	0.39	2.0	1
14473	Perfluorohexanoic Acid ¹	307-24-4	1.1 J	0.39	2.0	1
14473	Perfluorononanoic Acid ¹	375-95-1	N.D.	0.39	2.0	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.49	2.9	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	0.39	2.0	1
14473	Perfluorooctanoic Acid ¹	335-67-1	0.57 J	0.29	0.98	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	N.D.	2.0	5.9	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.29	0.98	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.39	0.98	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	N.D.	0.39	2.0	1

Target analyte 6:2 FTS was detected in the associated method blank as noted on the QC Summary.

The recovery for extraction standard 13C2-8:2 FTS is outside of QC acceptance limits as noted on the QC Summary.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 00:34	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-4D (320-51333-2) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083883
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submission Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 10:45
SDG#: TAC05-02

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	9.6	19	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	19	57	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	9.6	29	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	9.6	29	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	2.9	9.6	1
14473	Perfluorobutanoic Acid ¹	375-22-4	N.D.	19	57	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	5.7	19	1
14473	Perfluorodecanoic Acid ¹	335-76-2	N.D.	8.6	19	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	4.8	19	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	3.8	19	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	4.0 J	3.8	9.6	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	3.8	19	1
14473	Perfluorohexanoic Acid ¹	307-24-4	5.0 J	3.8	19	1
14473	Perfluorononanoic Acid ¹	375-95-1	N.D.	3.8	19	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	4.8	29	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	3.8	19	1
14473	Perfluorooctanoic Acid ¹	335-67-1	7.6 J	2.9	9.6	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	N.D.	19	57	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	2.9	9.6	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	3.8	9.6	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	N.D.	3.8	19	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: GM-4D (320-51333-2) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083883
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10

Collection Date/Time: 06/11/2019 10:45

SDG#: TAC05-02

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 00:52	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-5D (320-51333-3) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083884
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submission Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 11:20
SDG#: TAC05-03

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	18 JB	9.5	19	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	19	57	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	9.5	29	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	9.5	29	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	2.9	9.5	1
14473	Perfluorobutanoic Acid ¹	375-22-4	N.D.	19	57	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	5.7	19	1
14473	Perfluorodecanoic Acid ¹	335-76-2	N.D.	8.6	19	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	4.8	19	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	3.8	19	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	10	3.8	9.5	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	3.8	19	1
14473	Perfluorohexanoic Acid ¹	307-24-4	16 J	3.8	19	1
14473	Perfluorononanoic Acid ¹	375-95-1	N.D.	3.8	19	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	4.8	29	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	7.4 J	3.8	19	1
14473	Perfluorooctanoic Acid ¹	335-67-1	16	2.9	9.5	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	26 J	19	57	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	2.9	9.5	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	3.8	9.5	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	N.D.	3.8	19	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: GM-5D (320-51333-3) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083884
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10

Collection Date/Time: 06/11/2019 11:20

SDG#: TAC05-03

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:01	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-6D (320-51333-4) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083885
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submission Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 12:00
SDG#: TAC05-04

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	9.7	19	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	19	58	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	9.7	29	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	9.7	29	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	6.1 J	2.9	9.7	1
14473	Perfluorobutanoic Acid ¹	375-22-4	33 J	19	58	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	5.8	19	1
14473	Perfluorodecanoic Acid ¹	335-76-2	N.D.	8.8	19	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	4.9	19	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	3.9	19	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	12	3.9	9.7	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	6.0 J	3.9	19	1
14473	Perfluorohexanoic Acid ¹	307-24-4	30	3.9	19	1
14473	Perfluorononanoic Acid ¹	375-95-1	8.5 J	3.9	19	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	4.9	29	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	7.9 J	3.9	19	1
14473	Perfluorooctanoic Acid ¹	335-67-1	42	2.9	9.7	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	N.D.	19	58	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	2.9	9.7	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	3.9	9.7	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	N.D.	3.9	19	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: GM-6D (320-51333-4) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083885
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10

Collection Date/Time: 06/11/2019 12:00

SDG#: TAC05-04

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:10	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-7D (320-51333-5) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083886
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submission Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 12:35
SDG#: TAC05-05

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified			ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	0.97	1.9	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	1.9	5.8	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.97	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.97	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid ¹	375-73-5	4.9	0.29	0.97	1
14473	Perfluorobutanoic Acid ¹	375-22-4	18	1.9	5.8	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic Acid ¹	335-76-2	1.7 J	0.87	1.9	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.48	1.9	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	2.2	0.39	1.9	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	35	0.39	0.97	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	27	0.39	1.9	1
14473	Perfluorohexanoic Acid ¹	307-24-4	41	0.39	1.9	1
14473	Perfluorononanoic Acid ¹	375-95-1	20	0.39	1.9	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.48	2.9	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	110	0.39	1.9	1
14473	Perfluorooctanoic Acid ¹	335-67-1	110	0.29	0.97	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	38	1.9	5.8	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.29	0.97	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.39	0.97	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	N.D.	0.39	1.9	1

Target analyte 6:2 FTS was detected in the associated method blank as noted on the QC Summary.

The recovery for extraction standards is outside of QC acceptance limits due to the matrix of the sample.

The sample injection standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:19	Danielle D McCully	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-7D (320-51333-5) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083886
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10

Collection Date/Time: 06/11/2019 12:35

SDG#: TAC05-05

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-15D (320-51333-6) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083887
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submission Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 15:10
SDG#: TAC05-06

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	1.9 JB	0.99	2.0	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	2.0	5.9	1
14473	NEtFOSAA ¹	2991-50-6	6.8	0.99	3.0	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	2.0 J	0.99	3.0	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	5.7	0.30	0.99	1
14473	Perfluorobutanoic Acid ¹	375-22-4	48	2.0	5.9	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.59	2.0	1
14473	Perfluorodecanoic Acid ¹	335-76-2	N.D.	0.89	2.0	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.49	2.0	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.40	2.0	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	16	0.40	0.99	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	5.7	0.40	2.0	1
14473	Perfluorohexanoic Acid ¹	307-24-4	52	0.40	2.0	1
14473	Perfluorononanoic Acid ¹	375-95-1	70	0.40	2.0	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.49	3.0	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	9.0	0.40	2.0	1
14473	Perfluorooctanoic Acid ¹	335-67-1	84	0.30	0.99	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	26	2.0	5.9	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.30	0.99	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.40	0.99	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	N.D.	0.40	2.0	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: GM-15D (320-51333-6) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083887
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10

Collection Date/Time: 06/11/2019 15:10

SDG#: TAC05-06

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:28	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-16D (320-51333-7) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083888
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submission Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 14:50
SDG#: TAC05-07

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	N.D.	9.6	19	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	19	57	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	9.6	29	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA ¹	2355-31-9	N.D.	9.6	29	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid ¹	375-73-5	N.D.	2.9	9.6	1
14473	Perfluorobutanoic Acid ¹	375-22-4	N.D.	19	57	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	5.7	19	1
14473	Perfluorodecanoic Acid ¹	335-76-2	N.D.	8.6	19	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	4.8	19	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	3.8	19	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	5.1 J	3.8	9.6	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	N.D.	3.8	19	1
14473	Perfluorohexanoic Acid ¹	307-24-4	6.8 J	3.8	19	1
14473	Perfluorononanoic Acid ¹	375-95-1	5.2 J	3.8	19	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	4.8	29	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	N.D.	3.8	19	1
14473	Perfluorooctanoic Acid ¹	335-67-1	8.8 J	2.9	9.6	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	N.D.	19	57	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	2.9	9.6	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	3.8	9.6	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	N.D.	3.8	19	1

Target analyte 6:2 FTS was detected in the associated method blank as noted on the QC Summary.

The recovery for extraction standards is outside of QC acceptance limits due to the matrix of the sample.

The sample injection standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:37	Danielle D McCully	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-16D (320-51333-7) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083888
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10
 Collection Date/Time: 06/11/2019 14:50
 SDG#: TAC05-07

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-17D (320-51333-8) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083889
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submission Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 14:35
SDG#: TAC05-08

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	31 B	0.95	1.9	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	1.9	5.7	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.95	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.95	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid ¹	375-73-5	0.66 J	0.29	0.95	1
14473	Perfluorobutanoic Acid ¹	375-22-4	5.9	1.9	5.7	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.57	1.9	1
14473	Perfluorodecanoic Acid ¹	335-76-2	N.D.	0.86	1.9	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.48	1.9	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	N.D.	0.38	1.9	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	3.4	0.38	0.95	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	0.57 J	0.38	1.9	1
14473	Perfluorohexanoic Acid ¹	307-24-4	5.4	0.38	1.9	1
14473	Perfluorononanoic Acid ¹	375-95-1	0.82 J	0.38	1.9	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.48	2.9	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	2.0	0.38	1.9	1
14473	Perfluorooctanoic Acid ¹	335-67-1	6.9	0.29	0.95	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	6.4	1.9	5.7	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.29	0.95	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.38	0.95	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	N.D.	0.38	1.9	1

Target analyte 6:2 FTS was detected in the associated method blank as noted on the QC Summary. The recovery for target analyte 6:2 FTS in this sample is ten times higher than the recovery in the associated method blank, therefore the data is reported.

The recovery for extraction standards is outside of QC acceptance limits due to the matrix of the sample.

The sample injection standard peak areas were outside of the QC limits for both the initial injection and the re-injection. The values here are from the initial injection of the sample.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

*=This limit was used in the evaluation of the final result

Sample Description: GM-17D (320-51333-8) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083889
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10

Collection Date/Time: 06/11/2019 14:35

SDG#: TAC05-08

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:46	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-18D (320-51333-9) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083890
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submission Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 14:10
SDG#: TAC05-09

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous		EPA 537 Version 1.1 Modified	ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	6.2 B	0.97	1.9	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	1.9	5.8	1
14473	NEtFOSAA ¹	2991-50-6	2.6 J	0.97	2.9	1
NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.						
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.97	2.9	1
NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.						
14473	Perfluorobutanesulfonic acid ¹	375-73-5	5.8	0.29	0.97	1
14473	Perfluorobutanoic Acid ¹	375-22-4	27	1.9	5.8	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic Acid ¹	335-76-2	3.6	0.87	1.9	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.48	1.9	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	0.58 J	0.39	1.9	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	17	0.39	0.97	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	11	0.39	1.9	1
14473	Perfluorohexanoic Acid ¹	307-24-4	25	0.39	1.9	1
14473	Perfluorononanoic Acid ¹	375-95-1	10	0.39	1.9	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	1.3 J	0.48	2.9	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	31	0.39	1.9	1
14473	Perfluorooctanoic Acid ¹	335-67-1	33	0.29	0.97	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	29	1.9	5.8	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.29	0.97	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.39	0.97	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	2.8	0.39	1.9	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: GM-18D (320-51333-9) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083890
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10

Collection Date/Time: 06/11/2019 14:10

SDG#: TAC05-09

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 01:55	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Sample Description: GM-19D (320-51333-10) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083891
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submission Date/Time: 06/19/2019 10:10
Collection Date/Time: 06/11/2019 13:40
SDG#: TAC05-10

CAT No.	Analysis Name	CAS Number	Result	Method Detection Limit*	Limit of Quantitation	Dilution Factor
LC/MS/MS Miscellaneous EPA 537 Version 1.1 Modified						
			ng/l	ng/l	ng/l	
14473	6:2-Fluorotelomersulfonic acid ¹	27619-97-2	3.5 B	0.97	1.9	1
14473	8:2-Fluorotelomersulfonic acid ¹	39108-34-4	N.D.	1.9	5.8	1
14473	NEtFOSAA ¹	2991-50-6	N.D.	0.97	2.9	1
	NEtFOSAA is the acronym for N-ethyl perfluorooctanesulfonamidoacetic Acid.					
14473	NMeFOSAA ¹	2355-31-9	N.D.	0.97	2.9	1
	NMeFOSAA is the acronym for N-methyl perfluorooctanesulfonamidoacetic Acid.					
14473	Perfluorobutanesulfonic acid ¹	375-73-5	2.0	0.29	0.97	1
14473	Perfluorobutanoic Acid ¹	375-22-4	8.3	1.9	5.8	1
14473	Perfluorodecanesulfonic acid ¹	335-77-3	N.D.	0.58	1.9	1
14473	Perfluorodecanoic Acid ¹	335-76-2	1.2 J	0.88	1.9	1
14473	Perfluorododecanoic Acid ¹	307-55-1	N.D.	0.49	1.9	1
14473	Perfluoroheptanesulfonic acid ¹	375-92-8	0.85 J	0.39	1.9	1
14473	Perfluoroheptanoic Acid ¹	375-85-9	12	0.39	0.97	1
14473	Perfluorohexanesulfonic acid ¹	355-46-4	3.6	0.39	1.9	1
14473	Perfluorohexanoic Acid ¹	307-24-4	14	0.39	1.9	1
14473	Perfluorononanoic Acid ¹	375-95-1	4.1	0.39	1.9	1
14473	Perfluorooctanesulfonamide ¹	754-91-6	N.D.	0.49	2.9	1
14473	Perfluorooctanesulfonic acid ¹	1763-23-1	39	0.39	1.9	1
14473	Perfluorooctanoic Acid ¹	335-67-1	61	0.29	0.97	1
14473	Perfluoropentanoic Acid ¹	2706-90-3	15	1.9	5.8	1
14473	Perfluorotetradecanoic Acid ¹	376-06-7	N.D.	0.29	0.97	1
14473	Perfluorotridecanoic Acid ¹	72629-94-8	N.D.	0.39	0.97	1
14473	Perfluoroundecanoic Acid ¹	2058-94-8	N.D.	0.39	1.9	1

Target analytes were detected in the method blank associated with the samples as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

The recovery for the sample injection standard and the labeled compound used as extraction standards is outside the QC acceptance limits as noted on the QC Summary. The following corrective action was taken: The sample was reextracted outside holding time. The data is reported from the original extraction. Both sets of data are included in the data package.

Sample Comments

¹ = This analyte was not on the laboratory's NYSDOH Scope of Accreditation at the time of analysis.

