
APPENDIX B

**ANALYTICAL LABORATORY REPORTS
FOR SURFACE WATER SAMPLES**

ANALYTICAL LABORATORY REPORTS

**LIMESTONE RUN WATER SAMPLING EVENT
MARCH 28, 2019**

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

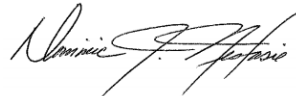
Laboratory Job ID: 180-88284-1

Client Project/Site: Fayette County Limestone Run

For:

Civil & Environmental Consultants Inc
333 Baldwin Rd.
Pittsburgh, Pennsylvania 15205

Attn: Jackie Rockey



Authorized for release by:
4/19/2019 9:40:31 AM

Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	6
Method Summary	7
Lab Chronicle	8
Client Sample Results	9
QC Sample Results	10
QC Association Summary	13
Chain of Custody	15
Receipt Checklists	19

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

Job ID: 180-88284-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

**Job Narrative
180-88284-1**

Receipt:

The sample was received on 3/29/2019 at 12:00 PM; the sample arrived in good condition, properly preserved and on ice. The temperature of the cooler at time of receipt was 3.5° C.

Anions:

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

Metals:

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

General Chemistry:

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



Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

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)

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
West Virginia DEP	State Program	3	142	01-31-20

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
SM 2340B		Water	Calcium hardness as calcium carbonate
SM 2340B		Water	Hardness as calcium carbonate
SM 2340B		Water	Magnesium hardness as calcium carbonate

Laboratory: Eurofins TestAmerica, Canton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Pennsylvania	NELAP	3	68-00340	08-31-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
180-88284-1	LIMESTONE RUN	Water	03/28/19 11:50	03/29/19 12:00

1

2

3

4

5

6

7

8

9

10

11

12

13

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	TAL PIT
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 4500 H+ B	pH	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
SM4500 P E-2011	Phosphorus	SM	TAL CAN
200.8	Preparation, Total Recoverable Metals	EPA	TAL PIT
Distill/Ammonia	Distillation, Ammonia	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

Client Sample ID: LIMESTONE RUN

Lab Sample ID: 180-88284-1

Date Collected: 03/28/19 11:50

Matrix: Water

Date Received: 03/29/19 12:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			274282	03/29/19 20:39	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	274599	04/02/19 12:06	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			274795	04/03/19 19:02	RSK	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	274599	04/02/19 12:06	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			274795	04/03/19 18:59	RSK	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			274584	04/02/19 10:41	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	275650	04/12/19 16:11	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			276208	04/18/19 14:23	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	274838	04/04/19 12:11	TAM	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			274919	04/05/19 08:48	JMS	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: NOEQUIP		1			275129	04/08/19 12:45	CLL	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	375164	04/08/19 09:04	TPH	TAL CAN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

TPH = Tom Harshman

Lab: TAL PIT

Batch Type: Prep

BSH = Brandon Hough

NAM = Nicole Marfisi

Batch Type: Analysis

BSH = Brandon Hough

CLL = Cheryl Loheyde

JMS = Jessica Scalise

MJH = Matthew Hartman

MM1 = Mary Beth Miller

RSK = Robert Kurtz

TAM = Tessa Mastalski

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

Client Sample ID: LIMESTONE RUN

Lab Sample ID: 180-88284-1

Date Collected: 03/28/19 11:50

Matrix: Water

Date Received: 03/29/19 12:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	4.4		1.0	0.71	mg/L			03/29/19 20:39	1
Nitrate as N	0.31		0.10	0.023	mg/L			03/29/19 20:39	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	94		30	12	ug/L		04/02/19 12:06	04/03/19 18:59	1
Calcium	6400		500	180	ug/L		04/02/19 12:06	04/03/19 18:59	1
Iron	29	J	50	15	ug/L		04/02/19 12:06	04/03/19 18:59	1
Magnesium	1400		500	70	ug/L		04/02/19 12:06	04/03/19 18:59	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	41		30	12	ug/L		04/02/19 12:06	04/03/19 19:02	1
Arsenic	1.0	U	1.0	0.17	ug/L		04/02/19 12:06	04/03/19 19:02	1
Cadmium	1.0	U	1.0	0.21	ug/L		04/02/19 12:06	04/03/19 19:02	1
Copper	2.0	U	2.0	0.99	ug/L		04/02/19 12:06	04/03/19 19:02	1
Lead	1.0	U	1.0	0.16	ug/L		04/02/19 12:06	04/03/19 19:02	1
Nickel	1.5		1.0	0.46	ug/L		04/02/19 12:06	04/03/19 19:02	1
Selenium	5.0	U	5.0	0.81	ug/L		04/02/19 12:06	04/03/19 19:02	1
Zinc	7.5		5.0	2.2	ug/L		04/02/19 12:06	04/03/19 19:02	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	16		0.25	0.0071	mg/L			04/02/19 10:41	1
Hardness as calcium carbonate	22		0.67	0.022	mg/L			04/02/19 10:41	1
Magnesium hardness as calcium carbonate	5.8		0.41	0.0048	mg/L			04/02/19 10:41	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.079	J	0.10	0.046	mg/L		04/12/19 16:11	04/18/19 14:23	1
Total Dissolved Solids	37		10	10	mg/L			04/04/19 12:11	1
pH	7.5	HF	0.1	0.1	SU			04/05/19 08:48	1
Total Alkalinity as CaCO3 to pH 4.5	7.6		5.0	5.0	mg/L			04/08/19 12:45	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			04/08/19 09:04	1

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-274282/54
Matrix: Water
Analysis Batch: 274282

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.71	mg/L			03/29/19 20:23	1
Nitrate as N	0.10	U	0.10	0.023	mg/L			03/29/19 20:23	1

Lab Sample ID: LCS 180-274282/51
Matrix: Water
Analysis Batch: 274282

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.4		mg/L		106	90 - 110
Nitrate as N	1.25	1.30		mg/L		104	90 - 110

Lab Sample ID: 180-88284-1 MS
Matrix: Water
Analysis Batch: 274282

Client Sample ID: LIMESTONE RUN
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	4.4		25.0	29.7		mg/L		101	80 - 120
Nitrate as N	0.31		1.25	1.56		mg/L		100	80 - 120

Lab Sample ID: 180-88284-1 MSD
Matrix: Water
Analysis Batch: 274282

Client Sample ID: LIMESTONE RUN
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	4.5		25.0	29.5		mg/L		100	80 - 120	0	20
Nitrate as N	0.32		1.25	1.55		mg/L		99	80 - 120	1	20

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-274599/1-A
Matrix: Water
Analysis Batch: 274795

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 274599

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		04/02/19 12:06	04/03/19 17:44	1
Arsenic	1.0	U	1.0	0.17	ug/L		04/02/19 12:06	04/03/19 17:44	1
Calcium	500	U	500	180	ug/L		04/02/19 12:06	04/03/19 17:44	1
Cadmium	1.0	U	1.0	0.21	ug/L		04/02/19 12:06	04/03/19 17:44	1
Iron	50	U	50	15	ug/L		04/02/19 12:06	04/03/19 17:44	1
Copper	2.0	U	2.0	0.99	ug/L		04/02/19 12:06	04/03/19 17:44	1
Magnesium	500	U	500	70	ug/L		04/02/19 12:06	04/03/19 17:44	1
Lead	1.0	U	1.0	0.16	ug/L		04/02/19 12:06	04/03/19 17:44	1
Nickel	1.0	U	1.0	0.46	ug/L		04/02/19 12:06	04/03/19 17:44	1
Selenium	5.0	U	5.0	0.81	ug/L		04/02/19 12:06	04/03/19 17:44	1
Zinc	5.0	U	5.0	2.2	ug/L		04/02/19 12:06	04/03/19 17:44	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-274599/2-A
Matrix: Water
Analysis Batch: 274795

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 274599

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aluminum	12000	12600		ug/L		105	85 - 115
Arsenic	40.0	42.0		ug/L		105	85 - 115
Calcium	50000	54900		ug/L		110	85 - 115
Cadmium	50.0	55.6		ug/L		111	85 - 115
Iron	11000	12000		ug/L		109	85 - 115
Copper	250	262		ug/L		105	85 - 115
Magnesium	50000	55600		ug/L		111	85 - 115
Lead	20.0	21.8		ug/L		109	85 - 115
Nickel	500	508		ug/L		102	85 - 115
Selenium	10.0	11.2		ug/L		112	85 - 115
Zinc	500	539		ug/L		108	85 - 115

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-275650/6-A
Matrix: Water
Analysis Batch: 276208

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 275650

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.046	mg/L		04/12/19 16:11	04/18/19 14:03	1

Lab Sample ID: LCS 180-275650/7-A
Matrix: Water
Analysis Batch: 276208

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 275650

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia, distilled	2.00	1.88		mg/L		94	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-274838/2
Matrix: Water
Analysis Batch: 274838

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L			04/04/19 12:11	1

Lab Sample ID: LCS 180-274838/1
Matrix: Water
Analysis Batch: 274838

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	304	258		mg/L		85	80 - 120

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 180-274919/1
 Matrix: Water
 Analysis Batch: 274919

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.1		SU		101	99 - 101

Lab Sample ID: 180-88284-1 DU
 Matrix: Water
 Analysis Batch: 274919

Client Sample ID: LIMESTONE RUN
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
pH	7.5	HF	7.4		SU		0.9	2

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-275129/3
 Matrix: Water
 Analysis Batch: 275129

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L			04/08/19 12:45	1

Lab Sample ID: LCS 180-275129/1
 Matrix: Water
 Analysis Batch: 275129

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	125	130		mg/L		104	90 - 110

Lab Sample ID: LCSD 180-275129/2
 Matrix: Water
 Analysis Batch: 275129

Client Sample ID: Lab Control Sample Dup
 Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5	125	130		mg/L		104	90 - 110	0	20

Method: SM4500 P E-2011 - Phosphorus

Lab Sample ID: MB 240-375164/3
 Matrix: Water
 Analysis Batch: 375164

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			04/08/19 06:32	1

Lab Sample ID: LCS 240-375164/4
 Matrix: Water
 Analysis Batch: 375164

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.413		mg/L		102	77 - 120

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

HPLC/IC

Analysis Batch: 274282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88284-1	LIMESTONE RUN	Total/NA	Water	EPA 300.0 R2.1	
MB 180-274282/54	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-274282/51	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	
180-88284-1 MS	LIMESTONE RUN	Total/NA	Water	EPA 300.0 R2.1	
180-88284-1 MSD	LIMESTONE RUN	Total/NA	Water	EPA 300.0 R2.1	

Metals

Analysis Batch: 274584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88284-1	LIMESTONE RUN	Total Recoverable	Water	SM 2340B	

Prep Batch: 274599

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88284-1	LIMESTONE RUN	Dissolved	Water	200.8	
180-88284-1	LIMESTONE RUN	Total Recoverable	Water	200.8	
MB 180-274599/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-274599/2-A	Lab Control Sample	Total Recoverable	Water	200.8	

Analysis Batch: 274795

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88284-1	LIMESTONE RUN	Dissolved	Water	EPA 200.8 Rev 5	274599
180-88284-1	LIMESTONE RUN	Total Recoverable	Water	EPA 200.8 Rev 5	274599
MB 180-274599/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	274599
LCS 180-274599/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	274599

General Chemistry

Analysis Batch: 274838

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88284-1	LIMESTONE RUN	Total/NA	Water	SM 2540C	
MB 180-274838/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-274838/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 274919

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88284-1	LIMESTONE RUN	Total/NA	Water	SM 4500 H+ B	
LCS 180-274919/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	
180-88284-1 DU	LIMESTONE RUN	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 275129

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88284-1	LIMESTONE RUN	Total/NA	Water	SM2320 B	
MB 180-275129/3	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-275129/1	Lab Control Sample	Total/NA	Water	SM2320 B	
LCSD 180-275129/2	Lab Control Sample Dup	Total/NA	Water	SM2320 B	

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fayette County Limestone Run

Job ID: 180-88284-1

General Chemistry

Prep Batch: 275650

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88284-1	LIMESTONE RUN	Total/NA	Water	Distill/Ammonia	
MB 180-275650/6-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 180-275650/7-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 276208

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88284-1	LIMESTONE RUN	Total/NA	Water	EPA 350.1	275650
MB 180-275650/6-A	Method Blank	Total/NA	Water	EPA 350.1	275650
LCS 180-275650/7-A	Lab Control Sample	Total/NA	Water	EPA 350.1	275650

Analysis Batch: 375164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-88284-1	LIMESTONE RUN	Total/NA	Water	SM4500 P E-2011	
MB 240-375164/3	Method Blank	Total/NA	Water	SM4500 P E-2011	
LCS 240-375164/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	

Regulatory Program: DWL NPDES RCRA Other:

Company Name: CEC	Client Contact	Project Manager: MIKE DAVISON	Site Contact: JACK ROCKEY	COC No: 1
Address: 333 BALMAIN ROAD	Tel/Fax:	Analysis Turnaround Time <input type="checkbox"/> CALENDAR DAYS <input type="checkbox"/> WORKING DAYS TAT if different from below: 2 weeks <input type="checkbox"/> 1 week <input type="checkbox"/> 2 days <input type="checkbox"/> 1 day <input type="checkbox"/>	Lab Contact: DOMINIC NESTARE	of 1 COCS
City/State/Zip: PA PA 15205	Project Name: 91-398	Carrier: COULTER	Sampler: JACK ROCKEY	For Lab Use Only:
Phone: 412-8429-2324	Site: FAYETTE CO	Perform MS/MSD (Y/N)	Walk-in Client:	Lab Sampling:
Fax:	P.O.#	Filtered Sample (Y/N)	Job / SDG No.:	Sample Specific Notes:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=Grab)	Matrix	# of Cont.
Limestone PWA	3/28/19	11:50	G	W	1



Preservation Used: 1= Ice, 2= HCl; 3= H2SO4; 4=HNO3; 5=NaOH; 6= Other

Possible Hazard Identification: Are any samples from a listed EPA Hazardous Waste? Please List any EPA Waste Codes for the sample in the Comments Section if the lab is to dispose of the sample.