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
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*=This limit was used in the evaluation of the final result

Sample Description: GM-19D (320-51333-10) Water
Pace PFAS Testing

TestAmerica Sacramento
ELLE Sample #: WW 1083891
ELLE Group #: 2049636
Matrix: Water

Project Name: Pace PFAS Testing

Submittal Date/Time: 06/19/2019 10:10

Collection Date/Time: 06/11/2019 13:40

SDG#: TAC05-10

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
14473	21 PFAS	EPA 537 Version 1.1 Modified	1	19175003	07/02/2019 02:04	Danielle D McCully	1
14091	PFAS Water Prep	EPA 537 Version 1.1 Modified	1	19175003	06/24/2019 15:00	Isaac Phillips-Cary	1

*=This limit was used in the evaluation of the final result

Quality Control Summary

Client Name: TestAmerica Sacramento
Reported: 07/16/2019 14:16

Group Number: 2049636

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

Analysis Name	Result	MDL** ng/l	LOQ ng/l
Batch number: 19175003	Sample number(s): 1083882-1083891		
6:2-Fluorotelomersulfonic acid	1.3 J	1.0	2.0
8:2-Fluorotelomersulfonic acid	N.D.	2.0	6.0
NEtFOSAA	N.D.	1.0	3.0
NMeFOSAA	N.D.	1.0	3.0
Perfluorobutanesulfonic acid	N.D.	0.30	1.0
Perfluorobutanoic Acid	N.D.	2.0	6.0
Perfluorodecanesulfonic acid	N.D.	0.60	2.0
Perfluorodecanoic Acid	N.D.	0.90	2.0
Perfluorododecanoic Acid	N.D.	0.50	2.0
Perfluoroheptanesulfonic acid	N.D.	0.40	2.0
Perfluoroheptanoic Acid	N.D.	0.40	1.0
Perfluorohexanesulfonic acid	N.D.	0.40	2.0
Perfluorohexanoic Acid	N.D.	0.40	2.0
Perfluorononanoic Acid	N.D.	0.40	2.0
Perfluorooctanesulfonamide	N.D.	0.50	3.0
Perfluorooctanesulfonic acid	N.D.	0.40	2.0
Perfluorooctanoic Acid	N.D.	0.30	1.0
Perfluoropentanoic Acid	N.D.	2.0	6.0
Perfluorotetradecanoic Acid	N.D.	0.30	1.0
Perfluorotridecanoic Acid	N.D.	0.40	1.0
Perfluoroundecanoic Acid	N.D.	0.40	2.0

LCS/LCSD

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 19175003	Sample number(s): 1083882-1083891								
6:2-Fluorotelomersulfonic acid	15.17	16.27	15.17	16.68	107	110	66-155	2	30
8:2-Fluorotelomersulfonic acid	15.33	18.69	15.33	20.55	122	134	66-148	10	30
NEtFOSAA	5.44	6.57	5.44	5.90	121	109	55-169	11	30
NMeFOSAA	5.44	6.57	5.44	5.70	121	105	44-147	14	30
Perfluorobutanesulfonic acid	4.81	4.72	4.81	4.60	98	96	73-128	3	30
Perfluorobutanoic Acid	5.44	6.45	5.44	6.37	119	117	74-142	1	30
Perfluorodecanesulfonic acid	5.24	5.23	5.24	5.03	100	96	60-135	4	30
Perfluorodecanoic Acid	5.44	5.71	5.44	5.60	105	103	69-148	2	30

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: TestAmerica Sacramento
Reported: 07/16/2019 14:16

Group Number: 2049636

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ng/l	LCS Conc ng/l	LCSD Spike Added ng/l	LCSD Conc ng/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Perfluorododecanoic Acid	5.44	5.58	5.44	5.93	103	109	75-136	6	30
Perfluoroheptanesulfonic acid	5.18	4.98	5.18	5.30	96	102	64-135	6	30
Perfluoroheptanoic Acid	5.44	5.65	5.44	5.91	104	109	76-140	5	30
Perfluorohexanesulfonic acid	5.14	4.56	5.14	4.99	89	97	71-131	9	30
Perfluorohexanoic Acid	5.44	5.61	5.44	5.63	103	103	75-135	0	30
Perfluorononanoic Acid	5.44	5.32	5.44	5.27	98	97	72-148	1	30
Perfluorooctanesulfonamide	5.44	6.36	5.44	5.95	117	109	65-164	7	30
Perfluorooctanesulfonic acid	5.20	4.81	5.20	4.62	93	89	67-138	4	30
Perfluorooctanoic Acid	5.44	5.36	5.44	5.38	98	99	72-138	0	30
Perfluoropentanoic Acid	5.44	5.53	5.44	5.80	102	107	74-134	5	30
Perfluorotetradecanoic Acid	5.44	6.16	5.44	6.32	113	116	74-135	3	30
Perfluorotridecanoic Acid	5.44	5.67	5.44	5.67	104	104	61-145	0	30
Perfluoroundecanoic Acid	5.44	5.27	5.44	5.58	97	103	75-146	6	30

Labeled Isotope Quality Control

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 21 PFAS
Batch number: 19175003

	13C4-PFBA	13C5-PFPeA	13C3-PFBS	13C5-PFHxA	13C3-PFHxS	13C4-PFHpA
1083882	92	102	94	86	89	85
1083883	93	99	91	86	78	86
1083884	95	108	97	91	79	88
1083885	86	100	93	91	76	85
1083886	95	105	155*	67	106	85
1083887	90	114	151*	78	113	108
1083888	100	118	112	102	93	99
1083889	90	97	99	76	71	82
1083890	98	113	165*	78	104	90
1083891	91	101	95	87	98	99
Blank	83	85	76	85	86	84
LCS	92	88	90	90	97	88
LCSD	91	90	86	91	92	88
Limits:	33-123	31-157	26-148	35-138	34-126	35-126
	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1083882	126	88	92	107	89	165*
1083883	320*	92	97	123	91	252*
1083884	229*	95	89	114	99	277*

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: TestAmerica Sacramento
Reported: 07/16/2019 14:16

Group Number: 2049636

Labeled Isotope Quality Control (continued)

Labeled isotope recoveries which are outside of the QC window are confirmed unless otherwise noted on the analysis report.

Analysis Name: 21 PFAS
Batch number: 19175003

	13C2-6:2-FTS	13C8-PFOA	13C8-PFOS	13C9-PFNA	13C6-PFDA	13C2-8:2-FTS
1083885	266*	89	97	137	89	249*
1083886	275*	97	96	100	94	230*
1083887	425*	99	90	130	94	287*
1083888	261*	99	106	136	105	293*
1083889	317*	90	86	152*	88	242*
1083890	319*	103	97	100	98	246*
1083891	180*	94	89	108	95	239*
Blank	86	87	87	88	86	71
LCS	91	92	94	103	89	78
LCSD	86	91	93	99	97	82

Limits: 32-170 48-122 50-121 41-144 47-125 27-164

	d3-NMeFOSAA	13C7-PFUnDA	d5-NEtFOSAA	13C2-PFDODA	13C2-PFTeDA	13C8-PFOA
1083882	113	89	129	86	76	33
1083883	165*	91	182*	74	72	48
1083884	167*	95	180*	84	79	51
1083885	160*	84	170*	76	74	45
1083886	99	96	119	79	73	23
1083887	191*	89	200*	67	72	49
1083888	185*	96	192*	85	84	53
1083889	163*	79	167*	64	57	41
1083890	111	113	141	98	99	23
1083891	128*	91	159*	75	70	28
Blank	91	86	92	83	87	64
LCS	94	95	94	91	89	68
LCSD	108	100	107	97	94	73

Limits: 30-127 30-128 30-142 39-130 26-119 11-127

*- Outside of specification

** - This limit was used in the evaluation of the final result for the blank

(1) The result for one or both determinations was less than five times the LOQ.

(2) The unspiked result was more than four times the spike added.

1042 2049630 6083882-91

Chain of Custody Record



Client Information (Sub Contract Lab)	Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact:	Phone:	E-Mail:	State of Origin:	Page:
Shipping/Receiving		cesar.cortes@testamericainc.com	New York	Page 1 of 2
Company:	Accreditations Required (See note):			Job #:
Eurofins Lancaster Laboratories Env LLC	NELAP - New York			320-51333-1

Address:	Due Date Requested:	Analysis Requested										Preservation Codes:	
2425 New Holland Pike,	6/26/2019												
City:	TAT Requested (days):	Field Filtered Sample (Yes or No)	Perform: MS/MSD (Yes or No)	SUB (General Subcontract Method)	Total Number of Containers	A - HCL		M - Hexane					
Lancaster						B - NaOH	N - None						
State, Zip:						C - Zn Acetate	O - AsNaO2						
PA, 17601						D - Nitric Acid	P - Na2O4S						
Phone:	PO #:					E - NaHSO4	Q - Na2SO3						
717-656-2300(Tel)						F - MeOH	R - Na2S2O3						
Email:	WO #:					G - Amchlor	S - H2SO4						
						H - Ascorbic Acid	T - TSP Dodecahydrate						
Project Name:	Project #:					I - Ice	U - Acetone						
Pace PFAS Testing	32010619					J - DI Water	V - MCAA						
Site:	SSOW#:					K - EDTA	W - pH 4-5						
						L - EDA	Z - other (specify)						
										Other:			

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform: MS/MSD (Yes or No)	SUB (General Subcontract Method)	Total Number of Containers	Special Instructions/Note:
GM-2D (320-51333-1)	6/11/19	13:10 Eastern		Water	X			2	
GM-4D (320-51333-2)	6/11/19	10:45 Eastern		Water	X			2	
GM-5D (320-51333-3)	6/11/19	11:20 Eastern		Water	X			2	
GM-6D (320-51333-4)	6/11/19	12:00 Eastern		Water	X			2	
GM-7D (320-51333-5)	6/11/19	12:35 Eastern		Water	X			2	
GM-15D (320-51333-6)	6/11/19	15:10 Eastern		Water	X			2	
GM-16D (320-51333-7)	6/11/19	14:50 Eastern		Water	X			2	
GM-17D (320-51333-8)	6/11/19	14:35 Eastern		Water	X			2	
GM-18D (320-51333-9)	6/11/19	14:10 Eastern		Water	X			2	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
Unconfirmed	<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify)	Primary Deliverable Rank: 2
Special Instructions/QC Requirements:	

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: <i>[Signature]</i>	Date/Time: 6/18/19 1630	Company: CTA Sec	Received by: <i>[Signature]</i>
Relinquished by:	Date/Time:	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by: <i>[Signature]</i>
	Date/Time: 6-19-19 10:10	Company: ELLG	

Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.: N/A	Cooler Temperature(s) °C and Other Remarks: 1.7	Page 114 of 118
-------------------------------------------------------------------------------------------	-----------------------	-------------------------------------------------	-----------------

Chain of Custody Record

Client Information (Sub Contract Lab)		Sampler:		Lab PM:		Carrier Tracking No(s):		COC No:											
Client Contact: Shipping/Receiving		Phone:		Cortes, Cesar C		E-Mail: cesar.cortes@testamericainc.com		State of Origin: New York											
Company: Eurofins Lancaster Laboratories Env LLC		Accreditations Required (See note): NELAP - New York		Job #: 320-51333-1		Page: Page 2 of 2													
Address: 2425 New Holland Pike, City: Lancaster State, Zip: PA, 17601 Phone: 717-656-2300(Tel) Email:		Due Date Requested: 6/26/2019 TAT Requested (days):		Analysis Requested						Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Z - other (specify) Other:									
Project Name: Pace PFAS Testing Site:		Project #: 32010619 SSOW#:																	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=wastefl, BT=Tissue, A=Air)		Field Filtered Samples (Yes or No)		Perform MS/MSD (Yes or No)		SUB (General Subcontract Method)		Total Number of Containers		Special Instructions/Note:	
GM-19D (320-51333-10)		6/11/19		13:40 Eastern				Water		X		X		SUB		2			

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to TestAmerica Laboratories, Inc. attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to TestAmerica Laboratories, Inc.

Possible Hazard Identification		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Unconfirmed		<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Deliverable Requested: I, II, III, IV, Other (specify)		Primary Deliverable Rank: 2	
		Special Instructions/QC Requirements:	

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by:		Date/Time: 6/8/19 1620		Company: EPA SW		Received by:	
Relinquished by:		Date/Time:		Company:		Received by:	
Relinquished by:		Date/Time:		Company:		Received by:	
Custody Seals Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.: N/A		Cooler Temperature(s) °C and Other Remarks: 1.7		Date/Time: 6-19-19 10:10	
						Company: ELLE	



Client: TestAmerica

Delivery and Receipt Information

Delivery Method:	<u>Fed Ex</u>	Arrival Timestamp:	<u>06/19/2019 10:10</u>
Number of Packages:	<u>1</u>	Number of Projects:	<u>2</u>
State/Province of Origin:	<u>NY</u>		

Arrival Condition Summary

Shipping Container Sealed:	Yes	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	Yes	Sample Date/Times match COC:	Yes
Custody Seal Intact:	Yes	VOA Vial Headspace \geq 6mm:	N/A
Samples Chilled:	Yes	Total Trip Blank Qty:	0
Paperwork Enclosed:	Yes	Air Quality Samples Present:	No
Samples Intact:	Yes		
Missing Samples:	No		
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Nicole Reiff (25684) at 12:42 on 06/19/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

<u>Cooler #</u>	<u>Thermometer ID</u>	<u>Corrected Temp</u>	<u>Therm. Type</u>	<u>Ice Type</u>	<u>Ice Present?</u>	<u>Ice Container</u>	<u>Elevated Temp?</u>
1	DT131	1.7	DT	Wet	Y	Loose	N

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

BMQL	Below Minimum Quantitation Level	mL	milliliter(s)
C	degrees Celsius	MPN	Most Probable Number
cfu	colony forming units	N.D.	non-detect
CP Units	cobalt-chloroplatinate units	ng	nanogram(s)
F	degrees Fahrenheit	NTU	nephelometric turbidity units
g	gram(s)	pg/L	picogram/liter
IU	International Units	RL	Reporting Limit
kg	kilogram(s)	TNTC	Too Numerous To Count
L	liter(s)	µg	microgram(s)
lb.	pound(s)	µL	microliter(s)
m3	cubic meter(s)	umhos/cm	micromhos/cm
meq	milliequivalents	MCL	Maximum Contamination Limit
mg	milligram(s)		
<	less than		
>	greater than		
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.		
ppb	parts per billion		
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.		

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as “analyze immediately” are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported.
P^	Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

June 28, 2019

Joe Guarino
Town of Babylon
281 Phelps Lane
North Babylon, NY 11703

RE: Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Dear Joe Guarino:

Enclosed are the analytical results for sample(s) received by the laboratory on June 11, 2019. The results relate only to the samples included in this report. Results reported herein conform to the most current, applicable TNI/NELAC standards and the laboratory's Quality Assurance Manual, where applicable, unless otherwise noted in the body of the report.

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

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

Sincerely,



Jennifer Aracri
jennifer.aracri@pacelabs.com
(631)694-3040
Project Manager

Enclosures



REPORT OF LABORATORY ANALYSIS

This report shall not be reproduced, except in full,
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CERTIFICATIONS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Minnesota Certification IDs

1700 Elm Street SE, Minneapolis, MN 55414-2485

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

CNMI Saipan Certification #: MP0003

Colorado Certification #: MN00064

Connecticut Certification #: PH-0256

EPA Region 8+Wyoming DW Certification #: via MN 027-053-137

Florida Certification #: E87605

Georgia Certification #: 959

Guam EPA Certification #: MN00064

Hawaii Certification #: MN00064

Idaho Certification #: MN00064

Illinois Certification #: 200011

Indiana Certification #: C-MN-01

Iowa Certification #: 368

Kansas Certification #: E-10167

Kentucky DW Certification #: 90062

Kentucky WW Certification #: 90062

Louisiana DEQ Certification #: 03086

Louisiana DW Certification #: MN00064

Maine Certification #: MN00064

Maryland Certification #: 322

Massachusetts Certification #: M-MN064

Michigan Certification #: 9909

Minnesota Certification #: 027-053-137

Minnesota Dept of Ag Certification #: via MN 027-053-137

Minnesota Petrofund Certification #: 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 #: CL101

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

Long Island Certification IDs

575 Broad Hollow Rd, Melville, NY 11747

New York Certification #: 10478 Primary Accrediting Body

New Jersey Certification #: NY158

Pennsylvania Certification #: 68-00350

Connecticut Certification #: PH-0435

Maryland Certification #: 208

Rhode Island Certification #: LAO00340

Massachusetts Certification #: M-NY026

New Hampshire Certification #: 2987

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7093107001	GM-2D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
7093107002	GM-4D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
7093107003	GM-5D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7093107004	GM-6D	EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
EPA 353.2	SDO	1	PACE-MV		
SM22 4500 NH3 H	BNK	1	PACE-MV		
SM22 5310B	KM1	1	PACE-MV		
7093107005	GM-7D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
7093107006	GM-15D	SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
7093107007	GM-16D	SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
EPA 353.2	SDO	1	PACE-MV		
7093107008	GM-17D	SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
		EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
SM22 2340C	AK1	1	PACE-MV		

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
7093107009	GM-18D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV
7093107010	GM-19D	EPA 6010C	JMW	22	PACE-MV
		EPA 7470A	JLN	1	PACE-MV
		EPA 8270D by SIM	STB	2	PASI-M
		EPA 180.1	KM1	1	PACE-MV
		SM22 2320B	AK1	1	PACE-MV
		SM22 2340C	AK1	1	PACE-MV
		SM22 2540C	KS1	1	PACE-MV
		EPA 410.4	JCA	1	PACE-MV
		SM22 5210B	VNS	1	PACE-MV
		EPA 300.0	BNK	3	PACE-MV
		EPA 351.2	SDO	1	PACE-MV
		EPA 353.2	SDO	2	PACE-MV
		EPA 353.2	SDO	1	PACE-MV

REPORT OF LABORATORY ANALYSIS

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SAMPLE ANALYTE COUNT

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	Method	Analysts	Analytes Reported	Laboratory
		SM22 4500 NH3 H	BNK	1	PACE-MV
		SM22 5310B	KM1	1	PACE-MV

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 6010C

Description: 6010 MET ICP

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for EPA 6010C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 3005A with any exceptions noted below.

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

QC Batch: 117823

B: Analyte was detected in the associated method blank.

- BLANK for HBN 117823 [MPRP/785 (Lab ID: 558052)]
- Thallium

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Method: EPA 7470A
Description: 7470 Mercury
Client: Town of Babylon
Date: June 28, 2019

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 8270D by SIM

Description: 8270D MSSV 14 Dioxane By SIM

Client: Town of Babylon

Date: June 28, 2019

General Information:

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

Hold Time:

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

Sample Preparation:

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

Initial Calibrations (including MS Tune as applicable):

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

Continuing Calibration:

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

Internal Standards:

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

Surrogates:

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

Method Blank:

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

Laboratory Control Spike:

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

QC Batch: 613702

R1: RPD value was outside control limits.

- LCSD (Lab ID: 3315789)
- 1,4-Dioxane (SIM)

Matrix Spikes:

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

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 180.1

Description: 180.1 Turbidity

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for EPA 180.1. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: SM22 2320B

Description: 2320B Alkalinity

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for SM22 2320B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: SM22 2340C

Description: 2340C Hardness, Total

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for SM22 2340C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: SM22 2540C

Description: 2540C Total Dissolved Solids

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for SM22 2540C. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 118004

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

- DUP (Lab ID: 559709)
 - Total Dissolved Solids
- DUP (Lab ID: 559711)
 - Total Dissolved Solids

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 410.4

Description: 410.4 COD

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for EPA 410.4. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 410.4 with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: SM22 5210B

Description: 5210B BOD, 5 day

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for SM22 5210B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with SM22 5210B with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 300.0

Description: 300.0 IC Anions 28 Days

Client: Town of Babylon

Date: June 28, 2019

General Information:

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

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 351.2

Description: 351.2 Total Kjeldahl Nitrogen

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for EPA 351.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Sample Preparation:

The samples were prepared in accordance with EPA 351.2 with any exceptions noted below.

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 119268

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7092926001,7093723002

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

- MS (Lab ID: 566777)
- Nitrogen, Kjeldahl, Total

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 119268

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

- DUP (Lab ID: 566780)
- Nitrogen, Kjeldahl, Total

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 353.2

Description: 353.2 Nitrogen, NO₂/NO₃ unpres

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 117328

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7093035001,7093139001

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

- MS (Lab ID: 555675)
- Nitrate-Nitrite (as N)

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: EPA 353.2

Description: 353.2 Nitrogen, NO₂

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for EPA 353.2. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: SM22 4500 NH3 H

Description: 4500 Ammonia Water

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for SM22 4500 NH3 H. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

QC Batch: 119281

B: Analyte was detected in the associated method blank.

- BLANK for HBN 119281 [WETA/191 (Lab ID: 566889)
- Nitrogen, Ammonia

Laboratory Control Spike:

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

Matrix Spikes:

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

QC Batch: 119281

A matrix spike and/or matrix spike duplicate (MS/MSD) were performed on the following sample(s): 7093468001

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

- MS (Lab ID: 566891)
- Nitrogen, Ammonia

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

QC Batch: 119281

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

- DUP (Lab ID: 566892)
- Nitrogen, Ammonia

Additional Comments:

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PROJECT NARRATIVE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Method: SM22 5310B

Description: 5310B TOC as NPOC

Client: Town of Babylon

Date: June 28, 2019

General Information:

10 samples were analyzed for SM22 5310B. All samples were received in acceptable condition with any exceptions noted below or on the chain-of custody and/or the sample condition upon receipt form (SCUR) attached at the end of this report.

Hold Time:

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

Method Blank:

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

Laboratory Control Spike:

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

Matrix Spikes:

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

Duplicate Sample:

All duplicate sample results were within method acceptance criteria with any exceptions noted below.

Additional Comments:

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

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-2D	Lab ID: 7093107001	Collected: 06/11/19 13:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	236	ug/L	200	1	06/14/19 09:04	06/24/19 18:36	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 18:36	7440-36-0	
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7440-38-2	
Barium	<200	ug/L	200	1	06/14/19 09:04	06/24/19 18:36	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:36	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 18:36	7440-43-9	
Calcium	20800	ug/L	200	1	06/14/19 09:04	06/24/19 18:36	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:36	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 18:36	7440-50-8	
Iron	1020	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:36	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:36	7439-92-1	
Magnesium	4750	ug/L	200	1	06/14/19 09:04	06/24/19 18:36	7439-95-4	
Manganese	71.7	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 18:36	7440-02-0	
Potassium	<5000	ug/L	5000	1	06/14/19 09:04	06/24/19 18:36	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7440-22-4	
Sodium	11600	ug/L	5000	1	06/14/19 09:04	06/24/19 18:36	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:36	7440-28-0	
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:36	7440-62-2	
Zinc	<20.0	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:36	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:31	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.13J	ug/L	0.25	1	06/18/19 11:20	06/21/19 20:39	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	44	%	30-125	1	06/18/19 11:20	06/21/19 20:39		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	3.0	NTU	1.0	1		06/12/19 15:11		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	24.2	mg/L	1.0	1		06/22/19 02:44		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	60.0	mg/L	5.0	1		06/24/19 15:17		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	129	mg/L	10.0	1		06/17/19 10:34		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	<10.0	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:39		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-2D	Lab ID: 7093107001	Collected: 06/11/19 13:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	1.4J	mg/L	2.0	1	06/13/19 10:33	06/18/19 10:50		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	0.12J	mg/L	0.50	1		06/26/19 23:56	24959-67-9	
Chloride	16.4	mg/L	2.0	1		06/26/19 23:56	16887-00-6	
Sulfate	44.4	mg/L	5.0	1		06/26/19 23:56	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	0.34	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:00	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.049J	mg/L	0.050	1		06/11/19 22:43	14797-55-8	
Nitrate-Nitrite (as N)	0.049J	mg/L	0.050	1		06/11/19 22:43	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:47	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.093J	mg/L	0.10	1		06/25/19 14:24	7664-41-7	B
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	0.98J	mg/L	1.0	1		06/18/19 16:07	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-4D	Lab ID: 7093107002	Collected: 06/11/19 10:45	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	<200	ug/L	200	1	06/14/19 09:04	06/24/19 18:41	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 18:41	7440-36-0	
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7440-38-2	
Barium	24.7J	ug/L	200	1	06/14/19 09:04	06/24/19 18:41	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:41	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 18:41	7440-43-9	
Calcium	18700	ug/L	200	1	06/14/19 09:04	06/24/19 18:41	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:41	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 18:41	7440-50-8	
Iron	318	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:41	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:41	7439-92-1	
Magnesium	3890	ug/L	200	1	06/14/19 09:04	06/24/19 18:41	7439-95-4	
Manganese	112	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 18:41	7440-02-0	
Potassium	4930J	ug/L	5000	1	06/14/19 09:04	06/24/19 18:41	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7440-22-4	
Sodium	22700	ug/L	5000	1	06/14/19 09:04	06/24/19 18:41	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:41	7440-28-0	
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:41	7440-62-2	
Zinc	<20.0	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:41	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:33	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.14J	ug/L	0.25	1	06/18/19 11:20	06/21/19 19:20	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	47	%	30-125	1	06/18/19 11:20	06/21/19 19:20		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	4.6	NTU	1.0	1		06/12/19 15:10		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	32.9	mg/L	1.0	1		06/22/19 02:52		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	50.0	mg/L	5.0	1		06/24/19 17:04		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	175	mg/L	10.0	1		06/17/19 10:34		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	38.9	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:39		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Sample: GM-4D	Lab ID: 7093107002	Collected: 06/11/19 10:45	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	6.1	mg/L	2.0	1	06/13/19 10:33	06/18/19 10:52		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	2.5	mg/L	0.50	1		06/27/19 00:12	24959-67-9	
Chloride	183	mg/L	10.0	5		06/27/19 19:38	16887-00-6	
Sulfate	36.7	mg/L	5.0	1		06/27/19 00:12	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	0.86	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:01	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.62	mg/L	0.050	1		06/11/19 22:45	14797-55-8	
Nitrate-Nitrite (as N)	0.62	mg/L	0.050	1		06/11/19 22:45	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:50	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.44	mg/L	0.10	1		06/25/19 14:25	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	12.6	mg/L	1.0	1		06/18/19 17:05	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-5D	Lab ID: 7093107003	Collected: 06/11/19 11:20	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	37.0J	ug/L	200	1	06/14/19 09:04	06/25/19 15:01	7429-90-5	
Antimony	13.7J	ug/L	60.0	1	06/14/19 09:04	06/25/19 15:01	7440-36-0	
Arsenic	15.4	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7440-38-2	
Barium	85.7J	ug/L	200	1	06/14/19 09:04	06/25/19 15:01	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/25/19 15:01	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/25/19 15:01	7440-43-9	
Calcium	22100	ug/L	200	1	06/14/19 09:04	06/25/19 15:01	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/25/19 15:01	7440-48-4	
Copper	15.6J	ug/L	25.0	1	06/14/19 09:04	06/25/19 15:01	7440-50-8	
Iron	27000	ug/L	20.0	1	06/14/19 09:04	06/25/19 15:01	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/25/19 15:01	7439-92-1	
Magnesium	3460	ug/L	200	1	06/14/19 09:04	06/25/19 15:01	7439-95-4	
Manganese	8060	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7439-96-5	
Nickel	5.0J	ug/L	40.0	1	06/14/19 09:04	06/25/19 15:01	7440-02-0	
Potassium	6800	ug/L	5000	1	06/14/19 09:04	06/25/19 15:01	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7440-22-4	
Sodium	112000	ug/L	5000	1	06/14/19 09:04	06/25/19 15:01	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/25/19 15:01	7440-28-0	
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/25/19 15:01	7440-62-2	
Zinc	7.0J	ug/L	20.0	1	06/14/19 09:04	06/25/19 15:01	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:35	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.084J	ug/L	0.25	1	06/18/19 11:20	06/21/19 19:40	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	43	%	30-125	1	06/18/19 11:20	06/21/19 19:40		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	22.0	NTU	2.0	2		06/12/19 15:10		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	51.2	mg/L	1.0	1		06/22/19 02:59		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	80.0	mg/L	5.0	1		06/26/19 12:06		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	472	mg/L	20.0	1		06/17/19 10:35		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	21.2	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:40		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Sample: GM-5D	Lab ID: 7093107003	Collected: 06/11/19 11:20	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	2.4J	mg/L	4.0	2	06/13/19 10:33	06/18/19 10:55		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	0.23J	mg/L	0.50	1		06/27/19 00:29	24959-67-9	
Chloride	221	mg/L	20.0	10		06/27/19 19:54	16887-00-6	
Sulfate	41.2	mg/L	5.0	1		06/27/19 00:29	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	0.46	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:02	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.10	mg/L	0.050	1		06/11/19 22:46	14797-55-8	
Nitrate-Nitrite (as N)	0.10	mg/L	0.050	1		06/11/19 22:46	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:51	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.072J	mg/L	0.10	1		06/25/19 14:27	7664-41-7	B
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	5.9	mg/L	1.0	1		06/18/19 17:21	7440-44-0	

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-6D	Lab ID: 7093107004	Collected: 06/11/19 12:00	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	105J	ug/L	200	1	06/14/19 09:04	06/24/19 18:52	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 18:52	7440-36-0	
Arsenic	32.8	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7440-38-2	
Barium	196J	ug/L	200	1	06/14/19 09:04	06/24/19 18:52	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:52	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 18:52	7440-43-9	
Calcium	92100	ug/L	200	1	06/14/19 09:04	06/24/19 18:52	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:52	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 18:52	7440-50-8	
Iron	17300	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:52	7439-89-6	
Lead	4.5J	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:52	7439-92-1	
Magnesium	10400	ug/L	200	1	06/14/19 09:04	06/24/19 18:52	7439-95-4	
Manganese	279	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 18:52	7440-02-0	
Potassium	16700	ug/L	5000	1	06/14/19 09:04	06/24/19 18:52	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7440-22-4	
Sodium	44100	ug/L	5000	1	06/14/19 09:04	06/24/19 18:52	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:52	7440-28-0	
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:52	7440-62-2	
Zinc	<20.0	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:52	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:36	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	5.0	ug/L	0.25	1	06/18/19 11:20	06/21/19 20:00	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	46	%	30-125	1	06/18/19 11:20	06/21/19 20:00		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	17.1	NTU	2.0	2		06/12/19 15:10		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	262	mg/L	1.0	1		06/22/19 03:12		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	260	mg/L	5.0	1		06/26/19 12:09		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	456	mg/L	20.0	1		06/17/19 10:35		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	47.7	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:40		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-6D	Lab ID: 7093107004	Collected: 06/11/19 12:00	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	22.2	mg/L	2.0	1	06/13/19 10:33	06/18/19 10:57		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	1.5	mg/L	0.50	1		06/27/19 00:46	24959-67-9	
Chloride	106	mg/L	20.0	10		06/27/19 20:11	16887-00-6	
Sulfate	16.0	mg/L	5.0	1		06/27/19 00:46	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	9.6	mg/L	0.50	5	06/25/19 13:02	06/26/19 08:38	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.054	mg/L	0.050	1		06/11/19 22:49	14797-55-8	
Nitrate-Nitrite (as N)	0.054	mg/L	0.050	1		06/11/19 22:49	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:53	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	8.1	mg/L	0.50	5		06/25/19 16:19	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	15.1	mg/L	1.0	1		06/18/19 17:37	7440-44-0	