Non-Hazardous Flammable Skin Irritant Poison B Unknown

Special Instructions/QC Requirements & Comments: **7A7-3**

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return to Client Disposal by Lab Archive for _____ Months

Custody Seal No.:	Cooler Temp. (°C):	Obs'd:	Corrd.:	Therm ID No.:
Relinquished by: Rockey	3-28-19	160		3.5
Relinquished by: Rockey	Date/Time: 3-28-19 16:00	Company: TestAmerica	Company: TestAmerica	Date/Time: 3-28-19 16:00
Relinquished by: Rockey	Date/Time: 3/29/19 10:35	Company: Rockey	Company: Rockey	Date/Time: 3/29/19 10:35
Relinquished by: Rockey	Date/Time: 3/29/19 12:00	Company: Rockey	Company: Rockey	Date/Time: 3/29/19 12:00



Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Nestasio, Dominic J	Carrier Tracking No(s):	COC No: 180-358517.1
Client Contact: Shipping/Receiving		E-Mail: dominic.nestasio@testamericainc.com	State of Origin: Pennsylvania	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - West Virginia DEP		
Address: 4101 Shuffel Street NW,		Due Date Requested: 4/11/2019		
City: North Canton		TAT Requested (days):		
State, Zip: OH, 44720		PO #:		
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		WO #:		
Email:		Project #: 18020244		
Project Name: Fayette County 191-398		SSOW#:		
Site:		Sample Date		
Sample Identification - Client ID (Lab ID)		Sample Time		
LIMESTONE RUN (180-88284-1)		11:50 Eastern		
Preservation Code:		Water		
Matrix (W=water, S=solid, O=wastefoil, BT=tissue, A=air)		Field Filled Sample (Yes or No)		
Sample Type (C=comp, G=grab)		4500 P E/ Total Phosphorus as P		
Form MS/MSD (Yes or No)		X		
Total Number of Containers		1		
Special Instructions/Note: WSU		Special Instructions/Note:		

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our 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

Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) _____
 Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____
 Relinquished by: _____ Date/Time: 3/29/19 12:00
 Relinquished by: _____ Date/Time: _____
 Relinquished by: _____ Date/Time: _____
 Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements:

Method of Shipment: _____
 Received by: _____ Date/Time: 3-30-19 10:00
 Received by: _____ Date/Time: _____
 Received by: _____ Date/Time: _____
 Cooler Temperature(s) °C and Other Remarks:



TestAmerica Canton Sample Receipt Form/Narrative

Login # : _____

Canton Facility

Client TA Pittsburgh

Site Name _____

Cooler unpacked by:

Cooler Received on 3-30-19

Opened on 3-30-19

MJD

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____


Receipt After-hours: Drop-off Date/Time

Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0.7°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC861525
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Yes No NA  ← Larger than this.
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login Sample Receipt Checklist

Client: Civil & Environmental Consultants Inc

Job Number: 180-88284-1

Login Number: 88284

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Neri, Tom

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.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
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	





1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

29 March 2019

Civil & Environmental Consultants, Inc.
Attn: Jackie Rockey
333 Baldwin Road
Pittsburgh, PA 15205

Work Order: 9032279
Project: Fecal Testing
Project Description: Fecal Testing

Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
Limestone Run	9032279-01	Waste Water	03/28/2019 11:50	3/28/19 17:55	

Report Narrative

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

Definitions

RL Reporting Limit

Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.

Environmental Service Laboratories, Inc., Indiana, PA/TNI Certification #32-00382

Approved By

Sean Mintzer
Project Manager





1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 03/29/2019 15:21

Lab Sample ID#: 9032279-01
Sample Type: Waste Water
Sample Source: Grab
Sampler: Client
Client Sample ID: Limestone Run

Sample Date: 03/28/2019 11:50
Receipt Date: 03/28/2019 17:55

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/ Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	<1	MPN/100 mL		1	CJR	03/28/19 17:53	03/29/19 13:24

ENVIRONMENTAL SERVICE LABORATORIES, INC.

SAMPLE REQUEST & CHAIN OF CUSTODY

PAGE 1 OF 1

HEADQUARTERS
1803 Philadelphia St.
Indiana, PA 15701
(724) 463-TEST
FAX: (724) 465-4209



SOUTHERN DIVISION
1276 Bentleyville Road
Van Voorhis, PA 15366
(724) 258-TEST
FAX: (724) 258-8376



NORTHERN DIVISION
435 Broad Street
Montoursville, PA 17754
(570) 321-9003
FAX: (570) 321-1957



FOR INTERNAL LABORATORY USE ONLY

Sample Identification	ESL#	Sample Type				Matrix	# of Containers	Container Type <small>Preservative</small>	Analysis Requested
		Composite		Grab					
		Date on/off	Time on/off	Date	Time				
Limestone Run	9032279 01			3-28-19	11:50	WW	1	Sterile 125mL Na ₂ S ₂ O ₃	<i>check 3/28/19 17:55</i> Fecal Coliform <i>2.50</i>
						WW	1	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform
						WW	1	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform

THE UNDERSIGNED PURCHASER HEREBY AGREES TO PAY SERVICE CHARGES ON ACCOUNTS OVER 31 DAYS OLD.
1. THESE SERVICE CHARGES WILL ACCRUE AT THE RATE OF 1 1/2% PER MONTH (18% PER ANNUM OR THE MAXIMUM ALLOWED BY LAW.)
2. THE UNDERSIGNED PURCHASER AGREES TO PAY, IN THE EVENT HIS ACCOUNT BECOMES DELINQUENT AND IS TURNED OVER TO ANY ATTORNEY FOR COLLECTION, REASONABLE ATTORNEY'S FEES PLUS ALL COURT AND ATTENDANT COLLECTION COSTS.

Project Notes:

Fecal Analysis

Sampled By: (Signature) *Rocky* Date/ Time *3-28-19 14:54*
 Relinquished By: (Signature) *Rocky* Date/ Time *3-28-19 14:54*
 Relinquished By: (Signature) *[Signature]* Date/ Time *3-28-19 17:45*
 Relinquished By: (Signature) _____ Date/ Time _____

Received By: (Signature) *[Signature]* Date/ Time *3-28-19 14:54*
 Received By: (Signature) *Jason W. Stander* Date/ Time *3/28/19 20:50*
 Received By: (Signature) _____ Date/ Time _____

Company/Name: **Civil & Environmental Consultants, Inc.**
 Address: **333 Baldwin Road
Pittsburgh, PA 15205**
 Contact Person: **Jackie Rocky**
 Mobile: **412-559-7035**
 Phone Number: **412-249-3140**
 Fax Number: **(412) 429-2114**
 Email: **bvalli@cecinc.com**

Correct Preservations Y / N / NA Correct Containers Y / N / NA Receipt Temperature _____

jrockey@cecinc.com

ANALYTICAL LABORATORY REPORTS
FLETCHER RUN WATER SAMPLING EVENT
MAY 9, 2019

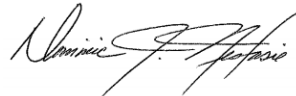
ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-89905-1
Client Project/Site: Grinnage Run

For:
Civil & Environmental Consultants Inc
333 Baldwin Rd.
Pittsburgh, Pennsylvania 15205

Attn: Jackie Rockey



Authorized for release by:
5/23/2019 11:05:02 AM

Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	6
Method Summary	7
Lab Chronicle	8
Client Sample Results	11
QC Sample Results	14
QC Association Summary	18
Chain of Custody	21
Receipt Checklists	25

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Job ID: 180-89905-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

**Job Narrative
180-89905-1**

Receipt

The samples were received on 5/10/2019 at 1:00 PM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at time of receipt was 4.0° C.

Anions

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

Metals

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

General Chemistry

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

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)

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Pennsylvania	NELAP	3	02-00416	04-30-20

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
SM 2340B		Water	Calcium hardness as calcium carbonate
SM 2340B		Water	Hardness as calcium carbonate
SM 2340B		Water	Magnesium hardness as calcium carbonate

Laboratory: Eurofins TestAmerica, Canton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Pennsylvania	NELAP	3	68-00340	08-31-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Assesst ID
180-89905-1	FR-2	Water	05/09/19 09:20	05/10/19 13:00	
180-89905-2	GR-1	Water	05/09/19 12:55	05/10/19 13:00	
180-89905-3	FR-1	Water	05/09/19 11:00	05/10/19 13:00	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	TAL PIT
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 4500 H+ B	pH	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
SM4500 P E-2011	Phosphorus	SM	TAL CAN
200.8	Preparation, Total Recoverable Metals	EPA	TAL PIT
Distill/Ammonia	Distillation, Ammonia	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Client Sample ID: FR-2

Lab Sample ID: 180-89905-1

Date Collected: 05/09/19 09:20

Matrix: Water

Date Received: 05/10/19 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			278338	05/10/19 20:19	CMR	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	278517	05/13/19 12:17	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			278704	05/14/19 16:15	RSK	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	278517	05/13/19 12:17	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			278704	05/14/19 16:11	RSK	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			278639	05/14/19 10:53	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	279229	05/20/19 17:28	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			279462	05/22/19 11:59	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	278659	05/14/19 12:36	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			278493	05/13/19 14:30	RJP	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: NOEQUIP		1	50 mL	50 mL	279412	05/22/19 09:10	CLL	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	381785	05/17/19 05:21	TPH	TAL CAN

Client Sample ID: GR-1

Lab Sample ID: 180-89905-2

Date Collected: 05/09/19 12:55

Matrix: Water

Date Received: 05/10/19 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			278338	05/10/19 21:05	CMR	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	278517	05/13/19 12:17	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			278704	05/14/19 16:21	RSK	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	278517	05/13/19 12:17	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			278704	05/14/19 16:18	RSK	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			278639	05/14/19 10:53	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	279229	05/20/19 17:28	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			279462	05/22/19 12:00	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	278538	05/13/19 15:18	TAM	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			278747	05/15/19 15:15	RJP	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Client Sample ID: GR-1

Lab Sample ID: 180-89905-2

Date Collected: 05/09/19 12:55

Matrix: Water

Date Received: 05/10/19 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM2320 B		1	50 mL	50 mL	279412	05/22/19 09:10	CLL	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	381785	05/17/19 05:33	TPH	TAL CAN

Client Sample ID: FR-1

Lab Sample ID: 180-89905-3

Date Collected: 05/09/19 11:00

Matrix: Water

Date Received: 05/10/19 13:00

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			278338	05/10/19 21:21	CMR	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	278517	05/13/19 12:17	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			278704	05/14/19 16:28	RSK	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	278517	05/13/19 12:17	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			278704	05/14/19 16:25	RSK	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			278639	05/14/19 10:53	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	279229	05/20/19 17:28	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			279462	05/22/19 12:02	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	278538	05/13/19 15:18	TAM	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			278747	05/15/19 15:17	RJP	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: NOEQUIP		1	50 mL	50 mL	279412	05/22/19 09:10	CLL	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	381785	05/17/19 05:37	TPH	TAL CAN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

TPH = Tom Harshman

Lab: TAL PIT

Batch Type: Prep

BSH = Brandon Hough

NAM = Nicole Marfisi

Batch Type: Analysis

AVS = Abbey Smith

BSH = Brandon Hough

CLL = Cheryl Loheyde

CMR = Carl Reagle

MM1 = Mary Beth Miller

RJP = Rockwell Pokrant

RSK = Robert Kurtz

TAM = Tessa Mastalski

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Client Sample ID: FR-2

Lab Sample ID: 180-89905-1

Date Collected: 05/09/19 09:20

Matrix: Water

Date Received: 05/10/19 13:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	38		1.0	0.71	mg/L			05/10/19 20:19	1
Nitrate as N	0.20		0.10	0.023	mg/L			05/10/19 20:19	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	960		30	12	ug/L		05/13/19 12:17	05/14/19 16:11	1
Calcium	74000		500	180	ug/L		05/13/19 12:17	05/14/19 16:11	1
Iron	2000		50	15	ug/L		05/13/19 12:17	05/14/19 16:11	1
Magnesium	14000		500	70	ug/L		05/13/19 12:17	05/14/19 16:11	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		05/13/19 12:17	05/14/19 16:15	1
Arsenic	0.80	J	1.0	0.17	ug/L		05/13/19 12:17	05/14/19 16:15	1
Cadmium	1.0	U	1.0	0.21	ug/L		05/13/19 12:17	05/14/19 16:15	1
Copper	2.0	U	2.0	0.99	ug/L		05/13/19 12:17	05/14/19 16:15	1
Lead	1.0	U	1.0	0.16	ug/L		05/13/19 12:17	05/14/19 16:15	1
Nickel	0.72	J	1.0	0.46	ug/L		05/13/19 12:17	05/14/19 16:15	1
Selenium	5.0	U	5.0	0.81	ug/L		05/13/19 12:17	05/14/19 16:15	1
Zinc	5.0	U	5.0	2.2	ug/L		05/13/19 12:17	05/14/19 16:15	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	180		0.25	0.0071	mg/L			05/14/19 10:53	1
Hardness as calcium carbonate	240		0.67	0.022	mg/L			05/14/19 10:53	1
Magnesium hardness as calcium carbonate	59		0.41	0.0048	mg/L			05/14/19 10:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.12		0.10	0.046	mg/L		05/20/19 17:28	05/22/19 11:59	1
Total Dissolved Solids	380		10	10	mg/L			05/14/19 12:36	1
pH	8.2	HF	0.1	0.1	SU			05/13/19 14:30	1
Total Alkalinity as CaCO3 to pH 4.!	210		5.0	5.0	mg/L			05/22/19 09:10	1
Total Phosphorus as P	0.11		0.10	0.037	mg/L			05/17/19 05:21	1

Client Sample ID: GR-1

Lab Sample ID: 180-89905-2

Date Collected: 05/09/19 12:55

Matrix: Water

Date Received: 05/10/19 13:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	32		1.0	0.71	mg/L			05/10/19 21:05	1
Nitrate as N	0.20		0.10	0.023	mg/L			05/10/19 21:05	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	200		30	12	ug/L		05/13/19 12:17	05/14/19 16:18	1
Calcium	67000		500	180	ug/L		05/13/19 12:17	05/14/19 16:18	1
Iron	410		50	15	ug/L		05/13/19 12:17	05/14/19 16:18	1
Magnesium	12000		500	70	ug/L		05/13/19 12:17	05/14/19 16:18	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Client Sample ID: GR-1