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-7D	Lab ID: 7093107005	Collected: 06/11/19 12:35	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	892	ug/L	200	1	06/14/19 09:04	06/24/19 18:58	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 18:58	7440-36-0	
Arsenic	6.9J	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7440-38-2	
Barium	136J	ug/L	200	1	06/14/19 09:04	06/24/19 18:58	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:58	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 18:58	7440-43-9	
Calcium	171000	ug/L	200	1	06/14/19 09:04	06/24/19 18:58	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7440-47-3	
Cobalt	3.8J	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:58	7440-48-4	
Copper	36.2	ug/L	25.0	1	06/14/19 09:04	06/24/19 18:58	7440-50-8	
Iron	5230	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:58	7439-89-6	
Lead	13.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 18:58	7439-92-1	
Magnesium	26600	ug/L	200	1	06/14/19 09:04	06/24/19 18:58	7439-95-4	
Manganese	2220	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7439-96-5	
Nickel	5.6J	ug/L	40.0	1	06/14/19 09:04	06/24/19 18:58	7440-02-0	
Potassium	9720	ug/L	5000	1	06/14/19 09:04	06/24/19 18:58	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7440-22-4	
Sodium	10100	ug/L	5000	1	06/14/19 09:04	06/24/19 18:58	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 18:58	7440-28-0	
Vanadium	10.9J	ug/L	50.0	1	06/14/19 09:04	06/24/19 18:58	7440-62-2	
Zinc	27.4	ug/L	20.0	1	06/14/19 09:04	06/24/19 18:58	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:38	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	<0.25	ug/L	0.25	1	06/18/19 11:20	06/21/19 20:19	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	44	%	30-125	1	06/18/19 11:20	06/21/19 20:19		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	9.4	NTU	2.0	2		06/12/19 15:11		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	470	mg/L	1.0	1		06/22/19 03:46		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	450	mg/L	5.0	1		06/24/19 17:15		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	570	mg/L	20.0	1		06/17/19 10:36		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	72.0	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:40		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-7D	Lab ID: 7093107005	Collected: 06/11/19 12:35	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	1.2J	mg/L	2.0	1	06/13/19 10:33	06/18/19 10:59		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	0.075J	mg/L	0.50	1		06/27/19 20:28	24959-67-9	
Chloride	5.8	mg/L	2.0	1		06/27/19 20:28	16887-00-6	
Sulfate	49.9	mg/L	5.0	1		06/27/19 20:28	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	1.9	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:06	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.13	mg/L	0.050	1		06/11/19 22:51	14797-55-8	
Nitrate-Nitrite (as N)	0.13	mg/L	0.050	1		06/11/19 22:51	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:54	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.12	mg/L	0.10	1		06/25/19 14:29	7664-41-7	B
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	15.9	mg/L	1.0	1		06/18/19 18:05	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-15D	Lab ID: 7093107006	Collected: 06/11/19 15:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	429	ug/L	200	1	06/14/19 09:04	06/24/19 19:03	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 19:03	7440-36-0	
Arsenic	11.5	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7440-38-2	
Barium	230	ug/L	200	1	06/14/19 09:04	06/24/19 19:03	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:03	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 19:03	7440-43-9	
Calcium	57000	ug/L	200	1	06/14/19 09:04	06/24/19 19:03	7440-70-2	
Chromium	5.3J	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7440-47-3	
Cobalt	7.5J	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:03	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 19:03	7440-50-8	
Iron	21200	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:03	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:03	7439-92-1	
Magnesium	9180	ug/L	200	1	06/14/19 09:04	06/24/19 19:03	7439-95-4	
Manganese	578	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7439-96-5	
Nickel	3.3J	ug/L	40.0	1	06/14/19 09:04	06/24/19 19:03	7440-02-0	
Potassium	22900	ug/L	5000	1	06/14/19 09:04	06/24/19 19:03	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7440-22-4	
Sodium	141000	ug/L	5000	1	06/14/19 09:04	06/24/19 19:03	7440-23-5	
Thallium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:03	7440-28-0	
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:03	7440-62-2	
Zinc	15.5J	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:03	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:40	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	16.2	ug/L	0.25	1	06/18/19 11:20	06/21/19 22:17	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	46	%	30-125	1	06/18/19 11:20	06/21/19 22:17		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	144	NTU	10.0	10		06/12/19 15:12		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	372	mg/L	1.0	1		06/22/19 04:03		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	100	mg/L	5.0	1		06/24/19 17:50		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	6.0J	mg/L	10.0	1		06/17/19 10:36		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	123	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:40		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-15D	Lab ID: 7093107006	Collected: 06/11/19 15:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	19.9	mg/L	4.0	2	06/13/19 10:33	06/18/19 11:01		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	3.0	mg/L	0.50	1		06/27/19 20:45	24959-67-9	
Chloride	177	mg/L	10.0	5		06/27/19 21:01	16887-00-6	
Sulfate	<5.0	mg/L	5.0	1		06/27/19 20:45	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	25.8	mg/L	1.0	10	06/25/19 13:02	06/26/19 08:39	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.044J	mg/L	0.050	1		06/11/19 22:52	14797-55-8	
Nitrate-Nitrite (as N)	0.044J	mg/L	0.050	1		06/11/19 22:52	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:57	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	22.0	mg/L	1.0	10		06/25/19 16:21	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	33.6	mg/L	1.0	1		06/18/19 18:22	7440-44-0	

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-16D	Lab ID: 7093107007	Collected: 06/11/19 14:50	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A						
Aluminum	338	ug/L	200	1	06/14/19 09:04	06/24/19 19:08	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 19:08	7440-36-0	
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7440-38-2	
Barium	79.9J	ug/L	200	1	06/14/19 09:04	06/24/19 19:08	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:08	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 19:08	7440-43-9	
Calcium	18000	ug/L	200	1	06/14/19 09:04	06/24/19 19:08	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7440-47-3	
Cobalt	26.8J	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:08	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 19:08	7440-50-8	
Iron	24100	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:08	7439-89-6	
Lead	4.1J	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:08	7439-92-1	
Magnesium	3070	ug/L	200	1	06/14/19 09:04	06/24/19 19:08	7439-95-4	
Manganese	4690	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 19:08	7440-02-0	
Potassium	4490J	ug/L	5000	1	06/14/19 09:04	06/24/19 19:08	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7440-22-4	
Sodium	15900	ug/L	5000	1	06/14/19 09:04	06/24/19 19:08	7440-23-5	
Thallium	6.4J	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:08	7440-28-0	B
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:08	7440-62-2	
Zinc	126	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:08	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A						
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:41	7439-97-6	
8270D MSSV 14 Dioxane By SIM		Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510						
1,4-Dioxane (SIM)	0.087J	ug/L	0.25	1	06/18/19 11:20	06/21/19 21:57	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	48	%	30-125	1	06/18/19 11:20	06/21/19 21:57		
180.1 Turbidity		Analytical Method: EPA 180.1						
Turbidity	18.4	NTU	2.0	2		06/12/19 15:11		
2320B Alkalinity		Analytical Method: SM22 2320B						
Alkalinity, Total as CaCO3	44.6	mg/L	1.0	1		06/24/19 12:18		
2340C Hardness, Total		Analytical Method: SM22 2340C						
Tot Hardness asCaCO3 (SM 2340B)	60.0	mg/L	5.0	1		06/26/19 12:10		
2540C Total Dissolved Solids		Analytical Method: SM22 2540C						
Total Dissolved Solids	259	mg/L	10.0	1		06/17/19 10:50		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	52.1	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:40		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-16D	Lab ID: 7093107007	Collected: 06/11/19 14:50	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	5.6	mg/L	2.0	1	06/13/19 10:33	06/18/19 11:04		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	0.83	mg/L	0.50	1		06/27/19 21:18	24959-67-9	
Chloride	35.4	mg/L	2.0	1		06/27/19 21:18	16887-00-6	
Sulfate	22.6	mg/L	5.0	1		06/27/19 21:18	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	2.1	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:07	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.046J	mg/L	0.050	1		06/11/19 22:53	14797-55-8	
Nitrate-Nitrite (as N)	0.046J	mg/L	0.050	1		06/11/19 22:53	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 20:59	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.37	mg/L	0.10	1		06/25/19 14:34	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	12.5	mg/L	1.0	1		06/18/19 19:05	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-17D	Lab ID: 7093107008	Collected: 06/11/19 14:35	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A						
Aluminum	<200	ug/L	200	1	06/14/19 09:04	06/24/19 19:14	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 19:14	7440-36-0	
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7440-38-2	
Barium	25.6J	ug/L	200	1	06/14/19 09:04	06/24/19 19:14	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:14	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 19:14	7440-43-9	
Calcium	12100	ug/L	200	1	06/14/19 09:04	06/24/19 19:14	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:14	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 19:14	7440-50-8	
Iron	249	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:14	7439-89-6	
Lead	3.1J	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:14	7439-92-1	
Magnesium	6440	ug/L	200	1	06/14/19 09:04	06/24/19 19:14	7439-95-4	
Manganese	26.5	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 19:14	7440-02-0	
Potassium	<5000	ug/L	5000	1	06/14/19 09:04	06/24/19 19:14	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7440-22-4	
Sodium	11500	ug/L	5000	1	06/14/19 09:04	06/24/19 19:14	7440-23-5	
Thallium	4.1J	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:14	7440-28-0	B
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:14	7440-62-2	
Zinc	18.9J	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:14	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A						
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:43	7439-97-6	
8270D MSSV 14 Dioxane By SIM		Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510						
1,4-Dioxane (SIM)	0.077J	ug/L	0.25	1	06/18/19 11:20	06/21/19 21:38	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	49	%	30-125	1	06/18/19 11:20	06/21/19 21:38		
180.1 Turbidity		Analytical Method: EPA 180.1						
Turbidity	1.2	NTU	1.0	1		06/12/19 15:11		
2320B Alkalinity		Analytical Method: SM22 2320B						
Alkalinity, Total as CaCO3	26.7	mg/L	1.0	1		06/24/19 12:39		
2340C Hardness, Total		Analytical Method: SM22 2340C						
Tot Hardness asCaCO3 (SM 2340B)	40.0	mg/L	5.0	1		06/24/19 17:22		
2540C Total Dissolved Solids		Analytical Method: SM22 2540C						
Total Dissolved Solids	118	mg/L	10.0	1		06/17/19 10:50		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	30.0	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:41		

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Sample: GM-17D	Lab ID: 7093107008	Collected: 06/11/19 14:35	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	1.0J	mg/L	2.0	1	06/13/19 10:33	06/18/19 11:06		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	1.1	mg/L	0.50	1		06/27/19 21:35	24959-67-9	
Chloride	23.7	mg/L	2.0	1		06/27/19 21:35	16887-00-6	
Sulfate	36.2	mg/L	5.0	1		06/27/19 21:35	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	1.7	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:08	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.028J	mg/L	0.050	1		06/11/19 22:54	14797-55-8	
Nitrate-Nitrite (as N)	<0.050	mg/L	0.050	1		06/11/19 22:54	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 21:00	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.87	mg/L	0.10	1		06/25/19 14:35	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	10	mg/L	1.0	1		06/18/19 19:21	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-18D	Lab ID: 7093107009	Collected: 06/11/19 14:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP		Analytical Method: EPA 6010C Preparation Method: EPA 3005A						
Aluminum	137J	ug/L	200	1	06/14/19 09:04	06/24/19 19:30	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 19:30	7440-36-0	
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7440-38-2	
Barium	136J	ug/L	200	1	06/14/19 09:04	06/24/19 19:30	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:30	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 19:30	7440-43-9	
Calcium	52400	ug/L	200	1	06/14/19 09:04	06/24/19 19:30	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:30	7440-48-4	
Copper	12.7J	ug/L	25.0	1	06/14/19 09:04	06/24/19 19:30	7440-50-8	
Iron	213	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:30	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:30	7439-92-1	
Magnesium	4670	ug/L	200	1	06/14/19 09:04	06/24/19 19:30	7439-95-4	
Manganese	3350	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 19:30	7440-02-0	
Potassium	25400	ug/L	5000	1	06/14/19 09:04	06/24/19 19:30	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7440-22-4	
Sodium	67300	ug/L	5000	1	06/14/19 09:04	06/24/19 19:30	7440-23-5	
Thallium	9.1J	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:30	7440-28-0	B
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:30	7440-62-2	
Zinc	37.9	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:30	7440-66-6	
7470 Mercury		Analytical Method: EPA 7470A Preparation Method: EPA 7470A						
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:49	7439-97-6	
8270D MSSV 14 Dioxane By SIM		Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510						
1,4-Dioxane (SIM)	0.15J	ug/L	0.25	1	06/18/19 11:20	06/21/19 21:18	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	46	%	30-125	1	06/18/19 11:20	06/21/19 21:18		
180.1 Turbidity		Analytical Method: EPA 180.1						
Turbidity	1.6	NTU	1.0	1		06/12/19 15:11		
2320B Alkalinity		Analytical Method: SM22 2320B						
Alkalinity, Total as CaCO3	136	mg/L	1.0	1		06/24/19 12:48		
2340C Hardness, Total		Analytical Method: SM22 2340C						
Tot Hardness asCaCO3 (SM 2340B)	140	mg/L	5.0	1		06/24/19 17:51		
2540C Total Dissolved Solids		Analytical Method: SM22 2540C						
Total Dissolved Solids	408	mg/L	20.0	1		06/17/19 10:52		
410.4 COD		Analytical Method: EPA 410.4 Preparation Method: EPA 410.4						
Chemical Oxygen Demand	16.8	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:42		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Sample: GM-18D	Lab ID: 7093107009	Collected: 06/11/19 14:10	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	5.8	mg/L	2.0	1	06/13/19 10:33	06/18/19 11:09		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	1.1	mg/L	0.50	1		06/27/19 22:25	24959-67-9	
Chloride	172	mg/L	10.0	5		06/27/19 22:42	16887-00-6	
Sulfate	10.3	mg/L	5.0	1		06/27/19 22:25	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	3.1	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:09	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	0.032J	mg/L	0.050	1		06/11/19 22:55	14797-55-8	
Nitrate-Nitrite (as N)	<0.050	mg/L	0.050	1		06/11/19 22:55	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 21:01	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	2.5	mg/L	0.10	1		06/25/19 14:36	7664-41-7	
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	4.0	mg/L	1.0	1		06/18/19 19:37	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Sample: GM-19D	Lab ID: 7093107010	Collected: 06/11/19 13:40	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
6010 MET ICP								
Analytical Method: EPA 6010C Preparation Method: EPA 3005A								
Aluminum	220	ug/L	200	1	06/14/19 09:04	06/24/19 19:35	7429-90-5	
Antimony	<60.0	ug/L	60.0	1	06/14/19 09:04	06/24/19 19:35	7440-36-0	
Arsenic	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7440-38-2	
Barium	76.1J	ug/L	200	1	06/14/19 09:04	06/24/19 19:35	7440-39-3	
Beryllium	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:35	7440-41-7	
Cadmium	<2.5	ug/L	2.5	1	06/14/19 09:04	06/24/19 19:35	7440-43-9	
Calcium	30100	ug/L	200	1	06/14/19 09:04	06/24/19 19:35	7440-70-2	
Chromium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7440-47-3	
Cobalt	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:35	7440-48-4	
Copper	<25.0	ug/L	25.0	1	06/14/19 09:04	06/24/19 19:35	7440-50-8	
Iron	248	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:35	7439-89-6	
Lead	<5.0	ug/L	5.0	1	06/14/19 09:04	06/24/19 19:35	7439-92-1	
Magnesium	4490	ug/L	200	1	06/14/19 09:04	06/24/19 19:35	7439-95-4	
Manganese	12.5	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7439-96-5	
Nickel	<40.0	ug/L	40.0	1	06/14/19 09:04	06/24/19 19:35	7440-02-0	
Potassium	5370	ug/L	5000	1	06/14/19 09:04	06/24/19 19:35	7440-09-7	
Selenium	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7782-49-2	
Silver	<10.0	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7440-22-4	
Sodium	32600	ug/L	5000	1	06/14/19 09:04	06/24/19 19:35	7440-23-5	
Thallium	3.9J	ug/L	10.0	1	06/14/19 09:04	06/24/19 19:35	7440-28-0	B
Vanadium	<50.0	ug/L	50.0	1	06/14/19 09:04	06/24/19 19:35	7440-62-2	
Zinc	13.0J	ug/L	20.0	1	06/14/19 09:04	06/24/19 19:35	7440-66-6	
7470 Mercury								
Analytical Method: EPA 7470A Preparation Method: EPA 7470A								
Mercury	<0.20	ug/L	0.20	1	06/21/19 10:50	06/21/19 18:51	7439-97-6	
8270D MSSV 14 Dioxane By SIM								
Analytical Method: EPA 8270D by SIM Preparation Method: EPA 3510								
1,4-Dioxane (SIM)	0.16J	ug/L	0.25	1	06/18/19 11:20	06/21/19 20:59	123-91-1	
Surrogates								
1,4-Dioxane-d8 (S)	42	%	30-125	1	06/18/19 11:20	06/21/19 20:59		
180.1 Turbidity								
Analytical Method: EPA 180.1								
Turbidity	2.0	NTU	1.0	1		06/12/19 15:11		
2320B Alkalinity								
Analytical Method: SM22 2320B								
Alkalinity, Total as CaCO3	6.2	mg/L	1.0	1		06/24/19 12:52		
2340C Hardness, Total								
Analytical Method: SM22 2340C								
Tot Hardness asCaCO3 (SM 2340B)	80.0	mg/L	5.0	1		06/24/19 17:51		
2540C Total Dissolved Solids								
Analytical Method: SM22 2540C								
Total Dissolved Solids	324	mg/L	10.0	1		06/17/19 11:03		
410.4 COD								
Analytical Method: EPA 410.4 Preparation Method: EPA 410.4								
Chemical Oxygen Demand	12.4	mg/L	10.0	1	06/19/19 09:15	06/19/19 11:42		

REPORT OF LABORATORY ANALYSIS

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ANALYTICAL RESULTS

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

Sample: GM-19D	Lab ID: 7093107010	Collected: 06/11/19 13:40	Received: 06/11/19 15:56	Matrix: Water				
Parameters	Results	Units	Report Limit	DF	Prepared	Analyzed	CAS No.	Qual
5210B BOD, 5 day	Analytical Method: SM22 5210B Preparation Method: SM22 5210B							
BOD, 5 day	1.7J	mg/L	2.0	1	06/13/19 10:33	06/18/19 11:11		
300.0 IC Anions 28 Days	Analytical Method: EPA 300.0							
Bromide	1.3	mg/L	0.50	1		06/27/19 22:58	24959-67-9	
Chloride	107	mg/L	10.0	5		06/27/19 23:15	16887-00-6	
Sulfate	26.9	mg/L	5.0	1		06/27/19 22:58	14808-79-8	
351.2 Total Kjeldahl Nitrogen	Analytical Method: EPA 351.2 Preparation Method: EPA 351.2							
Nitrogen, Kjeldahl, Total	0.91	mg/L	0.10	1	06/25/19 13:02	06/26/19 08:10	7727-37-9	
353.2 Nitrogen, NO2/NO3 unpres	Analytical Method: EPA 353.2							
Nitrate as N	3.2	mg/L	0.50	10		06/11/19 22:56	14797-55-8	
Nitrate-Nitrite (as N)	3.2	mg/L	0.50	10		06/11/19 22:56	7727-37-9	
353.2 Nitrogen, NO2	Analytical Method: EPA 353.2							
Nitrite as N	<0.050	mg/L	0.050	1		06/11/19 21:02	14797-65-0	
4500 Ammonia Water	Analytical Method: SM22 4500 NH3 H							
Nitrogen, Ammonia	0.065J	mg/L	0.10	1		06/25/19 14:37	7664-41-7	B
5310B TOC as NPOC	Analytical Method: SM22 5310B							
Total Organic Carbon	2.6	mg/L	1.0	1		06/18/19 19:52	7440-44-0	

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 118862

Analysis Method: EPA 7470A

QC Batch Method: EPA 7470A

Analysis Description: 7470 Mercury

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 564845

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Mercury	ug/L	<0.20	0.20	06/21/19 18:28	

LABORATORY CONTROL SAMPLE: 564846

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	1	1.0	101	80-120	

MATRIX SPIKE SAMPLE: 564847

Parameter	Units	7093441002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Mercury	ug/L	<0.20	1	0.81	78	75-125	

SAMPLE DUPLICATE: 564848

Parameter	Units	7093441002 Result	Dup Result	RPD	Qualifiers
Mercury	ug/L	<0.20	<0.20		

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REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

QC Batch: 117823 Analysis Method: EPA 6010C
QC Batch Method: EPA 3005A Analysis Description: 6010 MET Water
Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 558052 Matrix: Water
Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Aluminum	ug/L	<200	200	06/24/19 18:25	
Antimony	ug/L	<60.0	60.0	06/24/19 18:25	
Arsenic	ug/L	<10.0	10.0	06/24/19 18:25	
Barium	ug/L	<200	200	06/24/19 18:25	
Beryllium	ug/L	<5.0	5.0	06/24/19 18:25	
Cadmium	ug/L	<2.5	2.5	06/24/19 18:25	
Calcium	ug/L	<200	200	06/24/19 18:25	
Chromium	ug/L	<10.0	10.0	06/24/19 18:25	
Cobalt	ug/L	<50.0	50.0	06/24/19 18:25	
Copper	ug/L	<25.0	25.0	06/24/19 18:25	
Iron	ug/L	<20.0	20.0	06/24/19 18:25	
Lead	ug/L	<5.0	5.0	06/24/19 18:25	
Magnesium	ug/L	<200	200	06/24/19 18:25	
Manganese	ug/L	<10.0	10.0	06/24/19 18:25	
Nickel	ug/L	<40.0	40.0	06/24/19 18:25	
Potassium	ug/L	<5000	5000	06/24/19 18:25	
Selenium	ug/L	<10.0	10.0	06/24/19 18:25	
Silver	ug/L	<10.0	10.0	06/24/19 18:25	
Sodium	ug/L	<5000	5000	06/24/19 18:25	
Thallium	ug/L	5.3J	10.0	06/24/19 18:25	
Vanadium	ug/L	<50.0	50.0	06/24/19 18:25	
Zinc	ug/L	<20.0	20.0	06/24/19 18:25	

LABORATORY CONTROL SAMPLE: 558053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	5000	5030	101	80-120	
Antimony	ug/L	750	780	104	80-120	
Arsenic	ug/L	500	508	102	80-120	
Barium	ug/L	500	519	104	80-120	
Beryllium	ug/L	50	53.0	106	80-120	
Cadmium	ug/L	50	52.2	104	80-120	
Calcium	ug/L	25000	26400	106	80-120	
Chromium	ug/L	250	261	105	80-120	
Cobalt	ug/L	500	526	105	80-120	
Copper	ug/L	250	264	106	80-120	
Iron	ug/L	2000	2090	104	80-120	
Lead	ug/L	500	523	105	80-120	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

LABORATORY CONTROL SAMPLE: 558053

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Magnesium	ug/L	25000	26100	104	80-120	
Manganese	ug/L	250	260	104	80-120	
Nickel	ug/L	250	264	106	80-120	
Potassium	ug/L	50000	50700	101	80-120	
Selenium	ug/L	750	765	102	80-120	
Silver	ug/L	250	252	101	80-120	
Sodium	ug/L	50000	51500	103	80-120	
Thallium	ug/L	750	776	103	80-120	
Vanadium	ug/L	500	516	103	80-120	
Zinc	ug/L	1000	1040	104	80-120	

MATRIX SPIKE SAMPLE: 558055

Parameter	Units	7093379002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Aluminum	ug/L	<200	5000	4910	98	75-125	
Antimony	ug/L	<60.0	750	760	101	75-125	
Arsenic	ug/L	<10.0	500	499	100	75-125	
Barium	ug/L	<200	500	526	100	75-125	
Beryllium	ug/L	<5.0	50	51.8	104	75-125	
Cadmium	ug/L	<2.5	50	50.6	101	75-125	
Calcium	ug/L	77200	25000	102000	99	75-125	
Chromium	ug/L	16.1	250	265	99	75-125	
Cobalt	ug/L	<50.0	500	497	99	75-125	
Copper	ug/L	<25.0	250	252	99	75-125	
Iron	ug/L	299	2000	2320	101	75-125	
Lead	ug/L	<5.0	500	515	102	75-125	
Magnesium	ug/L	17100	25000	42400	101	75-125	
Manganese	ug/L	28.5	250	261	93	75-125	
Nickel	ug/L	46.9	250	294	99	75-125	
Potassium	ug/L	<5000	50000	51600	94	75-125	
Selenium	ug/L	<10.0	750	760	101	75-125	
Silver	ug/L	<10.0	250	242	97	75-125	
Sodium	ug/L	6640	50000	55400	98	75-125	
Thallium	ug/L	<10.0	750	762	102	75-125	
Vanadium	ug/L	<50.0	500	496	99	75-125	
Zinc	ug/L	<20.0	1000	1010	100	75-125	

SAMPLE DUPLICATE: 558054

Parameter	Units	7093379002 Result	Dup Result	RPD	Qualifiers
Aluminum	ug/L	<200	<200		
Antimony	ug/L	<60.0	<60.0		
Arsenic	ug/L	<10.0	<10.0		
Barium	ug/L	<200	25.3J		

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

SAMPLE DUPLICATE: 558054

Parameter	Units	7093379002 Result	Dup Result	RPD	Qualifiers
Beryllium	ug/L	<5.0	<5.0		
Cadmium	ug/L	<2.5	<2.5		
Calcium	ug/L	77200	81700	6	
Chromium	ug/L	16.1	17.7	9	
Cobalt	ug/L	<50.0	<50.0		
Copper	ug/L	<25.0	<25.0		
Iron	ug/L	299	351	16	
Lead	ug/L	<5.0	2.7J		
Magnesium	ug/L	17100	18200	6	
Manganese	ug/L	28.5	8.0J		
Nickel	ug/L	46.9	49.4	5	
Potassium	ug/L	<5000	4840J		
Selenium	ug/L	<10.0	<10.0		
Silver	ug/L	<10.0	<10.0		
Sodium	ug/L	6640	6860	3	
Thallium	ug/L	<10.0	<10.0		
Vanadium	ug/L	<50.0	<50.0		
Zinc	ug/L	<20.0	<20.0		

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 117421

Analysis Method: EPA 180.1

QC Batch Method: EPA 180.1

Analysis Description: 180.1 Turbidity

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 556069

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Turbidity	NTU	<1.0	1.0	06/12/19 15:09	

LABORATORY CONTROL SAMPLE: 556070

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Turbidity	NTU	10	10.1	101	90-110	

SAMPLE DUPLICATE: 556071

Parameter	Units	7093035001 Result	Dup Result	RPD	Qualifiers
Turbidity	NTU	<1.0	<1.0		

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 118942

Analysis Method: SM22 2320B

QC Batch Method: SM22 2320B

Analysis Description: 2320B Alkalinity

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006

METHOD BLANK: 565421

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO3	mg/L	<1.0	1.0	06/21/19 23:40	

LABORATORY CONTROL SAMPLE: 565422

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	25	26.2	105	85-115	

MATRIX SPIKE SAMPLE: 565424

Parameter	Units	7092454017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO3	mg/L	16.5	25	44.9	114	75-125	

SAMPLE DUPLICATE: 565423

Parameter	Units	7092454017 Result	Dup Result	RPD	Qualifiers
Alkalinity, Total as CaCO3	mg/L	16.5	16.6	1	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 119110 Analysis Method: SM22 2320B
 QC Batch Method: SM22 2320B Analysis Description: 2320B Alkalinity
 Associated Lab Samples: 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 566023 Matrix: Water
 Associated Lab Samples: 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	<1.0	1.0	06/24/19 11:56	

LABORATORY CONTROL SAMPLE: 566024

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	25	26.1	104	85-115	

MATRIX SPIKE SAMPLE: 566025

Parameter	Units	7093107007 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	44.6	25	71.3	107	75-125	

SAMPLE DUPLICATE: 566026

Parameter	Units	7093107007 Result	Dup Result	RPD	Qualifiers
Alkalinity, Total as CaCO ₃	mg/L	44.6	45.7	2	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL
Pace Project No.: 7093107

QC Batch: 119111 Analysis Method: SM22 2340C
QC Batch Method: SM22 2340C Analysis Description: 2340C Hardness, Total
Associated Lab Samples: 7093107001, 7093107002, 7093107005, 7093107006, 7093107008, 7093107009, 7093107010

METHOD BLANK: 566027 Matrix: Water
Associated Lab Samples: 7093107001, 7093107002, 7093107005, 7093107006, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	<5.0	5.0	06/24/19 13:46	

LABORATORY CONTROL SAMPLE: 566028

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	100	99.0	99	90-110	

MATRIX SPIKE SAMPLE: 566415

Parameter	Units	7093107008 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	40.0	667	700	99	75-125	

SAMPLE DUPLICATE: 566416

Parameter	Units	7093107008 Result	Dup Result	RPD	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	40.0	33.3	18	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 119500

Analysis Method: SM22 2340C

QC Batch Method: SM22 2340C

Analysis Description: 2340C Hardness, Total

Associated Lab Samples: 7093107003, 7093107004, 7093107007

METHOD BLANK: 567889

Matrix: Water

Associated Lab Samples: 7093107003, 7093107004, 7093107007

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	<5.0	5.0	06/26/19 12:05	

LABORATORY CONTROL SAMPLE: 567890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	100	99.0	99	90-110	

MATRIX SPIKE SAMPLE: 567891

Parameter	Units	7093107003 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	80.0	2000	2060	99	75-125	

SAMPLE DUPLICATE: 567892

Parameter	Units	7093107003 Result	Dup Result	RPD	Qualifiers
Tot Hardness asCaCO3 (SM 2340B)	mg/L	80.0	80.0	0	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 118003 Analysis Method: SM22 2540C
 QC Batch Method: SM22 2540C Analysis Description: 2540C Total Dissolved Solids
 Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008

METHOD BLANK: 559701 Matrix: Water
 Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<10.0	10.0	06/17/19 09:42	

LABORATORY CONTROL SAMPLE: 559702

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	568	114	85-115	

MATRIX SPIKE SAMPLE: 559704

Parameter	Units	7092927006 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	596	600	1130	89	75-125	

MATRIX SPIKE SAMPLE: 559706

Parameter	Units	7092454017 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	211	300	490	93	75-125	

SAMPLE DUPLICATE: 559703

Parameter	Units	7092927006 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	596	602	1	

SAMPLE DUPLICATE: 559705

Parameter	Units	7092454017 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	211	223	6	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 118004

Analysis Method: SM22 2540C

QC Batch Method: SM22 2540C

Analysis Description: 2540C Total Dissolved Solids

Associated Lab Samples: 7093107009, 7093107010

METHOD BLANK: 559707

Matrix: Water

Associated Lab Samples: 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Dissolved Solids	mg/L	<10.0	10.0	06/17/19 10:51	

LABORATORY CONTROL SAMPLE: 559708

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	500	540	108	85-115	

MATRIX SPIKE SAMPLE: 559710

Parameter	Units	7093107009 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	408	600	980	95	75-125	

MATRIX SPIKE SAMPLE: 559712

Parameter	Units	7093263004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Dissolved Solids	mg/L	162	300	454	97	75-125	

SAMPLE DUPLICATE: 559709

Parameter	Units	7093107009 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	408	480	16	D6

SAMPLE DUPLICATE: 559711

Parameter	Units	7093263004 Result	Dup Result	RPD	Qualifiers
Total Dissolved Solids	mg/L	162	175	8	D6

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL
 Pace Project No.: 7093107

QC Batch: 118376 Analysis Method: EPA 410.4
 QC Batch Method: EPA 410.4 Analysis Description: 410.4 COD
 Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 562201 Matrix: Water
 Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	10.0	06/19/19 11:37	