Lab Sample ID: 180-89905-2

Date Collected: 05/09/19 12:55

Matrix: Water

Date Received: 05/10/19 13:00

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	13	J	30	12	ug/L		05/13/19 12:17	05/14/19 16:21	1
Arsenic	0.65	J	1.0	0.17	ug/L		05/13/19 12:17	05/14/19 16:21	1
Cadmium	1.0	U	1.0	0.21	ug/L		05/13/19 12:17	05/14/19 16:21	1
Copper	2.0	U	2.0	0.99	ug/L		05/13/19 12:17	05/14/19 16:21	1
Lead	1.0	U	1.0	0.16	ug/L		05/13/19 12:17	05/14/19 16:21	1
Nickel	1.0	U	1.0	0.46	ug/L		05/13/19 12:17	05/14/19 16:21	1
Selenium	5.0	U	5.0	0.81	ug/L		05/13/19 12:17	05/14/19 16:21	1
Zinc	5.0	U	5.0	2.2	ug/L		05/13/19 12:17	05/14/19 16:21	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	170		0.25	0.0071	mg/L			05/14/19 10:53	1
Hardness as calcium carbonate	220		0.67	0.022	mg/L			05/14/19 10:53	1
Magnesium hardness as calcium carbonate	49		0.41	0.0048	mg/L			05/14/19 10:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.085	J	0.10	0.046	mg/L		05/20/19 17:28	05/22/19 12:00	1
Total Dissolved Solids	310		10	10	mg/L			05/13/19 15:18	1
pH	8.3	HF	0.1	0.1	SU			05/15/19 15:15	1
Total Alkalinity as CaCO3 to pH 4.5	200		5.0	5.0	mg/L			05/22/19 09:10	1
Total Phosphorus as P	0.040	J	0.10	0.037	mg/L			05/17/19 05:33	1

Client Sample ID: FR-1

Lab Sample ID: 180-89905-3

Date Collected: 05/09/19 11:00

Matrix: Water

Date Received: 05/10/19 13:00

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	48		1.0	0.71	mg/L			05/10/19 21:21	1
Nitrate as N	0.25		0.10	0.023	mg/L			05/10/19 21:21	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	62		30	12	ug/L		05/13/19 12:17	05/14/19 16:25	1
Calcium	8000		500	180	ug/L		05/13/19 12:17	05/14/19 16:25	1
Iron	150		50	15	ug/L		05/13/19 12:17	05/14/19 16:25	1
Magnesium	16000		500	70	ug/L		05/13/19 12:17	05/14/19 16:25	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		05/13/19 12:17	05/14/19 16:28	1
Arsenic	0.56	J	1.0	0.17	ug/L		05/13/19 12:17	05/14/19 16:28	1
Cadmium	1.0	U	1.0	0.21	ug/L		05/13/19 12:17	05/14/19 16:28	1
Copper	2.0	U	2.0	0.99	ug/L		05/13/19 12:17	05/14/19 16:28	1
Lead	1.0	U	1.0	0.16	ug/L		05/13/19 12:17	05/14/19 16:28	1
Nickel	0.67	J	1.0	0.46	ug/L		05/13/19 12:17	05/14/19 16:28	1
Selenium	5.0	U	5.0	0.81	ug/L		05/13/19 12:17	05/14/19 16:28	1
Zinc	5.0	U	5.0	2.2	ug/L		05/13/19 12:17	05/14/19 16:28	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage Run

Job ID: 180-89905-1

Client Sample ID: FR-1

Lab Sample ID: 180-89905-3

Date Collected: 05/09/19 11:00

Matrix: Water

Date Received: 05/10/19 13:00

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	200		0.25	0.0071	mg/L			05/14/19 10:53	1
Hardness as calcium carbonate	260		0.67	0.022	mg/L			05/14/19 10:53	1
Magnesium hardness as calcium carbonate	64		0.41	0.0048	mg/L			05/14/19 10:53	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.066	J	0.10	0.046	mg/L		05/20/19 17:28	05/22/19 12:02	1
Total Dissolved Solids	410		10	10	mg/L			05/13/19 15:18	1
pH	8.1	HF	0.1	0.1	SU			05/15/19 15:17	1
Total Alkalinity as CaCO3 to pH 4.!	210		5.0	5.0	mg/L			05/22/19 09:10	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			05/17/19 05:37	1

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage Run

Job ID: 180-89905-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-278338/6
Matrix: Water
Analysis Batch: 278338

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.71	mg/L			05/10/19 09:20	1
Nitrate as N	0.10	U	0.10	0.023	mg/L			05/10/19 09:20	1

Lab Sample ID: LCS 180-278338/5
Matrix: Water
Analysis Batch: 278338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.25	1.25		mg/L		100	90 - 110

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-278517/1-A
Matrix: Water
Analysis Batch: 278704

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 278517

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	30	U	30	12	ug/L		05/13/19 12:15	05/14/19 14:30	1
Arsenic	1.0	U	1.0	0.17	ug/L		05/13/19 12:15	05/14/19 14:30	1
Calcium	500	U	500	180	ug/L		05/13/19 12:15	05/14/19 14:30	1
Cadmium	1.0	U	1.0	0.21	ug/L		05/13/19 12:15	05/14/19 14:30	1
Iron	50	U	50	15	ug/L		05/13/19 12:15	05/14/19 14:30	1
Copper	2.0	U	2.0	0.99	ug/L		05/13/19 12:15	05/14/19 14:30	1
Magnesium	500	U	500	70	ug/L		05/13/19 12:15	05/14/19 14:30	1
Lead	1.0	U	1.0	0.16	ug/L		05/13/19 12:15	05/14/19 14:30	1
Nickel	1.0	U	1.0	0.46	ug/L		05/13/19 12:15	05/14/19 14:30	1
Selenium	5.0	U	5.0	0.81	ug/L		05/13/19 12:15	05/14/19 14:30	1
Zinc	5.0	U	5.0	2.2	ug/L		05/13/19 12:15	05/14/19 14:30	1

Lab Sample ID: LCS 180-278517/2-A
Matrix: Water
Analysis Batch: 278704

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 278517

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	977		ug/L		98	85 - 115
Calcium	25000	27100		ug/L		108	85 - 115
Cadmium	500	536		ug/L		107	85 - 115
Iron	5000	5410		ug/L		108	85 - 115
Copper	500	483		ug/L		97	85 - 115
Magnesium	25000	27500		ug/L		110	85 - 115
Lead	500	524		ug/L		105	85 - 115
Nickel	500	494		ug/L		99	85 - 115
Selenium	1000	1050		ug/L		105	85 - 115
Zinc	250	254		ug/L		102	85 - 115

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage Run

Job ID: 180-89905-1

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-279229/6-A
Matrix: Water
Analysis Batch: 279462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 279229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.046	mg/L	-	05/20/19 17:28	05/22/19 11:42	1

Lab Sample ID: LCS 180-279229/7-A
Matrix: Water
Analysis Batch: 279462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 279229
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia, distilled	2.00	1.94		mg/L	-	97	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-278538/2
Matrix: Water
Analysis Batch: 278538

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L	-		05/13/19 15:18	1

Lab Sample ID: LCS 180-278538/1
Matrix: Water
Analysis Batch: 278538

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	201	198		mg/L	-	99	80 - 120

Lab Sample ID: 180-89905-3 DU
Matrix: Water
Analysis Batch: 278538

Client Sample ID: FR-1
Prep Type: Total/NA
RPD Limit

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	410		413		mg/L	-	1	10

Lab Sample ID: MB 180-278659/2
Matrix: Water
Analysis Batch: 278659

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L	-		05/14/19 12:36	1

Lab Sample ID: LCS 180-278659/1
Matrix: Water
Analysis Batch: 278659

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
%Rec. Limits

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	201	190		mg/L	-	95	80 - 120

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 180-278493/1
Matrix: Water
Analysis Batch: 278493

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		100	99 - 101

Lab Sample ID: LCS 180-278747/1
Matrix: Water
Analysis Batch: 278747

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		100	99 - 101

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-279412/2
Matrix: Water
Analysis Batch: 279412

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L			05/22/19 09:10	1

Lab Sample ID: LCS 180-279412/1
Matrix: Water
Analysis Batch: 279412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	250	253		mg/L		101	90 - 110

Method: SM4500 P E-2011 - Phosphorus

Lab Sample ID: MB 240-381785/3
Matrix: Water
Analysis Batch: 381785

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			05/17/19 05:13	1

Lab Sample ID: LCS 240-381785/4
Matrix: Water
Analysis Batch: 381785

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.396		mg/L		98	77 - 120

Lab Sample ID: 180-89905-1 MS
Matrix: Water
Analysis Batch: 381785

Client Sample ID: FR-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.11		0.500	0.606		mg/L		100	38 - 156

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

Method: SM4500 P E-2011 - Phosphorus (Continued)

Lab Sample ID: 180-89905-1 MSD
Matrix: Water
Analysis Batch: 381785

Client Sample ID: FR-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Phosphorus as P	0.11		0.500	0.571		mg/L		93	38 - 156	6	29

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

HPLC/IC

Analysis Batch: 278338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-1	FR-2	Total/NA	Water	EPA 300.0 R2.1	
180-89905-2	GR-1	Total/NA	Water	EPA 300.0 R2.1	
180-89905-3	FR-1	Total/NA	Water	EPA 300.0 R2.1	
MB 180-278338/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-278338/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 278517

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-1	FR-2	Dissolved	Water	200.8	
180-89905-1	FR-2	Total Recoverable	Water	200.8	
180-89905-2	GR-1	Dissolved	Water	200.8	
180-89905-2	GR-1	Total Recoverable	Water	200.8	
180-89905-3	FR-1	Dissolved	Water	200.8	
180-89905-3	FR-1	Total Recoverable	Water	200.8	
MB 180-278517/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-278517/2-A	Lab Control Sample	Total Recoverable	Water	200.8	

Analysis Batch: 278639

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-1	FR-2	Total Recoverable	Water	SM 2340B	
180-89905-2	GR-1	Total Recoverable	Water	SM 2340B	
180-89905-3	FR-1	Total Recoverable	Water	SM 2340B	

Analysis Batch: 278704

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-1	FR-2	Dissolved	Water	EPA 200.8 Rev 5	278517
180-89905-1	FR-2	Total Recoverable	Water	EPA 200.8 Rev 5	278517
180-89905-2	GR-1	Dissolved	Water	EPA 200.8 Rev 5	278517
180-89905-2	GR-1	Total Recoverable	Water	EPA 200.8 Rev 5	278517
180-89905-3	FR-1	Dissolved	Water	EPA 200.8 Rev 5	278517
180-89905-3	FR-1	Total Recoverable	Water	EPA 200.8 Rev 5	278517
MB 180-278517/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	278517
LCS 180-278517/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	278517

General Chemistry

Analysis Batch: 278493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-1	FR-2	Total/NA	Water	SM 4500 H+ B	
LCS 180-278493/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 278538

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-2	GR-1	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1

General Chemistry (Continued)

Analysis Batch: 278538 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-3	FR-1	Total/NA	Water	SM 2540C	
MB 180-278538/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-278538/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-89905-3 DU	FR-1	Total/NA	Water	SM 2540C	

Analysis Batch: 278659

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-1	FR-2	Total/NA	Water	SM 2540C	
MB 180-278659/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-278659/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 278747

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-2	GR-1	Total/NA	Water	SM 4500 H+ B	
180-89905-3	FR-1	Total/NA	Water	SM 4500 H+ B	
LCS 180-278747/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Prep Batch: 279229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-1	FR-2	Total/NA	Water	Distill/Ammonia	
180-89905-2	GR-1	Total/NA	Water	Distill/Ammonia	
180-89905-3	FR-1	Total/NA	Water	Distill/Ammonia	
MB 180-279229/6-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 180-279229/7-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 279412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-1	FR-2	Total/NA	Water	SM2320 B	
180-89905-2	GR-1	Total/NA	Water	SM2320 B	
180-89905-3	FR-1	Total/NA	Water	SM2320 B	
MB 180-279412/2	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-279412/1	Lab Control Sample	Total/NA	Water	SM2320 B	

Analysis Batch: 279462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-1	FR-2	Total/NA	Water	EPA 350.1	279229
180-89905-2	GR-1	Total/NA	Water	EPA 350.1	279229
180-89905-3	FR-1	Total/NA	Water	EPA 350.1	279229
MB 180-279229/6-A	Method Blank	Total/NA	Water	EPA 350.1	279229
LCS 180-279229/7-A	Lab Control Sample	Total/NA	Water	EPA 350.1	279229

Analysis Batch: 381785

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89905-1	FR-2	Total/NA	Water	SM4500 P E-2011	
180-89905-2	GR-1	Total/NA	Water	SM4500 P E-2011	
180-89905-3	FR-1	Total/NA	Water	SM4500 P E-2011	
MB 240-381785/3	Method Blank	Total/NA	Water	SM4500 P E-2011	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage Run

Job ID: 180-89905-1


General Chemistry (Continued)

Analysis Batch: 381785 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 240-381785/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	
180-89905-1 MS	FR-2	Total/NA	Water	SM4500 P E-2011	
180-89905-1 MSD	FR-2	Total/NA	Water	SM4500 P E-2011	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Chain of Custody Record