LABORATORY CONTROL SAMPLE: 562202

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	500	531	106	90-110	

MATRIX SPIKE SAMPLE: 562203

Parameter	Units	7093107001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	1000	1010	100	90-110	

MATRIX SPIKE SAMPLE: 562205

Parameter	Units	7093260004 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	1000	1050	105	90-110	

SAMPLE DUPLICATE: 562204

Parameter	Units	7093107001 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	<10.0		

SAMPLE DUPLICATE: 562206

Parameter	Units	7093260004 Result	Dup Result	RPD	Qualifiers
Chemical Oxygen Demand	mg/L	<10.0	<10.0		

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 117575

Analysis Method: SM22 5210B

QC Batch Method: SM22 5210B

Analysis Description: 5210B BOD, 5 day

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 556869

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
BOD, 5 day	mg/L	<2.0	2.0	06/18/19 10:34	

LABORATORY CONTROL SAMPLE: 556870

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
BOD, 5 day	mg/L	198	176	89	84.5-115.4	

SAMPLE DUPLICATE: 556871

Parameter	Units	7093221001 Result	Dup Result	RPD	Qualifiers
BOD, 5 day	mg/L	202	188	7	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 119378

Analysis Method: EPA 300.0

QC Batch Method: EPA 300.0

Analysis Description: 300.0 IC Anions

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 567505

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Bromide	mg/L	<0.50	0.50	06/26/19 23:22	
Chloride	mg/L	<2.0	2.0	06/26/19 23:22	
Sulfate	mg/L	<5.0	5.0	06/26/19 23:22	

LABORATORY CONTROL SAMPLE: 567506

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Bromide	mg/L	1	1.1	108	90-110	
Chloride	mg/L	10	10.2	102	90-110	
Sulfate	mg/L	10	10.3	103	90-110	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 119268

Analysis Method: EPA 351.2

QC Batch Method: EPA 351.2

Analysis Description: 351.2 TKN

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 566775

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	<0.10	0.10	06/26/19 07:51	

LABORATORY CONTROL SAMPLE: 566776

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4	4.0	99	90-110	

MATRIX SPIKE SAMPLE: 566777

Parameter	Units	7092926001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	97.9	20	94.6	-16	90-110	M6

MATRIX SPIKE SAMPLE: 566779

Parameter	Units	7093723002 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4.7	4	9.1	110	90-110	

SAMPLE DUPLICATE: 566778

Parameter	Units	7092926001 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	97.9	91.2	7	

SAMPLE DUPLICATE: 566780

Parameter	Units	7093723002 Result	Dup Result	RPD	Qualifiers
Nitrogen, Kjeldahl, Total	mg/L	4.7	3.8	22	D6

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 117323

Analysis Method: EPA 353.2

QC Batch Method: EPA 353.2

Analysis Description: 353.2 Nitrite, Unpres.

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 555560

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrite as N	mg/L	<0.050	0.050	06/11/19 20:34	

LABORATORY CONTROL SAMPLE: 555561

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	1	1.0	104	90-110	

MATRIX SPIKE SAMPLE: 555562

Parameter	Units	7093101001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.55	110	90-110	

MATRIX SPIKE SAMPLE: 555564

Parameter	Units	7093107001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrite as N	mg/L	<0.050	0.5	0.56	112	90-110	

SAMPLE DUPLICATE: 555563

Parameter	Units	7093101001 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

SAMPLE DUPLICATE: 555565

Parameter	Units	7093107001 Result	Dup Result	RPD	Qualifiers
Nitrite as N	mg/L	<0.050	<0.050		

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch:	117328	Analysis Method:	EPA 353.2
QC Batch Method:	EPA 353.2	Analysis Description:	353.2 Nitrate, Unpres.
Associated Lab Samples:	7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010		

METHOD BLANK:	555671	Matrix:	Water
Associated Lab Samples:	7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010		

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrate-Nitrite (as N)	mg/L	<0.050	0.050	06/11/19 22:25	

LABORATORY CONTROL SAMPLE: 555672						
Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	1	1.0	102	90-110	

MATRIX SPIKE SAMPLE: 555673							
Parameter	Units	7093035001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	4.0	5	8.5	91	90-110	

MATRIX SPIKE SAMPLE: 555675							
Parameter	Units	7093139001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.69	0.5	1.1	86	90-110	M1

SAMPLE DUPLICATE: 555674					
Parameter	Units	7093035001 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	4.0	4.0	1	

SAMPLE DUPLICATE: 555676					
Parameter	Units	7093139001 Result	Dup Result	RPD	Qualifiers
Nitrate-Nitrite (as N)	mg/L	0.69	0.69	1	

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 119281

Analysis Method: SM22 4500 NH3 H

QC Batch Method: SM22 4500 NH3 H

Analysis Description: 4500 Ammonia

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 566889

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Nitrogen, Ammonia	mg/L	0.036J	0.10	06/25/19 14:09	

LABORATORY CONTROL SAMPLE: 566890

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	1	1.0	101	90-110	

MATRIX SPIKE SAMPLE: 566891

Parameter	Units	7093468001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Nitrogen, Ammonia	mg/L	22.4	10	29.0	67	75-125	M6

SAMPLE DUPLICATE: 566892

Parameter	Units	7093468001 Result	Dup Result	RPD	Qualifiers
Nitrogen, Ammonia	mg/L	22.4	17.7	23	D6

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QUALITY CONTROL DATA

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

QC Batch: 118154

Analysis Method: SM22 5310B

QC Batch Method: SM22 5310B

Analysis Description: 5310B TOC

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

METHOD BLANK: 560764

Matrix: Water

Associated Lab Samples: 7093107001, 7093107002, 7093107003, 7093107004, 7093107005, 7093107006, 7093107007, 7093107008, 7093107009, 7093107010

Parameter	Units	Blank Result	Reporting Limit	Analyzed	Qualifiers
Total Organic Carbon	mg/L	<1.0	1.0	06/18/19 15:35	

LABORATORY CONTROL SAMPLE: 560765

Parameter	Units	Spike Conc.	LCS Result	LCS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	10	9.2	92	85-115	

MATRIX SPIKE SAMPLE: 560767

Parameter	Units	7093107001 Result	Spike Conc.	MS Result	MS % Rec	% Rec Limits	Qualifiers
Total Organic Carbon	mg/L	0.98J	10	11.1	101	75-125	

SAMPLE DUPLICATE: 560766

Parameter	Units	7093107001 Result	Dup Result	RPD	Qualifiers
Total Organic Carbon	mg/L	0.98J	0.86J		

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: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

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.

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

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

TNI - The NELAC Institute.

LABORATORIES

PACE-MV Pace Analytical Services - Melville

PASI-M Pace Analytical Services - Minneapolis

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.

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

R1 RPD value was outside control limits.

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7093107001	GM-2D	EPA 3005A	117823	EPA 6010C	117836
7093107002	GM-4D	EPA 3005A	117823	EPA 6010C	117836
7093107003	GM-5D	EPA 3005A	117823	EPA 6010C	117836
7093107004	GM-6D	EPA 3005A	117823	EPA 6010C	117836
7093107005	GM-7D	EPA 3005A	117823	EPA 6010C	117836
7093107006	GM-15D	EPA 3005A	117823	EPA 6010C	117836
7093107007	GM-16D	EPA 3005A	117823	EPA 6010C	117836
7093107008	GM-17D	EPA 3005A	117823	EPA 6010C	117836
7093107009	GM-18D	EPA 3005A	117823	EPA 6010C	117836
7093107010	GM-19D	EPA 3005A	117823	EPA 6010C	117836
7093107001	GM-2D	EPA 7470A	118862	EPA 7470A	118885
7093107002	GM-4D	EPA 7470A	118862	EPA 7470A	118885
7093107003	GM-5D	EPA 7470A	118862	EPA 7470A	118885
7093107004	GM-6D	EPA 7470A	118862	EPA 7470A	118885
7093107005	GM-7D	EPA 7470A	118862	EPA 7470A	118885
7093107006	GM-15D	EPA 7470A	118862	EPA 7470A	118885
7093107007	GM-16D	EPA 7470A	118862	EPA 7470A	118885
7093107008	GM-17D	EPA 7470A	118862	EPA 7470A	118885
7093107009	GM-18D	EPA 7470A	118862	EPA 7470A	118885
7093107010	GM-19D	EPA 7470A	118862	EPA 7470A	118885
7093107001	GM-2D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107002	GM-4D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107003	GM-5D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107004	GM-6D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107005	GM-7D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107006	GM-15D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107007	GM-16D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107008	GM-17D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107009	GM-18D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107010	GM-19D	EPA 3510	613702	EPA 8270D by SIM	614675
7093107001	GM-2D	EPA 180.1	117421		
7093107002	GM-4D	EPA 180.1	117421		
7093107003	GM-5D	EPA 180.1	117421		
7093107004	GM-6D	EPA 180.1	117421		
7093107005	GM-7D	EPA 180.1	117421		
7093107006	GM-15D	EPA 180.1	117421		
7093107007	GM-16D	EPA 180.1	117421		
7093107008	GM-17D	EPA 180.1	117421		
7093107009	GM-18D	EPA 180.1	117421		
7093107010	GM-19D	EPA 180.1	117421		
7093107001	GM-2D	SM22 2320B	118942		
7093107002	GM-4D	SM22 2320B	118942		
7093107003	GM-5D	SM22 2320B	118942		
7093107004	GM-6D	SM22 2320B	118942		
7093107005	GM-7D	SM22 2320B	118942		
7093107006	GM-15D	SM22 2320B	118942		

REPORT OF LABORATORY ANALYSIS

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7093107007	GM-16D	SM22 2320B	119110		
7093107008	GM-17D	SM22 2320B	119110		
7093107009	GM-18D	SM22 2320B	119110		
7093107010	GM-19D	SM22 2320B	119110		
7093107001	GM-2D	SM22 2340C	119111		
7093107002	GM-4D	SM22 2340C	119111		
7093107003	GM-5D	SM22 2340C	119500		
7093107004	GM-6D	SM22 2340C	119500		
7093107005	GM-7D	SM22 2340C	119111		
7093107006	GM-15D	SM22 2340C	119111		
7093107007	GM-16D	SM22 2340C	119500		
7093107008	GM-17D	SM22 2340C	119111		
7093107009	GM-18D	SM22 2340C	119111		
7093107010	GM-19D	SM22 2340C	119111		
7093107001	GM-2D	SM22 2540C	118003		
7093107002	GM-4D	SM22 2540C	118003		
7093107003	GM-5D	SM22 2540C	118003		
7093107004	GM-6D	SM22 2540C	118003		
7093107005	GM-7D	SM22 2540C	118003		
7093107006	GM-15D	SM22 2540C	118003		
7093107007	GM-16D	SM22 2540C	118003		
7093107008	GM-17D	SM22 2540C	118003		
7093107009	GM-18D	SM22 2540C	118004		
7093107010	GM-19D	SM22 2540C	118004		
7093107001	GM-2D	EPA 410.4	118376	EPA 410.4	118422
7093107002	GM-4D	EPA 410.4	118376	EPA 410.4	118422
7093107003	GM-5D	EPA 410.4	118376	EPA 410.4	118422
7093107004	GM-6D	EPA 410.4	118376	EPA 410.4	118422
7093107005	GM-7D	EPA 410.4	118376	EPA 410.4	118422
7093107006	GM-15D	EPA 410.4	118376	EPA 410.4	118422
7093107007	GM-16D	EPA 410.4	118376	EPA 410.4	118422
7093107008	GM-17D	EPA 410.4	118376	EPA 410.4	118422
7093107009	GM-18D	EPA 410.4	118376	EPA 410.4	118422
7093107010	GM-19D	EPA 410.4	118376	EPA 410.4	118422
7093107001	GM-2D	SM22 5210B	117575	SM22 5210B	118399
7093107002	GM-4D	SM22 5210B	117575	SM22 5210B	118399
7093107003	GM-5D	SM22 5210B	117575	SM22 5210B	118399
7093107004	GM-6D	SM22 5210B	117575	SM22 5210B	118399
7093107005	GM-7D	SM22 5210B	117575	SM22 5210B	118399
7093107006	GM-15D	SM22 5210B	117575	SM22 5210B	118399
7093107007	GM-16D	SM22 5210B	117575	SM22 5210B	118399
7093107008	GM-17D	SM22 5210B	117575	SM22 5210B	118399
7093107009	GM-18D	SM22 5210B	117575	SM22 5210B	118399
7093107010	GM-19D	SM22 5210B	117575	SM22 5210B	118399

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7093107001	GM-2D	EPA 300.0	119378		
7093107002	GM-4D	EPA 300.0	119378		
7093107003	GM-5D	EPA 300.0	119378		
7093107004	GM-6D	EPA 300.0	119378		
7093107005	GM-7D	EPA 300.0	119378		
7093107006	GM-15D	EPA 300.0	119378		
7093107007	GM-16D	EPA 300.0	119378		
7093107008	GM-17D	EPA 300.0	119378		
7093107009	GM-18D	EPA 300.0	119378		
7093107010	GM-19D	EPA 300.0	119378		
7093107001	GM-2D	EPA 351.2	119268	EPA 351.2	119309
7093107002	GM-4D	EPA 351.2	119268	EPA 351.2	119309
7093107003	GM-5D	EPA 351.2	119268	EPA 351.2	119309
7093107004	GM-6D	EPA 351.2	119268	EPA 351.2	119309
7093107005	GM-7D	EPA 351.2	119268	EPA 351.2	119309
7093107006	GM-15D	EPA 351.2	119268	EPA 351.2	119309
7093107007	GM-16D	EPA 351.2	119268	EPA 351.2	119309
7093107008	GM-17D	EPA 351.2	119268	EPA 351.2	119309
7093107009	GM-18D	EPA 351.2	119268	EPA 351.2	119309
7093107010	GM-19D	EPA 351.2	119268	EPA 351.2	119309
7093107001	GM-2D	EPA 353.2	117328		
7093107002	GM-4D	EPA 353.2	117328		
7093107003	GM-5D	EPA 353.2	117328		
7093107004	GM-6D	EPA 353.2	117328		
7093107005	GM-7D	EPA 353.2	117328		
7093107006	GM-15D	EPA 353.2	117328		
7093107007	GM-16D	EPA 353.2	117328		
7093107008	GM-17D	EPA 353.2	117328		
7093107009	GM-18D	EPA 353.2	117328		
7093107010	GM-19D	EPA 353.2	117328		
7093107001	GM-2D	EPA 353.2	117323		
7093107002	GM-4D	EPA 353.2	117323		
7093107003	GM-5D	EPA 353.2	117323		
7093107004	GM-6D	EPA 353.2	117323		
7093107005	GM-7D	EPA 353.2	117323		
7093107006	GM-15D	EPA 353.2	117323		
7093107007	GM-16D	EPA 353.2	117323		
7093107008	GM-17D	EPA 353.2	117323		
7093107009	GM-18D	EPA 353.2	117323		
7093107010	GM-19D	EPA 353.2	117323		
7093107001	GM-2D	SM22 4500 NH3 H	119281		
7093107002	GM-4D	SM22 4500 NH3 H	119281		
7093107003	GM-5D	SM22 4500 NH3 H	119281		
7093107004	GM-6D	SM22 4500 NH3 H	119281		
7093107005	GM-7D	SM22 4500 NH3 H	119281		
7093107006	GM-15D	SM22 4500 NH3 H	119281		
7093107007	GM-16D	SM22 4500 NH3 H	119281		

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QUALITY CONTROL DATA CROSS REFERENCE TABLE

Project: GMP WELL ROUTINE 360+TAL METAL

Pace Project No.: 7093107

Lab ID	Sample ID	QC Batch Method	QC Batch	Analytical Method	Analytical Batch
7093107008	GM-17D	SM22 4500 NH3 H	119281		
7093107009	GM-18D	SM22 4500 NH3 H	119281		
7093107010	GM-19D	SM22 4500 NH3 H	119281		
7093107001	GM-2D	SM22 5310B	118154		
7093107002	GM-4D	SM22 5310B	118154		
7093107003	GM-5D	SM22 5310B	118154		
7093107004	GM-6D	SM22 5310B	118154		
7093107005	GM-7D	SM22 5310B	118154		
7093107006	GM-15D	SM22 5310B	118154		
7093107007	GM-16D	SM22 5310B	118154		
7093107008	GM-17D	SM22 5310B	118154		
7093107009	GM-18D	SM22 5310B	118154		
7093107010	GM-19D	SM22 5310B	118154		

REPORT OF LABORATORY ANALYSIS

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Sample Condition Upon Receipt

WO#: 7093107
PM: JSA Due Date: 06/25/19
CLIENT: BAB-ECO

Client Name: Babylon

Courier: Fed Ex UPS USPS Client Commercial Pace Other

Tracking #: _____
 Custody Seal on Cooler/Box Present: Yes No Seals intact: Yes No

Packing Material: Bubble Wrap Bubble Bags Ziploc None Other

Thermometer Used: TH091 Correction Factor: +0.2

Cooler Temperature (°C): 2.6 Cooler Temperature Corrected (°C): 2.8

Temperature Blank Present: Yes No

Type of Ice: Wet Blue None

Samples on ice, cooling process has begun

Date/Time 5035A kits placed in freezer _____

Temp should be above freezing to 6.0°C

USDA Regulated Soil (N/A, water sample)

Date and Initials of person examining contents: 6/11/19 JSP

Did samples originate in a quarantine zone within the United States: AL, AR, CA, FL, GA, ID, LA, MS, NC, NM, NY, OK, OR, SC, TN, TX, or VA (check map)? YES NO

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

If Yes to either question, fill out a Regulated Soil Checklist (F-LI-C-010) and include with SCUR/COC paperwork.