Client Information Client Contact: Jackie Rocky Company: Civil & Environmental Consultants Inc Address: 333 Baldwin Rd. City: Pittsburgh State, Zip: PA, 15205 Phone: 412-249-3140 Email: jrockey@cecinc.com Project Name: 18020244 Project No.: 191-398 Site:		Lab PM: Nestasie, Dominic J E-Mail: dominic.nestasie@testamericainc.com Phone: 412-249-3140 Carrier Tracking No(s): COC No: 180-51260-10639.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #:		Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> X Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> X 350_1 - Nitrogen, Ammonia <input checked="" type="checkbox"/> X 2320B_300_ORGMS_SM4500_H+ <input checked="" type="checkbox"/> X 2540C_Calcd - TDS <input checked="" type="checkbox"/> X 4500_P_E - Total Phosphorus as P <input checked="" type="checkbox"/> X 200_8 - (MOD) Special List 200.8 <input checked="" type="checkbox"/> X Field Filtered Metals (Pb, Ni, Cr, Cu, Zn, Cd, Mn, Fe, Al, Ag, As, Ba, Be, Bi, Br, B, Ca, Co, Cr, Cs, D, Di, Hg, K, Li, Mg, Mo, Ni, N, O, Os, Pb, Pt, Rb, Se, Sr, Tl, U, V, W, Y, Zn, Zr)	
Sample Identification Sample ID: FR-2, FR-2, GR-1, GR-1, FR-1, FR-1 Sample Date: 5-9-19, 5-9-19, 5-9-19, 5-9-19, 5-9-19, 5-9-19 Sample Time: 9:20, 9:20, 12:55, 12:55, 11:00, 11:00 Sample Type (C=comp, G=grab): G, G, G, G, G, G Matrix (Water, Spiked, Over-sat, Oil, BT-Tissue, A-Air): Water, Water, Water, Water, Water, Water Preservation Code:		Total Number of containers: 6 Special Instructions/Note: TAD3 = 4.02 Termo 10 CF=0 TEC  180-89905 Chain of Custody	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)			
Empty Kit Relinquished by: Relinquished by: Jackie Rocky Relinquished by: Jackie Rocky Relinquished by: Jackie Rocky Custody Seal No.: A Yes A No		Method of Shipment: Date/Time: 5/9/19 16:15 Date/Time: 5/10/19 13:00 Date/Time: 5/10/19 13:00 Company: CEC Company: CEC Company: CEC Cooler Temperature(s) °C and Other Remarks:	





Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:
Client Contact: Shipping/Receiving		Phone:	Nestase, Dominic J	State of Origin: Pennsylvania	180-362793.1
Company: TestAmerica Laboratories, Inc.		E-Mail: dominic.nestase@testamericainc.com	Accreditations Required (See note): State Program - West Virginia DEP	Page: 1 of 1	Job #: 180-89905-1
Address: 4101 Shuffel Street NW,		Due Date Requested: 5/23/2019	Analysis Requested		
City: North Canton		TAT Requested (days):	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Nitric Acid R - NaHSO4 S - H2SO4 T - TSP Dodecylhydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		
State, Zip: OH, 44720		PO #:	A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		WO #:	Total Number of containers		
Email:		Project #: 18020244	4500 P _{in} / E _l Total Phosphorus as P		
Grinnage Run		SSOW#:	Field Filtered Sample (Yes or No)		
Site:			Perform MS/MSD (Yes or No)		
			Preservation Code:		
			Matrix (W=water, S=solid, O=water/soil, BT=Tissue, AA=)		
			Sample Type (C=Comp, G=grab)		
			Sample Time		
			Sample Date		
			Sample Identification - Client ID (Lab ID)		
			FR-2 (180-89905-1)		
			GR-1 (180-89905-2)		
			FR-1 (180-89905-3)		
			Special Instructions/Note: <i>W19, C106</i>		
			Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our 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/test/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		
			Unconfirmed		
			Deliverable Requested: I, II, III, IV, Other (specify)		
			Primary Deliverable Rank: 2		
			Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)		
			Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		
			Special Instructions/QC Requirements:		
			Method of Shipment:		
			Received by: <i>[Signature]</i> Company: <i>ETA</i>		
			Date/Time: 5-19-19 940		
			Received by: _____ Company: _____		
			Date/Time: _____		
			Received by: _____ Company: _____		
			Date/Time: _____		
			Cooler Temperature(s) °C and Other Remarks:		
			Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		
			Custody Seal No.:		



TestAmerica Canton Sample Receipt Form/Narrative

Login # : _____

Canton Facility

Client ETA

Site Name _____

Cooler unpacked by:

Ryan Cribler

Cooler Received on 5-14-19

Opened on 5-14-19 940

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time

Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____


COOLANT: Wet Ice Blue Ice Dry Ice Water None

- 1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0.7°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

- 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 6 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? total Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA

- 3. Shippers' packing slip attached to the cooler(s)? Yes No
- 4. Did custody papers accompany the sample(s)? Yes No
- 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
- 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
- 7. Did all bottles arrive in good condition (Unbroken)? Yes No
- 8. Could all bottle labels be reconciled with the COC? Yes No
- 9. Were correct bottle(s) used for the test(s) indicated? Yes No
- 10. Sufficient quantity received to perform indicated analyses? Yes No
- 11. Are these work share samples? Yes No

Tests that are not checked for pH by Receiving:
 VOAs
 Oil and Grease
 TOC

- If yes, Questions 12-16 have been checked at the originating laboratory.
- 12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC984738
- 13. Were VOAs on the COC? Yes No
- 14. Were air bubbles >6 mm in any VOA vials?  Larger than this. Yes No NA
- 15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
- 16. Was a LL Hg or Me/Hg trip blank present? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Ryan Cribler

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login #: _____

TestAmerica Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)				IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
TA	Client	Box	Other	IR-8 #36	1.8	1.6	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36	2.4	2.2	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36	3.0	2.8	Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	
TA	Client	Box	Other	IR-8 #36			Wet Ice	Blue Ice	Dry Ice
							Water	None	

See Temperature Excursion Form

Login Sample Receipt Checklist

Client: Civil & Environmental Consultants Inc

Job Number: 180-89905-1

Login Number: 89905

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





1803 Philadelphia Street
 Indiana, PA 15701
 P: (724) 463-8378
 F: (724) 465-4209
 PADEP: 32-00382

1276 Bentleyville Road
 Van Voorhis, PA 15366
 P: (724) 258-8378
 F: (724) 258-8376
 PADEP: 63-04247

435 Broad Street
 Montoursville, PA 17754
 P: (570) 321-9002
 F: (570) 321-1957
 PADEP: 41-04880

950 West Main Street
 Sharpsville, PA 16150
 P: (724) 463-8378 x 500
 F: (724) 465-4209
 PADEP: 43-04934

14 May 2019

Civil & Environmental Consultants, Inc.
 Attn: Jackie Rockey
 333 Baldwin Road
 Pittsburgh, PA 15205

Work Order: 9050991
Project: Fecal Testing
Project Description: Fecal Testing

Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
GR-1	9050991-01	Waste Water	05/09/2019 12:55	5/9/19 17:41	
GR-2	9050991-02	Waste Water	05/09/2019 14:10	5/9/19 17:41	
FR-1	9050991-03	Waste Water	05/09/2019 11:00	5/9/19 17:41	
FR-2	9050991-04	Waste Water	05/09/2019 12:10	5/9/19 17:41	

Report Narrative

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

Definitions

RL Reporting Limit

Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.
 Environmental Service Laboratories, Inc., Indiana, PA/TNI Certification #32-00382

Approved By

Sean Mintzer
 Project Manager





1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 05/14/2019 13:22

Lab Sample ID#: 9050991-01
Sample Type: Waste Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-1

Sample Date: 05/09/2019 12:55
Receipt Date: 05/09/2019 17:41

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	<2420	MPN/100 mL		1	DAA	05/09/19 18:05	05/10/19 12:53

Lab Sample ID#: 9050991-02
Sample Type: Waste Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-2

Sample Date: 05/09/2019 14:10
Receipt Date: 05/09/2019 17:41

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	1300	MPN/100 mL		1	DAA	05/09/19 18:05	05/10/19 12:53

Lab Sample ID#: 9050991-03
Sample Type: Waste Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-1

Sample Date: 05/09/2019 11:00
Receipt Date: 05/09/2019 17:41

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	866	MPN/100 mL		1	DAA	05/09/19 18:05	05/10/19 12:53



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 05/14/2019 13:22

Lab Sample ID#: 9050991-04
Sample Type: Waste Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-2

Sample Date: 05/09/2019 12:10
Receipt Date: 05/09/2019 17:41

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/ Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	<2420	MPN/100 mL		1	DAA	05/09/19 18:05	05/10/19 12:53

ENVIRONMENTAL SERVICE LABORATORIES, INC.

SAMPLE REQUEST & CHAIN OF CUSTODY

PAGE 1 OF 1

HEADQUARTERS
1803 Philadelphia St.
Indiana, PA 15701
(724) 463-TEST
FAX: (724) 465-4209



SOUTHERN DIVISION
1276 Bentleyville Road
Van Voorhis, PA 15366
(724) 258-TEST
FAX: (724) 258-8376



NORTHERN DIVISION
435 Broad Street
Montoursville, PA 17754
(570) 321-9003
FAX: (570) 321-1957



9050991

FAX: (724) 465-4209

FOR INTERNAL LABORATORY USE ONLY

Sample Identification	ESL#	Sample Type				Matrix	# of Containers	Container Type <small>Preservative</small>	Analysis Requested	
		Composite		Grab						
		Date on/off	Time on/off	Date	Time					
GR-1	01	/	/	5-9-19	12:55	WW	1	Sterile 125mL Na ₂ S ₂ O ₃	λ	Fecal Coliform <i>see sign 1741</i>
GR-2	02	/	/	↓	14:10	WW	1	Sterile 125mL Na ₂ S ₂ O ₃	X	Fecal Coliform
FR-1	03	/	/	↓	11:00	WW	1	Sterile 125mL Na ₂ S ₂ O ₃	X	Fecal Coliform
FR-2	04	/	/	↓	12:10	WW	1	"	X	Fecal Coliform
		/	/							
		/	/							
		/	/							
		/	/							
		/	/							
		/	/							
		/	/							
		/	/							
		/	/							
		/	/							
		/	/							
		/	/							
		/	/							
		/	/							

6.3 (3)

THE UNDERSIGNED PURCHASER HEREBY AGREES TO PAY SERVICE CHARGES ON ACCOUNTS OVER 31 DAYS OLD.
1. THESE SERVICE CHARGES WILL ACCRUE AT THE RATE OF 1 1/2% PER MONTH (18% PER ANNUM OR THE MAXIMUM ALLOWED BY LAW.)
2. THE UNDERSIGNED PURCHASER AGREES TO PAY, IN THE EVENT HIS ACCOUNT BECOMES DELINQUENT AND IS TURNED OVER TO ANY ATTORNEY FOR COLLECTION, REASONABLE ATTORNEY'S FEES PLUS ALL COURT AND ATTENDANT COLLECTION COSTS.

Project Notes:
Fecal Analysis

Sampled By: (Signature) *J. Rocky* Date/Time *5/9/19 14:57*
Relinquished By: (Signature) *J. Rocky* Date/Time *5/9/19 14:57*
Relinquished By: (Signature) *[Signature]* Date/Time *5-9-19 1740*
Relinquished By: (Signature) _____ Date/Time _____
Relinquished By: (Signature) _____ Date/Time _____

Received By: (Signature) *[Signature]* Date/Time *5-9-19 14:57*
Received By: (Signature) *[Signature]* Date/Time *5/9/19 11:54*
Received By: (Signature) _____ Date/Time _____
Received By: (Signature) _____ Date/Time _____

Company/Name: **Civil & Environmental Consultants, Inc.**
Address: **333 Baldwin Road
Pittsburgh, PA 15205**
Contact Person: **Jackie Rocky**
Mobile: **412-559-7035**
Phone Number: **412-249-3140**
Fax Number: **(412) 429-2114**
Email: **jrockey@cecinc.com**

Correct Preservations Y/N/NA Correct Containers Y/N/NA Receipt Temperature _____

ANALYTICAL LABORATORY REPORTS
LIMESTONE RUN WATER SAMPLING EVENT
MAY 8, 2019

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

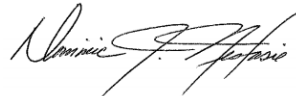
Laboratory Job ID: 180-89850-1

Client Project/Site: Limestone Run & Grinnage Run

For:

Civil & Environmental Consultants Inc
333 Baldwin Rd.
Pittsburgh, Pennsylvania 15205

Attn: Jackie Rockey



Authorized for release by:
5/23/2019 10:56:22 AM

Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	6
Method Summary	7
Lab Chronicle	8
Client Sample Results	10
QC Sample Results	12
QC Association Summary	16
Chain of Custody	18
Receipt Checklists	21

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Job ID: 180-89850-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-89850-1

Receipt

The samples were received on 5/9/2019 at 12:45 PM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at time of receipt was 3.2° C.

Anions

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

Metals

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

General Chemistry

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

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)

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Pennsylvania	NELAP	3	02-00416	04-30-20
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	
SM 2340B		Water	Calcium hardness as calcium carbonate	
SM 2340B		Water	Hardness as calcium carbonate	
SM 2340B		Water	Magnesium hardness as calcium carbonate	

Laboratory: Eurofins TestAmerica, Canton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Pennsylvania	NELAP	3	68-00340	08-31-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.



Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Assest ID
180-89850-1	LIMESTONE RUN	Water	05/08/19 10:40	05/09/19 12:45	
180-89850-2	GR-2	Water	05/08/19 15:40	05/09/19 12:45	

1

2

3

4

5

6

7

8

9

10

11

12

13

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	TAL PIT
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 4500 H+ B	pH	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
SM4500 P E-2011	Phosphorus	SM	TAL CAN
200.8	Preparation, Total Recoverable Metals	EPA	TAL PIT
Distill/Ammonia	Distillation, Ammonia	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Client Sample ID: LIMESTONE RUN

Lab Sample ID: 180-89850-1

Date Collected: 05/08/19 10:40

Matrix: Water

Date Received: 05/09/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			278195	05/09/19 21:26	CMR	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	278386	05/10/19 12:17	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			278465	05/11/19 18:39	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	278386	05/10/19 12:17	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			278465	05/11/19 18:35	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			278542	05/13/19 15:32	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	279229	05/20/19 17:28	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			279462	05/22/19 11:45	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	278375	05/10/19 11:28	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			278493	05/13/19 14:51	RJP	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: NOEQUIP		1			278887	05/16/19 09:50	CLL	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	381671	05/16/19 11:23	TPH	TAL CAN

Client Sample ID: GR-2

Lab Sample ID: 180-89850-2

Date Collected: 05/08/19 15:40

Matrix: Water

Date Received: 05/09/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			278195	05/09/19 21:42	CMR	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	278386	05/10/19 12:17	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			278465	05/11/19 18:45	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	278386	05/10/19 12:17	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			278465	05/11/19 18:42	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			278542	05/13/19 15:32	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	279229	05/20/19 17:28	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			279462	05/22/19 11:49	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	278375	05/10/19 11:28	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			278493	05/13/19 14:46	RJP	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Client Sample ID: GR-2

Lab Sample ID: 180-89850-2

Date Collected: 05/08/19 15:40

Matrix: Water

Date Received: 05/09/19 12:45

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM2320 B		1	50 mL	50 mL	278808	05/15/19 14:10	CLL	TAL PIT
Total/NA	Analysis	SM4500 P E-2011		1	5 mL	5 mL	381671	05/16/19 11:36	TPH	TAL CAN
		Instrument ID: ERNIE								

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

TPH = Tom Harshman

Lab: TAL PIT

Batch Type: Prep

BSH = Brandon Hough

NAM = Nicole Marfisi

Batch Type: Analysis

AVS = Abbey Smith

BSH = Brandon Hough

CLL = Cheryl Loheyde

CMR = Carl Reagle

MM1 = Mary Beth Miller

RJP = Rockwell Pokrant

WTR = Bill Reinheimer

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Client Sample ID: LIMESTONE RUN

Lab Sample ID: 180-89850-1

Date Collected: 05/08/19 10:40

Matrix: Water

Date Received: 05/09/19 12:45

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.6		1.0	0.71	mg/L			05/09/19 21:26	1
Nitrate as N	0.37		0.10	0.023	mg/L			05/09/19 21:26	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	110		30	12	ug/L		05/10/19 12:17	05/11/19 18:35	1
Calcium	6500		500	180	ug/L		05/10/19 12:17	05/11/19 18:35	1
Iron	58		50	15	ug/L		05/10/19 12:17	05/11/19 18:35	1
Magnesium	1400		500	70	ug/L		05/10/19 12:17	05/11/19 18:35	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	45		30	12	ug/L		05/10/19 12:17	05/11/19 18:39	1
Arsenic	0.18	J	1.0	0.17	ug/L		05/10/19 12:17	05/11/19 18:39	1
Cadmium	1.0	U	1.0	0.21	ug/L		05/10/19 12:17	05/11/19 18:39	1
Copper	2.0	U	2.0	0.99	ug/L		05/10/19 12:17	05/11/19 18:39	1
Lead	1.0	U	1.0	0.16	ug/L		05/10/19 12:17	05/11/19 18:39	1
Nickel	1.8		1.0	0.46	ug/L		05/10/19 12:17	05/11/19 18:39	1
Selenium	5.0	U	5.0	0.81	ug/L		05/10/19 12:17	05/11/19 18:39	1
Zinc	6.6		5.0	2.2	ug/L		05/10/19 12:17	05/11/19 18:39	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	16		0.25	0.0071	mg/L			05/13/19 15:32	1
Hardness as calcium carbonate	22		0.67	0.022	mg/L			05/13/19 15:32	1
Magnesium hardness as calcium carbonate	5.6		0.41	0.0048	mg/L			05/13/19 15:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.088	J	0.10	0.046	mg/L		05/20/19 17:28	05/22/19 11:45	1
Total Dissolved Solids	25		10	10	mg/L			05/10/19 11:28	1
pH	7.4	HF	0.1	0.1	SU			05/13/19 14:51	1
Total Alkalinity as CaCO3 to pH 4.!	10		5.0	5.0	mg/L			05/16/19 09:50	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			05/16/19 11:23	1

Client Sample ID: GR-2

Lab Sample ID: 180-89850-2

Date Collected: 05/08/19 15:40

Matrix: Water

Date Received: 05/09/19 12:45

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22		1.0	0.71	mg/L			05/09/19 21:42	1
Nitrate as N	0.21		0.10	0.023	mg/L			05/09/19 21:42	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	180		30	12	ug/L		05/10/19 12:17	05/11/19 18:42	1
Calcium	65000		500	180	ug/L		05/10/19 12:17	05/11/19 18:42	1
Iron	330		50	15	ug/L		05/10/19 12:17	05/11/19 18:42	1
Magnesium	11000		500	70	ug/L		05/10/19 12:17	05/11/19 18:42	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Client Sample ID: GR-2
Date Collected: 05/08/19 15:40
Date Received: 05/09/19 12:45

Lab Sample ID: 180-89850-2
Matrix: Water

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		05/10/19 12:17	05/11/19 18:45	1
Arsenic	0.65	J	1.0	0.17	ug/L		05/10/19 12:17	05/11/19 18:45	1
Cadmium	1.0	U	1.0	0.21	ug/L		05/10/19 12:17	05/11/19 18:45	1
Copper	2.0	U	2.0	0.99	ug/L		05/10/19 12:17	05/11/19 18:45	1
Lead	1.0	U	1.0	0.16	ug/L		05/10/19 12:17	05/11/19 18:45	1
Nickel	1.0	U	1.0	0.46	ug/L		05/10/19 12:17	05/11/19 18:45	1
Selenium	5.0	U	5.0	0.81	ug/L		05/10/19 12:17	05/11/19 18:45	1
Zinc	5.0	U	5.0	2.2	ug/L		05/10/19 12:17	05/11/19 18:45	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	160		0.25	0.0071	mg/L			05/13/19 15:32	1
Hardness as calcium carbonate	210		0.67	0.022	mg/L			05/13/19 15:32	1
Magnesium hardness as calcium carbonate	45		0.41	0.0048	mg/L			05/13/19 15:32	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.075	J	0.10	0.046	mg/L		05/20/19 17:28	05/22/19 11:49	1
Total Dissolved Solids	270		10	10	mg/L			05/10/19 11:28	1
pH	8.3	HF	0.1	0.1	SU			05/13/19 14:46	1
Total Alkalinity as CaCO3 to pH 4.!	180		5.0	5.0	mg/L			05/15/19 14:10	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			05/16/19 11:36	1

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-278195/6
Matrix: Water
Analysis Batch: 278195

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.71	mg/L			05/09/19 09:38	1
Nitrate as N	0.10	U	0.10	0.023	mg/L			05/09/19 09:38	1

Lab Sample ID: LCS 180-278195/5
Matrix: Water
Analysis Batch: 278195

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	26.5		mg/L		106	90 - 110
Nitrate as N	1.25	1.31		mg/L		105	90 - 110

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-278386/1-A
Matrix: Water
Analysis Batch: 278465

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 278386

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		05/10/19 12:17	05/11/19 17:51	1
Arsenic	1.0	U	1.0	0.17	ug/L		05/10/19 12:17	05/11/19 17:51	1
Calcium	500	U	500	180	ug/L		05/10/19 12:17	05/11/19 17:51	1
Cadmium	1.0	U	1.0	0.21	ug/L		05/10/19 12:17	05/11/19 17:51	1
Iron	50	U	50	15	ug/L		05/10/19 12:17	05/11/19 17:51	1
Copper	2.0	U	2.0	0.99	ug/L		05/10/19 12:17	05/11/19 17:51	1
Magnesium	500	U	500	70	ug/L		05/10/19 12:17	05/11/19 17:51	1
Lead	1.0	U	1.0	0.16	ug/L		05/10/19 12:17	05/11/19 17:51	1
Nickel	1.0	U	1.0	0.46	ug/L		05/10/19 12:17	05/11/19 17:51	1
Selenium	5.0	U	5.0	0.81	ug/L		05/10/19 12:17	05/11/19 17:51	1
Zinc	5.0	U	5.0	2.2	ug/L		05/10/19 12:17	05/11/19 17:51	1

Lab Sample ID: LCS 180-278386/2-A
Matrix: Water
Analysis Batch: 278465

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 278386

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	5000	5340		ug/L		107	85 - 115
Arsenic	1000	956		ug/L		96	85 - 115
Calcium	25000	27900		ug/L		111	85 - 115
Cadmium	500	531		ug/L		106	85 - 115
Iron	5000	5310		ug/L		106	85 - 115
Copper	500	527		ug/L		105	85 - 115
Magnesium	25000	27300		ug/L		109	85 - 115
Lead	500	509		ug/L		102	85 - 115
Nickel	500	479		ug/L		96	85 - 115
Selenium	1000	1040		ug/L		104	85 - 115
Zinc	250	236		ug/L		94	85 - 115

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-279229/6-A
Matrix: Water
Analysis Batch: 279462

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 279229

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.046	mg/L		05/20/19 17:28	05/22/19 11:42	1

Lab Sample ID: LCS 180-279229/7-A
Matrix: Water
Analysis Batch: 279462

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 279229

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	2.00	1.94		mg/L		97	90 - 110

Lab Sample ID: 180-89850-1 MS
Matrix: Water
Analysis Batch: 279462

Client Sample ID: LIMESTONE RUN
Prep Type: Total/NA
Prep Batch: 279229

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	0.088	J	2.00	2.07		mg/L		99	90 - 110

Lab Sample ID: 180-89850-1 MSD
Matrix: Water
Analysis Batch: 279462

Client Sample ID: LIMESTONE RUN
Prep Type: Total/NA
Prep Batch: 279229

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Ammonia, distilled	0.088	J	2.00	1.95		mg/L		93	90 - 110	6	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-278375/2
Matrix: Water
Analysis Batch: 278375

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L			05/10/19 11:28	1

Lab Sample ID: LCS 180-278375/1
Matrix: Water
Analysis Batch: 278375

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	180		mg/L		90	80 - 120

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 180-278493/1
Matrix: Water
Analysis Batch: 278493

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		100	99 - 101

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-278808/2
Matrix: Water
Analysis Batch: 278808

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L			05/15/19 14:10	1

Lab Sample ID: LCS 180-278808/1
Matrix: Water
Analysis Batch: 278808

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	250	249		mg/L		100	90 - 110

Lab Sample ID: MB 180-278887/2
Matrix: Water
Analysis Batch: 278887

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L			05/16/19 09:50	1

Lab Sample ID: LCS 180-278887/1
Matrix: Water
Analysis Batch: 278887

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	125	131		mg/L		105	90 - 110

Method: SM4500 P E-2011 - Phosphorus

Lab Sample ID: MB 240-381671/3
Matrix: Water
Analysis Batch: 381671

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			05/16/19 11:15	1

Lab Sample ID: LCS 240-381671/4
Matrix: Water
Analysis Batch: 381671

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.409		mg/L		101	77 - 120

Lab Sample ID: 180-89850-1 MS
Matrix: Water
Analysis Batch: 381671

Client Sample ID: LIMESTONE RUN
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.10	U	0.500	0.533		mg/L		107	38 - 156

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

Method: SM4500 P E-2011 - Phosphorus (Continued)

Lab Sample ID: 180-89850-1 MSD
 Matrix: Water
 Analysis Batch: 381671

Client Sample ID: LIMESTONE RUN
 Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Total Phosphorus as P	0.10	U	0.500	0.512		mg/L		102	38 - 156	4	29

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

HPLC/IC

Analysis Batch: 278195

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89850-1	LIMESTONE RUN	Total/NA	Water	EPA 300.0 R2.1	
180-89850-2	GR-2	Total/NA	Water	EPA 300.0 R2.1	
MB 180-278195/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-278195/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 278386

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89850-1	LIMESTONE RUN	Dissolved	Water	200.8	
180-89850-1	LIMESTONE RUN	Total Recoverable	Water	200.8	
180-89850-2	GR-2	Dissolved	Water	200.8	
180-89850-2	GR-2	Total Recoverable	Water	200.8	
MB 180-278386/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-278386/2-A	Lab Control Sample	Total Recoverable	Water	200.8	

Analysis Batch: 278465

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89850-1	LIMESTONE RUN	Dissolved	Water	EPA 200.8 Rev 5	278386
180-89850-1	LIMESTONE RUN	Total Recoverable	Water	EPA 200.8 Rev 5	278386
180-89850-2	GR-2	Dissolved	Water	EPA 200.8 Rev 5	278386
180-89850-2	GR-2	Total Recoverable	Water	EPA 200.8 Rev 5	278386
MB 180-278386/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	278386
LCS 180-278386/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	278386

Analysis Batch: 278542

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89850-1	LIMESTONE RUN	Total Recoverable	Water	SM 2340B	
180-89850-2	GR-2	Total Recoverable	Water	SM 2340B	

General Chemistry

Analysis Batch: 278375

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89850-1	LIMESTONE RUN	Total/NA	Water	SM 2540C	
180-89850-2	GR-2	Total/NA	Water	SM 2540C	
MB 180-278375/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-278375/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 278493

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89850-1	LIMESTONE RUN	Total/NA	Water	SM 4500 H+ B	
180-89850-2	GR-2	Total/NA	Water	SM 4500 H+ B	
LCS 180-278493/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Limestone Run & Grinnage Run

Job ID: 180-89850-1

General Chemistry

Analysis Batch: 278808

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89850-2	GR-2	Total/NA	Water	SM2320 B	
MB 180-278808/2	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-278808/1	Lab Control Sample	Total/NA	Water	SM2320 B	

Analysis Batch: 278887

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89850-1	LIMESTONE RUN	Total/NA	Water	SM2320 B	
MB 180-278887/2	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-278887/1	Lab Control Sample	Total/NA	Water	SM2320 B	

Prep Batch: 279229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89850-1	LIMESTONE RUN	Total/NA	Water	Distill/Ammonia	
180-89850-2	GR-2	Total/NA	Water	Distill/Ammonia	
MB 180-279229/6-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 180-279229/7-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
180-89850-1 MS	LIMESTONE RUN	Total/NA	Water	Distill/Ammonia	
180-89850-1 MSD	LIMESTONE RUN	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 279462

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89850-1	LIMESTONE RUN	Total/NA	Water	EPA 350.1	279229
180-89850-2	GR-2	Total/NA	Water	EPA 350.1	279229
MB 180-279229/6-A	Method Blank	Total/NA	Water	EPA 350.1	279229
LCS 180-279229/7-A	Lab Control Sample	Total/NA	Water	EPA 350.1	279229
180-89850-1 MS	LIMESTONE RUN	Total/NA	Water	EPA 350.1	279229
180-89850-1 MSD	LIMESTONE RUN	Total/NA	Water	EPA 350.1	279229