			COMMENTS:
Chain of Custody Present:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		1.
Chain of Custody Filled Out:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		2.
Chain of Custody Relinquished:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		3.
Sampler Name & Signature on COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		4.
Samples Arrived within Hold Time:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		5.
Short Hold Time Analysis (<72hr):	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		6.
Rush Turn Around Time Requested:	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		7.
Sufficient Volume: (Triple volume provided for MS/MSD)	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		8.
Correct Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		9.
-Pace Containers Used:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Containers Intact:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		10.
Filtered volume received for Dissolved tests	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		11. Note if sediment is visible in the dissolved container.
Sample Labels match COC:	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		12.
-Includes date/time/ID/Analysis Matrix SL <input checked="" type="radio"/> WT <input type="radio"/> OIL			
All containers needing preservation have been checked	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		13. <input type="checkbox"/> HNO ₃ <input type="checkbox"/> H ₂ SO ₄ <input type="checkbox"/> NaOH <input type="checkbox"/> HCl
pH paper Lot # <u>HC603463</u>			Sample #
All containers needing preservation are found to be in compliance with EPA recommendation? (HNO ₃ , H ₂ SO ₄ , HCl, NaOH>9 Sulfide, NAOH>12 Cyanide) Exceptions: VOA, Coliform, TOC/DOC, Oil and Grease, DRO/8015 (water). Per Method, VOA pH is checked after analysis	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> N/A		Initial when completed: _____ Lot # of added preservative: _____ Date/Time preservative added: _____
Samples checked for dechlorination:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		14. Positive for Res. Chlorine? Y N
KI starch test strips Lot #			
Residual chlorine strips Lot #			
Headspace in VOA Vials (>6mm):	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		15.
Trip Blank Present:	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		16.
Trip Blank Custody Seals Present	<input type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A		
Pace Trip Blank Lot # (if applicable): _____			

Client Notification/ Resolution: _____ Field Data Required? Y / N

Person Contacted: _____ Date/Time: _____

Comments/ Resolution: _____

* PM (Project Manager) review is documented electronically in LIMS.

ANALYTICAL REPORT

Job Number: 420-155308-1

SDG Number: 7093107

Job Description: Pace Analytical Sevices, Inc.-Mellville

For:

Pace Analytical Mellville
575 Broadhollow Road
Melville, NY 11747

Attention: James Murphy

Laura Marciano

Laura L Marciano
Customer Service Manager
lmarciano@envirotestlaboratories.com
06/25/2019

cc: Ms. Jen Aracri
Betty Harrison
Accounts Payable
Sophia Sparkes

NYSDOH ELAP does not certify for all parameters. EnviroTest Laboratories does hold certification for all analytes where certification is offered by ELAP unless otherwise specified in the Certification Information section of this report. Pursuant to NELAP, this report may not be reproduced, except in full, without written approval of the laboratory. EnviroTest Laboratories Inc. certifies that the analytical results contained herein apply only to the samples tested as received by our laboratory. All questions regarding this report should be directed to the EnviroTest Customer Service Representative.

EnviroTest Laboratories, Inc. Certifications and Approvals: NYSDOH 10142, NJDEP NY015, CTDOH PH-0554

EXECUTIVE SUMMARY - Detections

Client: Pace Analytical Melville

Job Number: 420-155308-1

Sdg Number: 7093107

Lab Sample ID Analyte	Client Sample ID	Result / Qualifier	Reporting Limit	Units	Method
420-155308-5 Phenolics, Total Recoverable	GM-7D	0.016	0.010	mg/L	420.4 Rev. 1.0
420-155308-7 Phenolics, Total Recoverable	GM-16D	0.012	0.010	mg/L	420.4 Rev. 1.0
420-155308-9 Phenolics, Total Recoverable	GM-18D	0.013	0.010	mg/L	420.4 Rev. 1.0

METHOD SUMMARY

Client: Pace Analytical Mellville

Job Number: 420-155308-1

SDG Number: 7093107

Description	Lab Location	Method	Preparation Method
Matrix: Water			
Phenols Semi-Automated	EnvTest	EPA 420.4 Rev. 1.0	
Distillation/Phenolics	EnvTest		Distill/Phenol

Lab References:

EnvTest = EnviroTest

Method References:

EPA = US Environmental Protection Agency

METHOD / ANALYST SUMMARY

Client: Pace Analytical Melville

Job Number: 420-155308-1

SDG Number: 7093107

Method	Analyst	Analyst ID
EPA 420.4 Rev. 1.0	Mastrobuono, Danielle	DM

SAMPLE SUMMARY

Client: Pace Analytical Mellville

Job Number: 420-155308-1

SDG Number: 7093107

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
420-155308-1	GM-2D	Water	06/11/2019 1310	06/14/2019 1015
420-155308-2	GM-4D	Water	06/11/2019 1045	06/14/2019 1015
420-155308-3	GM-5D	Water	06/11/2019 1120	06/14/2019 1015
420-155308-4	GM-6D	Water	06/11/2019 1200	06/14/2019 1015
420-155308-5	GM-7D	Water	06/11/2019 1235	06/14/2019 1015
420-155308-6	GM-15D	Water	06/11/2019 1510	06/14/2019 1015
420-155308-7	GM-16D	Water	06/11/2019 1450	06/14/2019 1015
420-155308-8	GM-17D	Water	06/11/2019 1435	06/14/2019 1015
420-155308-9	GM-18D	Water	06/11/2019 1410	06/14/2019 1015
420-155308-10	GM-19D	Water	06/11/2019 1340	06/14/2019 1015

SAMPLE RESULTS

Analytical Data

Client: Pace Analytical Melville

Job Number: 420-155308-1

Sdg Number: 7093107

General Chemistry

Client Sample ID: GM-2D

Lab Sample ID: 420-155308-1

Client Matrix: Water

Date Sampled: 06/11/2019 1310

Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1602			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-4D

Lab Sample ID: 420-155308-2

Client Matrix: Water

Date Sampled: 06/11/2019 1045

Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1603			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-5D

Lab Sample ID: 420-155308-3

Client Matrix: Water

Date Sampled: 06/11/2019 1120

Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1603			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-6D

Lab Sample ID: 420-155308-4

Client Matrix: Water

Date Sampled: 06/11/2019 1200

Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1604			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-7D

Lab Sample ID: 420-155308-5

Client Matrix: Water

Date Sampled: 06/11/2019 1235

Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.016		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1615			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Analytical Data

Client: Pace Analytical Mellville

Job Number: 420-155308-1

Sdg Number: 7093107

General Chemistry

Client Sample ID: GM-15D

Lab Sample ID: 420-155308-6
Client Matrix: Water

Date Sampled: 06/11/2019 1510
Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1605			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-16D

Lab Sample ID: 420-155308-7
Client Matrix: Water

Date Sampled: 06/11/2019 1450
Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.012		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1616			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-17D

Lab Sample ID: 420-155308-8
Client Matrix: Water

Date Sampled: 06/11/2019 1435
Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1611			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-18D

Lab Sample ID: 420-155308-9
Client Matrix: Water

Date Sampled: 06/11/2019 1410
Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	0.013		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1612			
Prep Batch:		Date Prepared:	06/19/2019	0946			

Client Sample ID: GM-19D

Lab Sample ID: 420-155308-10
Client Matrix: Water

Date Sampled: 06/11/2019 1340
Date Received: 06/14/2019 1015

Analyte	Result	Qual	Units	RL	RL	Dil	Method
Phenolics, Total Recoverable	<0.010		mg/L	0.010	0.010	1.0	420.4 Rev. 1.0
Anly Batch:		Date Analyzed	06/19/2019	1612			
Prep Batch:		Date Prepared:	06/19/2019	0946			

DATA REPORTING QUALIFIERS

Lab Section	Qualifier	Description
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Certification Information

The following analytes are Not Part of the ELAP scope of accreditation:

Sulfur, Tungsten, Bicarbonate Alkalinity, 7 Day BOD 5210C, 28 Day BOD, Soluble BOD, Carbon Dioxide Carbonate Alkalinity, CBOD Soluble, Chlorine, Cyanide (WAD), Ferrous Iron, Ferric Iron, Total Nitrogen, Total Organic Nitrogen, Dissolved Oxygen, pH, Solids (Fixed), Solids (Percent), Solids (Percent Moisture), Solids (Percent Volatile), Solids (Volatile Suspended), Temperature, TKN (Soluble), COD (Soluble), Total Inorganic Carbon, 2-Aminopyridine, 3-Picoline, 1-Methyl-2-pyrrilidinone, Aziridine, Dimethyl sulfoxide, 1-Chlorohexane, 1,2,4,5-Tetramethylbenzene, 4-Ethyl toluene, p-Diethylbenzene, Iron Bacteria, Salmonella, Sulfur Reducing Bacteria, & UOD (Ultimate Oxygen Demand).

The following analytes are Not Part of ELAP Potable Water scope of accreditation:

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), Nitrate-Nitrite (10-107-4-1C, 353.2), m-Xylene & p-Xylene (502.2, 524), o-Xylene (502.2, 524), Sulfide (SM4500SD), Acenaphthene (525.2), Acenaphthylene (525.2), Fluoranthene (525.2), Fluorene (525.2), Phenanthrene (525.2), Anthracene (525.2), Pyrene (525.2), Benzo[a]anthracene (525.2), Benzo[b]fluoranthene (525.2), Benzo[g,h,i]perylene (525.2), Benzo[k]fluoranthene (525.2), Indeno[1,2,3-cd]pyrene (525.2), & Dibenz(a,h)anthracene (525.2).

The following analytes are Not Part of ELAP Solid and Hazardous Waste scope of accreditation:

Ammonia (SM 4500NH3G), TKN (351.2), Phosphorus (365.3), 1,2-Dichloro-1,1,2-trifluoroethane (8260), & Chlorodifluoromethane (8260).

The following analytes are Not Part of ELAP Non Potable Water scope of accreditation:

Dissolved Organic Carbon (5310C), Mecoprop (8151A), MCPA (8151A), Propylene Glycol (8015D).

Definitions and Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
%R	Percent Recovery
DL, RA, RE	Indicates a Dilution, Reanalysis or Reextraction.
EPA	United States Environmental Protection Agency
MDL	Method Detection Limit - an estimate of the minimum amount of a substance that an analytical process can reliably detect. A MDL is analyte- and matrix-specific and may be laboratory-dependent.
ND	Not detected at the reporting limit (or MDL if shown).
QC	Quality Control
RL	Reporting Limit - the minimum levels, concentrations, or quantities of a target variable (e.g., target analyte) that can be reported with a specified degree of confidence.
RPD	Relative Percent Difference - a measure of the relative difference between two points.

QUALITY CONTROL RESULTS

Quality Control Results

Client: Pace Analytical Melville

Job Number: 420-155308-1

Sdg Number: 7093107

QC Association Summary

Lab Sample ID	Client Sample ID	Report Basis	Client Matrix	Method	Prep Batch
General Chemistry					
Prep Batch: 420-132681					
LCS 420-132681/28-A	Lab Control Spike	T	Water	Distill/Phenol	
MB 420-132681/27-A	Method Blank	T	Water	Distill/Phenol	
420-155302-A-2-B DU	Duplicate	T	Water	Distill/Phenol	
420-155302-A-2-C MS	Matrix Spike	T	Water	Distill/Phenol	
420-155308-1	GM-2D	T	Water	Distill/Phenol	
420-155308-2	GM-4D	T	Water	Distill/Phenol	
420-155308-3	GM-5D	T	Water	Distill/Phenol	
420-155308-4	GM-6D	T	Water	Distill/Phenol	
420-155308-5	GM-7D	T	Water	Distill/Phenol	
420-155308-6	GM-15D	T	Water	Distill/Phenol	
420-155308-7	GM-16D	T	Water	Distill/Phenol	
420-155308-7DU	Duplicate	T	Water	Distill/Phenol	
420-155308-7MS	Matrix Spike	T	Water	Distill/Phenol	
420-155308-8	GM-17D	T	Water	Distill/Phenol	
420-155308-9	GM-18D	T	Water	Distill/Phenol	
420-155308-10	GM-19D	T	Water	Distill/Phenol	
Analysis Batch:420-132707					
LCS 420-132681/28-A	Lab Control Spike	T	Water	420.4 Rev. 1.0	420-132681
MB 420-132681/27-A	Method Blank	T	Water	420.4 Rev. 1.0	420-132681
420-155302-A-2-B DU	Duplicate	T	Water	420.4 Rev. 1.0	420-132681
420-155302-A-2-C MS	Matrix Spike	T	Water	420.4 Rev. 1.0	420-132681
420-155308-1	GM-2D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-2	GM-4D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-3	GM-5D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-4	GM-6D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-5	GM-7D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-6	GM-15D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-7	GM-16D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-7DU	Duplicate	T	Water	420.4 Rev. 1.0	420-132681
420-155308-7MS	Matrix Spike	T	Water	420.4 Rev. 1.0	420-132681
420-155308-8	GM-17D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-9	GM-18D	T	Water	420.4 Rev. 1.0	420-132681
420-155308-10	GM-19D	T	Water	420.4 Rev. 1.0	420-132681

Report Basis

T = Total

Surrogate Recovery Report

Lab Sample ID Client Sample ID

Surrogate Acceptance Limits

Quality Control Results

Client: Pace Analytical Melville

Job Number: 420-155308-1
Sdg Number: 7093107

Method Blank - Batch: 420-132681

Method: 420.4 Rev. 1.0
Preparation: Distill/Phenol

Lab Sample ID: MB 420-132681/27-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1601
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Result	Qual	RL	RL
Phenolics, Total Recoverable	<0.010		0.010	0.010

Lab Control Spike - Batch: 420-132681

Method: 420.4 Rev. 1.0
Preparation: Distill/Phenol

Lab Sample ID: LCS 420-132681/28-A
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1601
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Spike Amount	Result	% Rec.	Limit	Qual
Phenolics, Total Recoverable	0.0500	0.056	112	57 - 123	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Pace Analytical Mellville

Job Number: 420-155308-1
Sdg Number: 7093107

Matrix Spike - Batch: 420-132681

Method: 420.4 Rev. 1.0
Preparation: Distill/Phenol

Lab Sample ID: 420-155302-A-2-C MS
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1540
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Phenolics, Total Recoverable	0.011	0.0300	0.039	94	55 - 136	

Matrix Spike - Batch: 420-132681

Method: 420.4 Rev. 1.0
Preparation: Distill/Phenol

Lab Sample ID: 420-155308-7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1607
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Sample Result/Qual	Spike Amount	Result	% Rec.	Limit	Qual
Phenolics, Total Recoverable	0.012	0.0300	0.038	87	55 - 136	

Calculations are performed before rounding to avoid round-off errors in calculated results.