Analysis Batch: 381671

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-89850-1	LIMESTONE RUN	Total/NA	Water	SM4500 P E-2011	
180-89850-2	GR-2	Total/NA	Water	SM4500 P E-2011	
MB 240-381671/3	Method Blank	Total/NA	Water	SM4500 P E-2011	
LCS 240-381671/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	
180-89850-1 MS	LIMESTONE RUN	Total/NA	Water	SM4500 P E-2011	
180-89850-1 MSD	LIMESTONE RUN	Total/NA	Water	SM4500 P E-2011	

Chain of Custody Record

Client Information		Sampler: Jackie Rocky		Lab PM: Nestasie, Dominic J		Carrier Tracking No(s):		COC No: 180-51396-10639.1	
Client Contact: Jackie Rocky		Phone: 412-249-3140		E-Mail: dominic.nestasie@testamericainc.com		Page: Page 1 of 1		Job #:	
Company: Civil & Environmental Consultants Inc		Address: 333 Baldwin Rd.		City: Pittsburgh		State, Zip: PA, 15205		Phone: 412-249-3140	
Email: jrockey@cecinc.com		Project #: 18020244		Project Name: Limestone Run 2 Grinnage Run		SSOW#:		Due Date Requested:	
TAT Requested (days):		PO #: Purchase Order not required		WO #:		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	
Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (Water, Solid, Other)		Preservation Code:	
Sample Identification		Sample Date		Sample Time		Sample Type		Matrix	
Limestone Run		5-8-19		1040		G		Water	
Limestone Run		5-8-19		1040		G		Water	
GR-2		5-8-19		1540		G		Water	
GR-2		5-8-19		1540		G		Water	
Special Instructions/Note:		TAN 1 = 3.2°C		Thermo 10		CF=20		FEC	
Total Number of Containers		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		350.1 Nitrogen, Ammonia		2220B, 300_ORGFMS, SM4500_H+	
200.8 (MOD) Special List 200.8		4500_P_E - Total Phosphorus as P		2540C_Calcd - TDS		200.8 (MOD) Special List 200.8		Filtered Metals	
Preservation Codes:		A - HCL		M - Hexane		B - NaOH		N - None	
C - Zn Acetate		O - AsNaO2		P - Na2OAS		D - Nitric Acid		Q - Na2SO3	
E - NaHSO4		F - MeOH		R - Na2S2O3		G - Amchlor		S - H2SO4	
H - Ascorbic Acid		I - Ice		T - TSP Dodecahydrate		J - DI Water		U - Acetone	
K - EDTA		L - EDA		V - MCAA		W - pH 4-5		Z - other (specify)	
Other:		Special Instructions/Note:		TAN 1 = 3.2°C		Thermo 10		CF=20	
FEC		180-99850 Chain of Custody		Barcode		180-99850 Chain of Custody		Barcode	
Possible Hazard Identification		Non-Hazard <input type="checkbox"/>		Flammable <input type="checkbox"/>		Skin Irritant <input type="checkbox"/>		Poison B <input type="checkbox"/>	
Deliverable Requested: I, II, III, IV, Other (specify)		Unknown <input checked="" type="checkbox"/>		Radiological <input type="checkbox"/>		Return To Client <input type="checkbox"/>		Disposal By Lab <input type="checkbox"/>	
Empty Kit Relinquished by:		Date: 5/8/19		Time: 19:00		Company: CEC		Method of Shipment:	
Relinquished by: Jackie Rocky		Date/Time: 5/19/19		Time: 12:45		Company: CEC		Date/Time: 5/19/19	
Relinquished by: Jackie Rocky		Date/Time: 5/19/19		Time: 12:45		Company: CEC		Date/Time: 5/19/19	
Relinquished by: Jackie Rocky		Date/Time: 5/19/19		Time: 12:45		Company: CEC		Date/Time: 5/19/19	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Received by: Jackie Rocky		Date/Time: 5/19/19	
Received by: Jackie Rocky		Date/Time: 5/19/19		Time: 12:45		Company: CEC		Date/Time: 5/19/19	
Received by: Jackie Rocky		Date/Time: 5/19/19		Time: 12:45		Company: CEC		Date/Time: 5/19/19	
Received by: Jackie Rocky		Date/Time: 5/19/19		Time: 12:45		Company: CEC		Date/Time: 5/19/19	

TestAmerica Canton Sample Receipt Form/Narrative

Login # : _____

Canton Facility

Client Pitt Site Name _____


Cooler unpacked by: [Signature]

Cooler Received on 5-10-19 Opened on 5-10-19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ **Storage Location** _____

TestAmerica Cooler # _____ Foam Box _____ Client Cooler _____ Box Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF -0.2 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0.7°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes NA
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC984738
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Yes No NA  Larger than this.
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login Sample Receipt Checklist

Client: Civil & Environmental Consultants Inc

Job Number: 180-89850-1

Login Number: 89850

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

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.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
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	





1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

10 May 2019

Civil & Environmental Consultants, Inc.
Attn: Jackie Rockey
333 Baldwin Road
Pittsburgh, PA 15205

Work Order: 9050687
Project: Fecal Testing
Project Description: Fecal Testing

Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
Limestone Run	9050687-01	Waste Water	05/08/2019 10:40	5/8/19 13:32	

Report Narrative

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

Definitions

RL Reporting Limit

Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.

S=Environmental Service Laboratories, Inc.-Southern Division, PA DEP lab ID #63-04247

Approved By

Sean Mintzer
Project Manager



1803 Philadelphia Street
 Indiana, PA 15701
 P: (724) 463-8378
 F: (724) 465-4209
 PADEP: 32-00382

1276 Bentleyville Road
 Van Voorhis, PA 15366
 P: (724) 258-8378
 F: (724) 258-8376
 PADEP: 63-04247

435 Broad Street
 Montoursville, PA 17754
 P: (570) 321-9002
 F: (570) 321-1957
 PADEP: 41-04880

950 West Main Street
 Sharpsville, PA 16150
 P: (724) 463-8378 x 500
 F: (724) 465-4209
 PADEP: 43-04934

Civil & Environmental Consultants, Inc.
 333 Baldwin Road
 Pittsburgh, PA 15205

Reported: 05/10/2019 18:19

Lab Sample ID#: 9050687-01
Sample Type: Waste Water
Sample Source: Grab
Sampler: Client
Client Sample ID: Limestone Run

Sample Date: 05/08/2019 10:40
Receipt Date: 05/08/2019 13:32

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/ Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	15	MPN/100 mL		1	DC/S	05/08/19 14:35	05/09/19 08:45

ENVIRONMENTAL SERVICE LABORATORIES, INC.

SAMPLE REQUEST & CHAIN OF CUSTODY

PAGE 1 OF 1

HEADQUARTERS
1803 Philadelphia St.
Indiana, PA 15701
(724) 463-TEST
FAX: (724) 465-4209

SOUTHERN DIVISION
1276 Bentleyville Road
Van Vochris, PA 15366
(724) 258-TEST
FAX: (724) 258-8376

NORTHERN DIVISION
435 Broad Street
Mountourville, PA 17754
(570) 321-9008
FAX: (570) 321-1957

NORTHWEST DIVISION
950 Main Street
Sharpsville, PA 16150
(724) 463-TEST
FAX: (724) 465-4209



FOR INTERNAL LABORATORY USE ONLY

Sample Identification	ESL#	Composite		Grab		Matrix	# of Containers	Container Type	Analysis Requested
		Date on/off	Time on/off	Date	Time				
Limestone Run	9050687			5-8-19	10:40	WW	1/8V	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform
						WW	1	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform
						WW	1	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform

THE UNDERSIGNED PURCHASER HEREBY AGREES TO PAY SERVICE CHARGES ON ACCOUNTS OVER 31 DAYS OLD.
1. THESE SERVICE CHARGES WILL ACCRUE AT THE RATE OF 1.12% PER MONTH (18% PER ANNUM) OR THE MAXIMUM ALLOWED BY LAW.)
2. THE UNDERSIGNED PURCHASER AGREES TO PAY, IN THE EVENT HIS ACCOUNT BECOMES DELINQUENT AND IS TURNED OVER TO ANY ATTORNEY FOR COLLECTION, REASONABLE ATTORNEY'S FEES PLUS ALL COURT AND ATTENDANT COLLECTION COSTS.

Project Notes:
Fecal Analysis

Sampled By: (Signature) *[Signature]* **Date/Time** 5/8/19 11:40
Relinquished By: (Signature) *[Signature]* **Date/Time** 5/8/19 13:32
Received By: (Signature) *[Signature]* **Date/Time** 5-8-19 13:30

Company/Name: Civil & Environmental Consultants, Inc.
Address: 333 Baldwin Road, Pittsburgh, PA 15205
Contact Person: Jackie Roeky
Mobile: 412-559-7035
Phone Number: 412-249-3140
Fax Number: (412) 429-2114
Email: bvaal@cecin.com
yroeky@cecin.com

Correct Preservations: Y / N / NA **Correct Containers:** Y / N / NA **Receipt Temperature:** _____

ANALYTICAL LABORATORY REPORTS
FLETCHER RUN WATER SAMPLING EVENT
JUNE 26, 2019

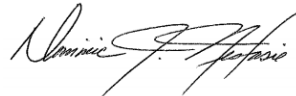
ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-91943-1
Client Project/Site: Project No. 191-398

For:
Civil & Environmental Consultants Inc
333 Baldwin Rd.
Pittsburgh, Pennsylvania 15205

Attn: Jackie Rockey



Authorized for release by:
7/15/2019 4:28:05 PM

Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	6
Method Summary	7
Lab Chronicle	8
Client Sample Results	11
QC Sample Results	15
QC Association Summary	19
Chain of Custody	22
Receipt Checklists	26

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Project No. 191-398

Job ID: 180-91943-1

Job ID: 180-91943-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

**Job Narrative
180-91943-1**

Receipt:

The samples were received on 6/27/2019 at 12:41 PM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at time of receipt was 2.6° C.

Anions:

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

Metals:

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

General Chemistry:

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Project No. 191-398

Job ID: 180-91943-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

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)

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Project No. 191-398

Job ID: 180-91943-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	EPA Region	Identification Number	Expiration Date
Pennsylvania	NELAP	3	02-00416	04-30-20

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
SM 2340B		Water	Calcium hardness as calcium carbonate
SM 2340B		Water	Hardness as calcium carbonate
SM 2340B		Water	Magnesium hardness as calcium carbonate

Laboratory: Eurofins TestAmerica, Canton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	EPA Region	Identification Number	Expiration Date
Pennsylvania	NELAP	3	68-00340	08-31-19 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Project No. 191-398

Job ID: 180-91943-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-91943-1	GR-2	Water	06/26/19 10:35	06/27/19 12:41	
180-91943-2	GR-1	Water	06/26/19 11:50	06/27/19 12:41	
180-91943-3	FR-2	Water	06/26/19 13:00	06/27/19 12:41	
180-91943-4	FR-1	Water	06/26/19 13:40	06/27/19 12:41	

1

2

3

4

5

6

7

8

9

10

11

12

13

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Project No. 191-398

Job ID: 180-91943-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	TAL PIT
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 4500 H+ B	pH	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
SM4500 P E-2011	Phosphorus	SM	TAL CAN
200.8	Preparation, Total Recoverable Metals	EPA	TAL PIT
Distill/Ammonia	Distillation, Ammonia	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Project No. 191-398

Job ID: 180-91943-1

Client Sample ID: GR-2
Date Collected: 06/26/19 10:35
Date Received: 06/27/19 12:41

Lab Sample ID: 180-91943-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			283114	06/27/19 19:30	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	283299	06/28/19 06:53	RJR	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	284732	07/12/19 21:24	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	283298	06/28/19 06:52	RJR	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	284732	07/12/19 18:35	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			283136	07/15/19 13:08	RJR	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	284453	07/10/19 18:27	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			284693	07/12/19 18:25	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	283775	07/02/19 17:22	TAM	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			283326	06/28/19 15:04	RJP	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: PCTITRATOR		1			283528	06/28/19 15:19	JAS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	390473	07/10/19 09:59	TPH	TAL CAN

Client Sample ID: GR-1
Date Collected: 06/26/19 11:50
Date Received: 06/27/19 12:41

Lab Sample ID: 180-91943-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			283282	06/28/19 09:22	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	283299	06/28/19 06:53	RJR	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	284732	07/12/19 21:43	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	283298	06/28/19 06:52	RJR	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	284732	07/12/19 18:54	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			283136	07/15/19 13:08	RJR	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	284453	07/10/19 18:27	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			284693	07/12/19 18:15	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	283775	07/02/19 17:22	TAM	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			283326	06/28/19 15:05	RJP	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Project No. 191-398

Job ID: 180-91943-1

Client Sample ID: GR-1

Date Collected: 06/26/19 11:50

Date Received: 06/27/19 12:41

Lab Sample ID: 180-91943-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM2320 B		1			283528	06/28/19 15:26	JAS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	390473	07/10/19 10:03	TPH	TAL CAN

Client Sample ID: FR-2

Date Collected: 06/26/19 13:00

Date Received: 06/27/19 12:41

Lab Sample ID: 180-91943-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			283282	06/28/19 09:38	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	283299	06/28/19 06:53	RJR	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	284732	07/12/19 21:48	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	283298	06/28/19 06:52	RJR	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	284732	07/12/19 18:58	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			283136	07/15/19 13:08	RJR	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	284453	07/10/19 18:27	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			284693	07/12/19 18:16	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	283775	07/02/19 17:22	TAM	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			283326	06/28/19 15:06	RJP	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: PCTITRATOR		1			283528	06/28/19 15:32	JAS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	390473	07/10/19 10:07	TPH	TAL CAN

Client Sample ID: FR-1

Date Collected: 06/26/19 13:40

Date Received: 06/27/19 12:41

Lab Sample ID: 180-91943-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			283282	06/28/19 09:53	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	283299	06/28/19 06:53	RJR	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	284732	07/12/19 21:52	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	283298	06/28/19 06:52	RJR	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	284732	07/12/19 19:03	WTR	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Project No. 191-398

Job ID: 180-91943-1

Client Sample ID: FR-1

Lab Sample ID: 180-91943-4

Date Collected: 06/26/19 13:40

Matrix: Water

Date Received: 06/27/19 12:41

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	SM 2340B		1			283136	07/15/19 13:08	RJR	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	284453	07/10/19 18:27	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			284693	07/12/19 18:18	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	283775	07/02/19 17:22	TAM	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			283326	06/28/19 15:07	RJP	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: PCTITRATOR		1			283528	06/28/19 15:38	JAS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	390473	07/10/19 10:11	TPH	TAL CAN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

TPH = Tom Harshman

Lab: TAL PIT

Batch Type: Prep

BSH = Brandon Hough

RJR = Ron Rosenbaum

Batch Type: Analysis

BSH = Brandon Hough

JAS = Joshua Schmidt

MJH = Matthew Hartman

RJP = Rockwell Pokrant

RJR = Ron Rosenbaum

TAM = Tessa Mastalski

WTR = Bill Reinheimer

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Project No. 191-398

Job ID: 180-91943-1

Client Sample ID: GR-2
Date Collected: 06/26/19 10:35
Date Received: 06/27/19 12:41

Lab Sample ID: 180-91943-1
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	22		1.0	0.71	mg/L			06/27/19 19:30	1
Nitrate as N	0.25		0.10	0.023	mg/L			06/27/19 19:30	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	150		30	12	ug/L		06/28/19 06:52	07/12/19 18:35	1
Calcium	57000		500	180	ug/L		06/28/19 06:52	07/12/19 18:35	1
Iron	310		50	15	ug/L		06/28/19 06:52	07/12/19 18:35	1
Magnesium	9600		500	70	ug/L		06/28/19 06:52	07/12/19 18:35	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		06/28/19 06:53	07/12/19 21:24	1
Arsenic	0.53	J	1.0	0.17	ug/L		06/28/19 06:53	07/12/19 21:24	1
Cadmium	1.0	U	1.0	0.21	ug/L		06/28/19 06:53	07/12/19 21:24	1
Copper	2.0	U	2.0	0.99	ug/L		06/28/19 06:53	07/12/19 21:24	1
Lead	1.0	U	1.0	0.16	ug/L		06/28/19 06:53	07/12/19 21:24	1
Nickel	0.99	J	1.0	0.46	ug/L		06/28/19 06:53	07/12/19 21:24	1
Selenium	5.0	U	5.0	0.81	ug/L		06/28/19 06:53	07/12/19 21:24	1
Zinc	5.0	U	5.0	2.2	ug/L		06/28/19 06:53	07/12/19 21:24	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	140		0.25	0.0071	mg/L			07/15/19 13:08	1
Hardness as calcium carbonate	180		0.67	0.022	mg/L			07/15/19 13:08	1
Magnesium hardness as calcium carbonate	40		0.41	0.0048	mg/L			07/15/19 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		07/10/19 18:27	07/12/19 18:25	1
Total Dissolved Solids	290		10	10	mg/L			07/02/19 17:22	1
pH	8.2	HF	0.1	0.1	SU			06/28/19 15:04	1
Total Alkalinity as CaCO3 to pH 4.!	160		5.0	5.0	mg/L			06/28/19 15:19	1
Total Phosphorus as P	0.081	J	0.10	0.037	mg/L			07/10/19 09:59	1

Client Sample ID: GR-1
Date Collected: 06/26/19 11:50
Date Received: 06/27/19 12:41

Lab Sample ID: 180-91943-2
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	31		1.0	0.71	mg/L			06/28/19 09:22	1
Nitrate as N	0.37		0.10	0.023	mg/L			06/28/19 09:22	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	270		30	12	ug/L		06/28/19 06:52	07/12/19 18:54	1
Calcium	59000		500	180	ug/L		06/28/19 06:52	07/12/19 18:54	1
Iron	480		50	15	ug/L		06/28/19 06:52	07/12/19 18:54	1
Magnesium	9900		500	70	ug/L		06/28/19 06:52	07/12/19 18:54	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Project No. 191-398

Job ID: 180-91943-1

Client Sample ID: GR-1

Lab Sample ID: 180-91943-2

Date Collected: 06/26/19 11:50

Matrix: Water

Date Received: 06/27/19 12:41

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		06/28/19 06:53	07/12/19 21:43	1
Arsenic	0.74	J	1.0	0.17	ug/L		06/28/19 06:53	07/12/19 21:43	1
Cadmium	1.0	U	1.0	0.21	ug/L		06/28/19 06:53	07/12/19 21:43	1
Copper	2.0	U	2.0	0.99	ug/L		06/28/19 06:53	07/12/19 21:43	1
Lead	1.0	U	1.0	0.16	ug/L		06/28/19 06:53	07/12/19 21:43	1
Nickel	0.50	J	1.0	0.46	ug/L		06/28/19 06:53	07/12/19 21:43	1
Selenium	0.82	J	5.0	0.81	ug/L		06/28/19 06:53	07/12/19 21:43	1
Zinc	3.3	J	5.0	2.2	ug/L		06/28/19 06:53	07/12/19 21:43	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	150		0.25	0.0071	mg/L			07/15/19 13:08	1
Hardness as calcium carbonate	190		0.67	0.022	mg/L			07/15/19 13:08	1
Magnesium hardness as calcium carbonate	41		0.41	0.0048	mg/L			07/15/19 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		07/10/19 18:27	07/12/19 18:15	1
Total Dissolved Solids	320		10	10	mg/L			07/02/19 17:22	1
pH	8.2	HF	0.1	0.1	SU			06/28/19 15:05	1
Total Alkalinity as CaCO3 to pH 4.5	150		5.0	5.0	mg/L			06/28/19 15:26	1
Total Phosphorus as P	0.063	J	0.10	0.037	mg/L			07/10/19 10:03	1

Client Sample ID: FR-2

Lab Sample ID: 180-91943-3

Date Collected: 06/26/19 13:00

Matrix: Water

Date Received: 06/27/19 12:41

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	26		1.0	0.71	mg/L			06/28/19 09:38	1
Nitrate as N	0.13		0.10	0.023	mg/L			06/28/19 09:38	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	100		30	12	ug/L		06/28/19 06:52	07/12/19 18:58	1
Calcium	62000		500	180	ug/L		06/28/19 06:52	07/12/19 18:58	1
Iron	260		50	15	ug/L		06/28/19 06:52	07/12/19 18:58	1
Magnesium	11000		500	70	ug/L		06/28/19 06:52	07/12/19 18:58	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		06/28/19 06:53	07/12/19 21:48	1
Arsenic	0.70	J	1.0	0.17	ug/L		06/28/19 06:53	07/12/19 21:48	1
Cadmium	1.0	U	1.0	0.21	ug/L		06/28/19 06:53	07/12/19 21:48	1
Copper	2.0	U	2.0	0.99	ug/L		06/28/19 06:53	07/12/19 21:48	1
Lead	1.0	U	1.0	0.16	ug/L		06/28/19 06:53	07/12/19 21:48	1
Nickel	0.69	J	1.0	0.46	ug/L		06/28/19 06:53	07/12/19 21:48	1
Selenium	5.0	U	5.0	0.81	ug/L		06/28/19 06:53	07/12/19 21:48	1
Zinc	5.0	U	5.0	2.2	ug/L		06/28/19 06:53	07/12/19 21:48	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Project No. 191-398

Job ID: 180-91943-1

Client Sample ID: FR-2

Lab Sample ID: 180-91943-3

Date Collected: 06/26/19 13:00

Matrix: Water

Date Received: 06/27/19 12:41

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	150		0.25	0.0071	mg/L			07/15/19 13:08	1
Hardness as calcium carbonate	200		0.67	0.022	mg/L			07/15/19 13:08	1
Magnesium hardness as calcium carbonate	45		0.41	0.0048	mg/L			07/15/19 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		07/10/19 18:27	07/12/19 18:16	1
Total Dissolved Solids	330		10	10	mg/L			07/02/19 17:22	1
pH	8.1	HF	0.1	0.1	SU			06/28/19 15:06	1
Total Alkalinity as CaCO3 to pH 4.!	180		5.0	5.0	mg/L			06/28/19 15:32	1
Total Phosphorus as P	0.063	J	0.10	0.037	mg/L			07/10/19 10:07	1

Client Sample ID: FR-1

Lab Sample ID: 180-91943-4

Date Collected: 06/26/19 13:40

Matrix: Water

Date Received: 06/27/19 12:41

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	33		1.0	0.71	mg/L			06/28/19 09:53	1
Nitrate as N	0.15		0.10	0.023	mg/L			06/28/19 09:53	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	120		30	12	ug/L		06/28/19 06:52	07/12/19 19:03	1
Calcium	66000		500	180	ug/L		06/28/19 06:52	07/12/19 19:03	1
Iron	280		50	15	ug/L		06/28/19 06:52	07/12/19 19:03	1
Magnesium	12000		500	70	ug/L		06/28/19 06:52	07/12/19 19:03	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		06/28/19 06:53	07/12/19 21:52	1
Arsenic	0.56	J	1.0	0.17	ug/L		06/28/19 06:53	07/12/19 21:52	1
Cadmium	1.0	U	1.0	0.21	ug/L		06/28/19 06:53	07/12/19 21:52	1
Copper	2.0	U	2.0	0.99	ug/L		06/28/19 06:53	07/12/19 21:52	1
Lead	1.0	U	1.0	0.16	ug/L		06/28/19 06:53	07/12/19 21:52	1
Nickel	0.72	J	1.0	0.46	ug/L		06/28/19 06:53	07/12/19 21:52	1
Selenium	5.0	U	5.0	0.81	ug/L		06/28/19 06:53	07/12/19 21:52	1
Zinc	5.0	U	5.0	2.2	ug/L		06/28/19 06:53	07/12/19 21:52	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	160		0.25	0.0071	mg/L			07/15/19 13:08	1
Hardness as calcium carbonate	210		0.67	0.022	mg/L			07/15/19 13:08	1
Magnesium hardness as calcium carbonate	48		0.41	0.0048	mg/L			07/15/19 13:08	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.14		0.10	0.088	mg/L		07/10/19 18:27	07/12/19 18:18	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Project No. 191-398

Job ID: 180-91943-1

Client Sample ID: FR-1

Lab Sample ID: 180-91943-4

Date Collected: 06/26/19 13:40

Matrix: Water

Date Received: 06/27/19 12:41

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	360		10	10	mg/L			07/02/19 17:22	1
pH	8.0	HF	0.1	0.1	SU			06/28/19 15:07	1
Total Alkalinity as CaCO3 to pH 4.!	180		5.0	5.0	mg/L			06/28/19 15:38	1
Total Phosphorus as P	0.054	J	0.10	0.037	mg/L			07/10/19 10:11	1

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Project No. 191-398

Job ID: 180-91943-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-283114/43
Matrix: Water
Analysis Batch: 283114

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.71	mg/L			06/27/19 17:59	1
Nitrate as N	0.10	U	0.10	0.023	mg/L			06/27/19 17:59	1

Lab Sample ID: LCS 180-283114/42
Matrix: Water
Analysis Batch: 283114

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.25	1.27		mg/L	101	90 - 110	

Lab Sample ID: MB 180-283282/18
Matrix: Water
Analysis Batch: 283282

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.71	mg/L			06/28/19 09:07	1
Nitrate as N	0.10	U	0.10	0.023	mg/L			06/28/19 09:07	1

Lab Sample ID: LCS 180-283282/17
Matrix: Water
Analysis Batch: 283282

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.25	1.33		mg/L	107	90 - 110	

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-283298/1-A
Matrix: Water
Analysis Batch: 284732

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 283298

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	30	U	30	12	ug/L		06/28/19 06:52	07/12/19 18:11	1
Calcium	500	U	500	180	ug/L		06/28/19 06:52	07/12/19 18:11	1
Iron	50	U	50	15	ug/L		06/28/19 06:52	07/12/19 18:11	1
Magnesium	500	U	500	70	ug/L		06/28/19 06:52	07/12/19 18:11	1

Lab Sample ID: LCS 180-283298/2-A
Matrix: Water
Analysis Batch: 284732

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 283298

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Calcium	25000	24900		ug/L	100	85 - 115	
Iron	5000	4810		ug/L	96	85 - 115	
Magnesium	25000	25600		ug/L	103	85 - 115	

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Project No. 191-398

Job ID: 180-91943-1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-91943-1 MS

Matrix: Water

Analysis Batch: 284732

Client Sample ID: GR-2

Prep Type: Total Recoverable

Prep Batch: 283298

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Aluminum	150		5000	4700		ug/L		91	70 - 130	
Calcium	57000		25000	81200		ug/L		96	70 - 130	
Iron	310		5000	4870		ug/L		91	70 - 130	
Magnesium	9600		25000	34300		ug/L		99	70 - 130	

Lab Sample ID: 180-91943-1 MSD

Matrix: Water

Analysis Batch: 284732

Client Sample ID: GR-2

Prep Type: Total Recoverable

Prep Batch: 283298

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec.		RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits			
Aluminum	150		5000	5080		ug/L		99	70 - 130	8	20	
Calcium	57000		25000	79900		ug/L		91	70 - 130	2	20	
Iron	310		5000	5130		ug/L		97	70 - 130	5	20	
Magnesium	9600		25000	34800		ug/L		101	70 - 130	2	20	

Lab Sample ID: MB 180-283299/1-A

Matrix: Water

Analysis Batch: 284732

Client Sample ID: Method Blank

Prep Type: Total Recoverable

Prep Batch: 283299

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	30	U	30	12	ug/L		06/28/19 06:53	07/12/19 21:05	1
Arsenic	1.0	U	1.0	0.17	ug/L		06/28/19 06:53	07/12/19 21:05	1
Cadmium	1.0	U	1.0	0.21	ug/L		06/28/19 06:53	07/12/19 21:05	1
Copper	2.0	U	2.0	0.99	ug/L		06/28/19 06:53	07/12/19 21:05	1
Lead	1.0	U	1.0	0.16	ug/L		06/28/19 06:53	07/12/19 21:05	1
Nickel	1.0	U	1.0	0.46	ug/L		06/28/19 06:53	07/12/19 21:05	1
Selenium	5.0	U	5.0	0.81	ug/L		06/28/19 06:53	07/12/19 21:05	1
Zinc	5.0	U	5.0	2.2	ug/L		06/28/19 06:53	07/12/19 21:05	1