Quality Control Results

Client: Pace Analytical Mellville

Job Number: 420-155308-1
Sdg Number: 7093107

Duplicate - Batch: 420-132681

Method: 420.4 Rev. 1.0
Preparation: Distill/Phenol

Lab Sample ID: 420-155302-A-2-B DU
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1539
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Phenolics, Total Recoverable	0.011	0.011	0	15	

Duplicate - Batch: 420-132681

Method: 420.4 Rev. 1.0
Preparation: Distill/Phenol

Lab Sample ID: 420-155308-7
Client Matrix: Water
Dilution: 1.0
Date Analyzed: 06/19/2019 1606
Date Prepared: 06/19/2019 0946

Analysis Batch: 420-132707
Prep Batch: 420-132681
Units: mg/L

Instrument ID: Lachat Quikchem 8500 FIA
Lab File ID: OM_6-19-2019_03-35-07PM.C
Initial Weight/Volume: mL
Final Weight/Volume: mL

Analyte	Sample Result/Qual	Result	RPD	Limit	Qual
Phenolics, Total Recoverable	0.012	0.012	1	15	

Calculations are performed before rounding to avoid round-off errors in calculated results.

155308

Chain of Custody



Workorder: 7093107

Workorder Name: GMP WELL ROUTINE 360+TAL METAL

Results Requested By: 6/25/2019

Report / Invoice To		Subcontract To			Requested Analysis										LAB USE ONLY					
Jennifer Aracri Pace Analytical Melville 575 Broad Hollow Road Melville, NY 11747 Phone (631)694-3040 Email: jennifer.aracri@pacelabs.com		EnviroTest Laboratories, Inc. P.O. 7093107ISA 315 Fullerton Avenue Newburgh, NY 12550																		
State of Sample Origin: NY				Preserved Containers										20.1 Phenolics, Total Recoverable						
Item	Sample ID	Collect Date/Time	Lab ID	Matrix	H2SO4	Unpreserved														
1	GM-2D	6/11/2019 13:10	7093107001	Water																X
2	GM-4D	6/11/2019 10:45	7093107002	Water																X
3	GM-5D	6/11/2019 11:20	7093107003	Water																X
4	GM-6D	6/11/2019 12:00	7093107004	Water																X
5	GM-7D	6/11/2019 12:35	7093107005	Water																X
6	GM-15D	6/11/2019 15:10	7093107006	Water																X
7	GM-16D	6/11/2019 14:50	7093107007	Water																X
8	GM-17D	6/11/2019 14:35	7093107008	Water																X
9	GM-18D	6/11/2019 14:10	7093107009	Water																X
10	GM-19D	6/11/2019 13:40	7093107010	Water																X
11																				
12																				
13																				
14																				



420-155308-A-1

GM-2D

Date Sampled, 6/11/2019

420-1350311

REDEY P.O. 1068 0079 3227

LOGIN SAMPLE RECEIPT CHECK LIST

Client: Pace Analytical Mellville

Job Number: 420-155308-1

SDG Number: 7093107

Login Number: 155308

Question	T/F/NA	Comment
Samples were collected by ETL employee as per SOP-SAM-1	NA	
The cooler's custody seal, if present, is intact.	NA	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is recorded.	True	2.4 C
Cooler Temp. is within method specified range.(0-6 C PW, 0-8 C NPW, or BAC <10 C	True	
If false, was sample received on ice within 6 hours of collection.	NA	
Based on above criteria cooler temperature is acceptable.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	NA	
If necessary, staff have been informed of any short hold time or quick TAT needs	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	

BABYLON LANDFILL - FIELD DATA - JUNE - 2019

Wells GM-26 to GM-28 / Groundwater Sampling Data

WELL #	Well Survey Elevation	Well Size	Metal or PVC	TPVC (in ft) (Top of PVC)	TOC (in ft) (Top of Casing)	BOC (in ft) (Bottom of Casing)	One Well Volume (Gallons)	Three Well Volumes (Gallons)	Groundwater Contour Levels
GM-26		4"	*PVC	16.68		32.50	10.28	30.85	
GM-26I		4"	*PVC	16.30		42.50	17.03	51.09	
GM-27		4"	PVC	22.70		36.70	9.10	27.30	
GM-27I		4"	PVC	23.02		47.50	15.91	47.74	
GM-28		4"	PVC	22.40		37.50	9.82	29.45	
GM-28I		4"	PVC	22.68		46.91	15.75	47.25	

WELL #	Start Purge	Stop Purge	Well Notes For Sampling
GM-26	855	915	Cloudy to turbid, no odors
GM-26I	850	920	Cloudy, no odors
GM-27	956	1035	Slightly cloudy, no odors
GM-27I	948	1025	Clear, no odors
GM-28	1115	1138	Clear, no odors
GM-28I	1110	1140	Clear with grey tint in color, no odors, small black particles

Water Quality Parameters

WELL #	Sampling Date	Sample Time	pH (SU)	ORP (mv)	Conductivity (umhos/cm2)	Temp. (oC)	Turbidity (NTU)	Dis. Oxygen (DO) mg/L
GM-26	6/10/2019	932	7.44	-76.5	1002	14.9	230.0	5.49
GM-26I	6/10/2019	925	6.78	-45.6	1072	15.5	68.0	3.45
GM-27	6/10/2019	1040	8.83	-149.0	1030	14.2	54.8	1.13
GM-27I	6/10/2019	1044	9.26	-171.1	1040	13.9	13.0	0.00
GM-28	6/10/2019	1203	7.89	-100.0	982	16.2	26.4	0.00
GM-28I	6/10/2019	1145	9.25	-171.9	959	16.7	28.5	0.96

Field Notes: Duplicate performed on GM-27I @ 1044
 Equipment Blank @ 1040 on 6-11-2019 w/new bailer
 MS/MSD performed on GM-28 @ NA
GM-28I did not have a cover to the flush mount well

Notes: N/F : Not found due to high grass or deep snow.
 N/S : No sample due to dry well or frozen well from extreme cold temps.
 *PVC ABOVE TOC

BABYLON LANDFILL - FIELD DATA - JUNE - 2019

Leachate Sampling Data

WELL #	Date	Start Purge	Stop Purge	Gallons Purged	Well Notes For Sampling
NNU-PLCRS	6/10/2019	1309	1310	~ 40	Clear, grey tint, odors
NNU-SLCRS	6/10/2019	1321	1323	~ 40	Clear, grey tint, odors
ONU-SLCRS	6/10/2019	1343	1345	~ 60	Clear, no odors
SA-SLCRS	6/11/2019	Direct Sample	Direct Sample	0	Turbid, black particles, black in color
CELL - 7	6/11/2019	Direct Sample	Direct Sample	0	Clear, no odors

Leachate Parameters

WELL #	Sampling Time	pH (SU)	ORP (mv)	Conductivity (umhos/cm2)	Temp. (oC)	Turbidity (NTU)	Dissolved Oxygen (DO) mg/L
NNU-PLCRS	1310	7.77	-96.0	698	31.3	8.25	0.00
NNU-SLCRS	1323	6.94	-47.3	236	38.7	6.03	0.00
ONU-SLCRS	1345	7.22	-65.2	778	25.6	7.25	3.00
SA-SLCRS	1015	8.00	-106.4	298	16.8	224.00	0.42
CELL - 7	915	7.81	-96.3	876	21.1	6.49	0.00

NNU-PLCRS: New Northern U Primary * One Tap Location for Primary/Secondary (Top Road)

NNU-SLCRS: New Northern U Secondary * One Tap Location for Primary/Secondary (Top Road)

ONU-SLCRS: Old Northern U Secondary *One Tap Location for Primary/Secondary (Lower Road)

SA-SLCRS: Southern Ash Secondary *Use Bailer / Square Metal Door

CELL 7: Primary System * Use Bailer / First Round Black Cover (Left Cover)

BABYLON LANDFILL - FIELD DATA - JUNE - 2019

Traditional Wells - Groundwater Sampling Data

WELL #	Well Survey Elevation	Well Size	Metal or PVC	TPVC (in ft) (Top of PVC)	TOC (in ft) (Top of Casing)	BOC (in ft) (Bottom of Casing)	One Well Volume (Gallons)	Three Well Volumes (Gallons)	Groundwater Contour Levels
GM-2D	69.25	4"	PVC	24.02	24.68	86.00	39.86	119.57	44.57
GM-4D	62.43	4"	PVC	15.85	16.46	91.40	48.71	146.13	45.97
GM-5D	62.35	4"	PVC	16.32	16.75	91.80	48.78	146.35	45.60
GM-6D	63.84	4"	PVC	17.93	18.11	92.80	48.55	145.65	45.73
GM-7D	63.23	4"	PVC	17.05	17.74	91.10	47.68	143.05	45.49
GM-15D	50.74	4"	PVC	9.78	10.22	84.50	48.28	144.85	40.52
GM-16D	?	4"	PVC	6.42	6.83	87.00	52.11	156.33	?
GM-17D	52.09	4"	PVC	11.83	12.27	87.70	49.03	147.09	39.82
GM-18D	?	4"	PVC	11.98	12.43	78.00	42.62	127.86	?
GM-19D	53.34	4"	PVC	11.56	12.00	87.40	49.01	147.03	41.34

WELL #	Start Purge	Stop Purge	Well Notes For Sampling
GM-2D	1240	1309	Clear, no odors
GM-4D	1018	1043	Clear, no odors
GM-5D	1035	1118	Slightly cloudy, orange tint, orange particles, no odors
GM-6D	1105	1157	Slightly cloudy, orange tint, orange particles, no odors
GM-7D	1140	1231	Slightly cloudy, orange tint, no odors
GM-15D	1445	1508	Cloudy, orange tint, orange particles, no odors
GM-16D	1420	1448	Cloudy, orange tint, orange particles, no odors
GM-17D	1348	1434	Clear, no odors
GM-18D	1340	1406	Clear, no odors
GM-19D	1315	1335	Clear, no odors, small particles

Water Quality Parameters

WELL #	Sampling Date	Sample Time	pH (SU)	ORP (mv)	Conductivity (umhos/cm2)	Temp. (oC)	Turbidity (NTU)	Dis. Oxygen (DO) mg/L
GM-2D	6/11/2019	1310	7.45	-32.5	3290	14.0	7.67	2.55
GM-4D	6/11/2019	1045	8.00	-103.0	3120	16.7	4.61	0.96
GM-5D	6/11/2019	1120	7.30	-68.6	982	15.5	61.30	2.76
GM-6D	6/11/2019	1200	7.79	-95.9	884	18.0	94.30	3.36
GM-7D	6/11/2019	1235	8.42	-127.9	896	15.5	33.10	5.77
GM-15D	6/11/2019	1510	7.62	-86.4	1123	13.9	45.20	3.29
GM-16D	6/11/2019	1450	7.30	-66.2	2950	13.0	121.00	4.39
GM-17D	6/11/2019	1435	7.23	-64.2	2340	13.6	3.20	2.05
GM-18D	6/11/2019	1410	7.47	-78.9	1130	13.9	5.18	2.91
GM-19D	6/11/2019	1340	6.13	-10.4	1420	14.5	7.09	4.57

7092927007

7092927001

Water

Water

06/10/19

06/10/19

6/10/2019 10:44:00 AM

6/10/2019 9:32:00 AM

Analyte	CAS	Units		
Turbidity		NTU	12.6 D	19.0 D
Bromide	24959-67-9	mg/L	2.0	0.58
Chloride	16887-00-6	mg/L	455 D	79.8 D
Sulfate	14808-79-8	mg/L	<5.0	80.8 D
Nitrogen, Kjeldahl, Total	7727-37-9	mg/L	19.1 D	<0.50
Nitrate as N	14797-55-8	mg/L	0.037J	6.0 D
Nitrate-Nitrite (as N)	7727-37-9	mg/L	<0.050	6.0 D
Nitrite as N	14797-65-0	mg/L	<0.050	<0.050
Chemical Oxygen Demand		mg/L	91.8	10.2
Cadmium	7440-43-9	ug/L	<2.5	<2.5
Calcium	7440-70-2	ug/L	74000	64600
Iron	7439-89-6	ug/L	1980	21300
Lead	7439-92-1	ug/L	<5.0	189
Magnesium	7439-95-4	ug/L	4760	6410
Manganese	7439-96-5	ug/L	87.2	400
Potassium	7440-09-7	ug/L	39800	17500
Sodium	7440-23-5	ug/L	176000	45200
1,4-Dioxane (SIM)	123-91-1	ug/L	0.26	<0.25
Alkalinity, Total as CaCO3		mg/L	206	112
Tot Hardness asCaCO3		mg/L	200	175
Total Dissolved Solids		mg/L	826	426
Nitrogen, Ammonia	7664-41-7	mg/L	17.4 D	0.084J
BOD, 5 day		mg/L	22.1 D	1.0J
Total Organic Carbon	7440-44-0	mg/L	25.8	3.9J

GM-26I	GM-27	GM-27I	GM-28	GM-28I
7092927002	7092927003	7092927004	7092927005	7092927006
Water	Water	Water	Water	Water
06/10/19	06/10/19	06/10/19	06/10/19	06/10/19
6/10/2019 9:25:00 AM	6/10/2019 10:40:00 AM	6/10/2019 10:44:00 AM	6/10/2019 12:03:00 PM	6/10/2019 11:45:00 AM
10.2 D	6.5 D	23.0 D	65.0 D	20.0 D
0.53	2.4	2.0	1.3	1.7
72.5 D	442 D	424 D	256 D	251 D
59.3 D	<5.0	<5.0	216 D	31.5
<0.50	33.7 D	19.3 D	20.9 D	12.2 D
4.1 D	0.030J	0.044J	0.042J	0.029J
4.1 D	<0.050	0.044J	0.042J	<0.050
<0.050	<0.050	<0.050	<0.050	<0.050
<10.0	154	83.0	109	45.5
<2.5	<2.5	<2.5	<2.5	<2.5
40800	55500	72800	248000	39600
7280	3660	1920	8540	4070
28.7	13.8	<5.0	10.9	14.6
3440	9180	4680	54400	4310
75.9	153	85.9	1670	292
12600	43400	38700	51200	62600
33000	200000	175000	186000	114000
<0.25	0.32	0.26	0.38	0.25J
52.5	284	200	984	149
100	180	190	880	100
340	874	900	1530	596
0.066J	32.0 D	17.5 D	18.2 D	11.4 D
1.0J	32.5 D	21.7 D	11.9 D	13.3 D
1.8	43.1	25.5	35.9	12.7