Lab Sample ID: LCS 180-283299/2-A

Matrix: Water

Analysis Batch: 284732

Client Sample ID: Lab Control Sample

Prep Type: Total Recoverable

Prep Batch: 283299

Analyte	Spike Added	LCS	LCS	Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	
Aluminum	5000	4930		ug/L		99	85 - 115	
Arsenic	1000	954		ug/L		95	85 - 115	
Cadmium	500	491		ug/L		98	85 - 115	
Copper	500	476		ug/L		95	85 - 115	
Lead	500	482		ug/L		96	85 - 115	
Nickel	500	462		ug/L		92	85 - 115	
Selenium	1000	926		ug/L		93	85 - 115	
Zinc	250	234		ug/L		93	85 - 115	

Lab Sample ID: 180-91943-1 MS

Matrix: Water

Analysis Batch: 284732

Client Sample ID: GR-2

Prep Type: Dissolved

Prep Batch: 283299

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec.	
	Result	Qualifier	Added	Result	Qualifier				Limits	
Aluminum	30	U	5000	4840		ug/L		97	70 - 130	

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Project No. 191-398

Job ID: 180-91943-1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-91943-1 MS
Matrix: Water
Analysis Batch: 284732

Client Sample ID: GR-2
Prep Type: Dissolved
Prep Batch: 283299

Analyte	Sample	Sample	Spike	MS		Unit	D	%Rec	%Rec.	
	Result	Qualifier		Result	Qualifier				Limits	
Arsenic	0.53	J	1000	981		ug/L		98	70 - 130	
Cadmium	1.0	U	500	504		ug/L		101	70 - 130	
Copper	2.0	U	500	484		ug/L		97	70 - 130	
Lead	1.0	U	500	495		ug/L		99	70 - 130	
Nickel	0.99	J	500	471		ug/L		94	70 - 130	
Selenium	5.0	U	1000	922		ug/L		92	70 - 130	
Zinc	5.0	U	250	243		ug/L		97	70 - 130	

Lab Sample ID: 180-91943-1 MSD
Matrix: Water
Analysis Batch: 284732

Client Sample ID: GR-2
Prep Type: Dissolved
Prep Batch: 283299

Analyte	Sample	Sample	Spike	MSD		Unit	D	%Rec	%Rec.		RPD	
	Result	Qualifier		Result	Qualifier				Limits	RPD	Limit	
Aluminum	30	U	5000	4730		ug/L		95	70 - 130		2	20
Arsenic	0.53	J	1000	964		ug/L		96	70 - 130		2	20
Cadmium	1.0	U	500	496		ug/L		99	70 - 130		2	20
Copper	2.0	U	500	472		ug/L		94	70 - 130		2	20
Lead	1.0	U	500	486		ug/L		97	70 - 130		2	20
Nickel	0.99	J	500	458		ug/L		91	70 - 130		3	20
Selenium	5.0	U	1000	909		ug/L		91	70 - 130		1	20
Zinc	5.0	U	250	240		ug/L		96	70 - 130		1	20

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-284453/6-A
Matrix: Water
Analysis Batch: 284693

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 284453

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		07/10/19 18:27	07/12/19 17:56		1

Lab Sample ID: LCS 180-284453/7-A
Matrix: Water
Analysis Batch: 284693

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 284453

Analyte	Spike	LCS		Unit	D	%Rec	%Rec.	
		Result	Qualifier				Limits	
Ammonia, distilled	2.00	1.83		mg/L		91	90 - 110	

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-283775/2
Matrix: Water
Analysis Batch: 283775

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB	MB	RL	MDL	Unit	D	Prepared	Analyzed	Dil	Fac
	Result	Qualifier								
Total Dissolved Solids	10	U	10	10	mg/L			07/02/19 17:22		1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Project No. 191-398

Job ID: 180-91943-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 180-283775/1
 Matrix: Water
 Analysis Batch: 283775

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	201	204		mg/L		101	80 - 120

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 180-283326/1
 Matrix: Water
 Analysis Batch: 283326

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.1		SU		101	99 - 101

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-283528/33
 Matrix: Water
 Analysis Batch: 283528

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L			06/28/19 13:23	1

Lab Sample ID: LCS 180-283528/32
 Matrix: Water
 Analysis Batch: 283528

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	250	235		mg/L		94	90 - 110

Method: SM4500 P E-2011 - Phosphorus

Lab Sample ID: MB 240-390473/3
 Matrix: Water
 Analysis Batch: 390473

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			07/10/19 08:44	1

Lab Sample ID: LCS 240-390473/4
 Matrix: Water
 Analysis Batch: 390473

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.418		mg/L		103	77 - 120

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Project No. 191-398

Job ID: 180-91943-1

HPLC/IC

Analysis Batch: 283114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-1	GR-2	Total/NA	Water	EPA 300.0 R2.1	
MB 180-283114/43	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-283114/42	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 283282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-2	GR-1	Total/NA	Water	EPA 300.0 R2.1	
180-91943-3	FR-2	Total/NA	Water	EPA 300.0 R2.1	
180-91943-4	FR-1	Total/NA	Water	EPA 300.0 R2.1	
MB 180-283282/18	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-283282/17	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Analysis Batch: 283136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-1	GR-2	Total Recoverable	Water	SM 2340B	
180-91943-2	GR-1	Total Recoverable	Water	SM 2340B	
180-91943-3	FR-2	Total Recoverable	Water	SM 2340B	
180-91943-4	FR-1	Total Recoverable	Water	SM 2340B	

Prep Batch: 283298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-1	GR-2	Total Recoverable	Water	200.8	
180-91943-2	GR-1	Total Recoverable	Water	200.8	
180-91943-3	FR-2	Total Recoverable	Water	200.8	
180-91943-4	FR-1	Total Recoverable	Water	200.8	
MB 180-283298/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-283298/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
180-91943-1 MS	GR-2	Total Recoverable	Water	200.8	
180-91943-1 MSD	GR-2	Total Recoverable	Water	200.8	

Prep Batch: 283299

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-1	GR-2	Dissolved	Water	200.8	
180-91943-2	GR-1	Dissolved	Water	200.8	
180-91943-3	FR-2	Dissolved	Water	200.8	
180-91943-4	FR-1	Dissolved	Water	200.8	
MB 180-283299/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-283299/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
180-91943-1 MS	GR-2	Dissolved	Water	200.8	
180-91943-1 MSD	GR-2	Dissolved	Water	200.8	

Analysis Batch: 284732

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-1	GR-2	Dissolved	Water	EPA 200.8 Rev 5	283299
180-91943-1	GR-2	Total Recoverable	Water	EPA 200.8 Rev 5	283298
180-91943-2	GR-1	Dissolved	Water	EPA 200.8 Rev 5	283299

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Project No. 191-398

Job ID: 180-91943-1

Metals (Continued)

Analysis Batch: 284732 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-2	GR-1	Total Recoverable	Water	EPA 200.8 Rev 5	283298
180-91943-3	FR-2	Dissolved	Water	EPA 200.8 Rev 5	283299
180-91943-3	FR-2	Total Recoverable	Water	EPA 200.8 Rev 5	283298
180-91943-4	FR-1	Dissolved	Water	EPA 200.8 Rev 5	283299
180-91943-4	FR-1	Total Recoverable	Water	EPA 200.8 Rev 5	283298
MB 180-283298/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	283298
MB 180-283299/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	283299
LCS 180-283298/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	283298
LCS 180-283299/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	283299
180-91943-1 MS	GR-2	Dissolved	Water	EPA 200.8 Rev 5	283299
180-91943-1 MS	GR-2	Total Recoverable	Water	EPA 200.8 Rev 5	283298
180-91943-1 MSD	GR-2	Dissolved	Water	EPA 200.8 Rev 5	283299
180-91943-1 MSD	GR-2	Total Recoverable	Water	EPA 200.8 Rev 5	283298

General Chemistry

Analysis Batch: 283326

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-1	GR-2	Total/NA	Water	SM 4500 H+ B	
180-91943-2	GR-1	Total/NA	Water	SM 4500 H+ B	
180-91943-3	FR-2	Total/NA	Water	SM 4500 H+ B	
180-91943-4	FR-1	Total/NA	Water	SM 4500 H+ B	
LCS 180-283326/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 283528

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-1	GR-2	Total/NA	Water	SM2320 B	
180-91943-2	GR-1	Total/NA	Water	SM2320 B	
180-91943-3	FR-2	Total/NA	Water	SM2320 B	
180-91943-4	FR-1	Total/NA	Water	SM2320 B	
MB 180-283528/33	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-283528/32	Lab Control Sample	Total/NA	Water	SM2320 B	

Analysis Batch: 283775

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-1	GR-2	Total/NA	Water	SM 2540C	
180-91943-2	GR-1	Total/NA	Water	SM 2540C	
180-91943-3	FR-2	Total/NA	Water	SM 2540C	
180-91943-4	FR-1	Total/NA	Water	SM 2540C	
MB 180-283775/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-283775/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Project No. 191-398

Job ID: 180-91943-1

General Chemistry

Prep Batch: 284453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-1	GR-2	Total/NA	Water	Distill/Ammonia	
180-91943-2	GR-1	Total/NA	Water	Distill/Ammonia	
180-91943-3	FR-2	Total/NA	Water	Distill/Ammonia	
180-91943-4	FR-1	Total/NA	Water	Distill/Ammonia	
MB 180-284453/6-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 180-284453/7-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 284693

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-1	GR-2	Total/NA	Water	EPA 350.1	284453
180-91943-2	GR-1	Total/NA	Water	EPA 350.1	284453
180-91943-3	FR-2	Total/NA	Water	EPA 350.1	284453
180-91943-4	FR-1	Total/NA	Water	EPA 350.1	284453
MB 180-284453/6-A	Method Blank	Total/NA	Water	EPA 350.1	284453
LCS 180-284453/7-A	Lab Control Sample	Total/NA	Water	EPA 350.1	284453

Analysis Batch: 390473

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-91943-1	GR-2	Total/NA	Water	SM4500 P E-2011	
180-91943-2	GR-1	Total/NA	Water	SM4500 P E-2011	
180-91943-3	FR-2	Total/NA	Water	SM4500 P E-2011	
180-91943-4	FR-1	Total/NA	Water	SM4500 P E-2011	
MB 240-390473/3	Method Blank	Total/NA	Water	SM4500 P E-2011	
LCS 240-390473/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	

Chain of Custody Record

Client Information Company: Jackie Rockey Address: 333 Baldwin Rd. City: Pittsburgh State, Zip: PA, 15205 Phone: 412-249-3140 Email: jrockey@cecinc.com Project Name: 18020244 Project No. 191-398 Site:		Lab PM: Nestasie, Dominic J E-Mail: dominic.nestasie@testamericainc.com Carrier Tracking No(s): COC No: 180-52482-10639.1 Page: Page 1 of 1 Job #:	
Due Date Requested: TAT Requested (days): STANDARD PO #: 412-249-3140 Purchase Order not required WO #:		Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D 350.1 - Nitrogen, Ammonia 2320B, 300_ORGFMS, SM4500_H+ 2540C_Calcd - TDS 4500_P_E - Total Phosphorus as P 200.8 - (MOD) Special List 200.8 Field Filtered Metals (Disso)	
Sample Identification Sample ID: GR-2, GR-2, GR-1, GR-1, FR-2, FR-2, FR-1, FR-1 Sample Date: 6-26-19 Sample Time: 10:35, 10:35, 11:50, 11:50, 13:00, 13:00, 13:40, 13:40 Sample Type: G (Grab) Matrix: Water Preservation Code:		Total Number of Containers: 5 Special Instructions/Note: Q1 2926°C Run 10 CF=0.3	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal B	
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:	
Empty Kit Relinquished by:		Method of Shipment:	
Relinquished by: Michael J. Dorman Date/Time: 6/26/19 17:20 Company:		Received by: RB Bement Date/Time: 6/27/19 10:30 Company:	
Relinquished by: RB Bement Date/Time: 6/27/19 12:41 Company:		Received by: JA Pitt Date/Time: 6/27/19 12:41 Company:	
Relinquished by:		Received by:	
Custody Seals Intact: A Yes Δ No		Cooler Temperature(s) °C and Other Remarks:	





Chain of Custody Record

Client Information (Sub Contract Lab)		Lab PM: Nestlasie, Dominic J		Carrier Tracking No(s):		COC No: 180-367334-1	
Client Contact: Shipping/Receiving		E-Mail: dominic.nestlasie@testamericainc.com		State of Origin: Pennsylvania		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): State Program - West Virginia DEP		Job #:		180-91943-1	
Address: 4101 Shuffel Street NW,		Due Date Requested: 7/11/2019		Analysis Requested:		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amelchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
City: North Canton		TAT Requested (days):		Field Filtered Sample (Yes or No)		Total Number of Containers	
State, Zip: OH, 44720		PO #:		Perform MS/MSD (Yes or No)		4500_P_E/Total Phosphorus as P	
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		WO #:		Field Filtered Sample (Yes or No)		Other:	
Email:		Project #: 18020244		Sample Date		Sample Time	
Project Name: Project No. 191-398		SSOW#:		Sample Date		Sample Time	
Site:		Sample Date		Sample Time		Sample Date	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Date	
GR-2 (180-91943-1)		6/26/19		10:35 Eastern		Water	
GR-1 (180-91943-2)		6/26/19		11:50 Eastern		Water	
FR-2 (180-91943-3)		6/26/19		13:00 Eastern		Water	
FR-1 (180-91943-4)		6/26/19		13:40 Eastern		Water	
Special Instructions/Note: <i>W26</i>		Special Instructions/Note:		Special Instructions/Note:		Special Instructions/Note:	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our 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/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

Unconfirmed
Deliverable Requested: 1, II, III, IV, Other (specify) _____ Months

Empty Kit Relinquished by: _____ Date: _____ Time: _____

Relinquished by: *gms* Date: 6/26/19 17:00 Company: TAPR Company

Relinquished by: _____ Date: _____ Time: _____ Company: _____

Relinquished by: _____ Date: _____ Time: _____ Company: _____

Custody Seals Intact: Yes No Custody Seal No.: _____

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For _____ Months
 Special Instructions/QC Requirements: _____

Received by: *John D* Date/Time: 6/26/19 9:30 AM Company: _____

Received by: _____ Date/Time: _____ Company: _____

Received by: _____ Date/Time: _____ Company: _____

Cooler Temperature(s) °C and Other Remarks: _____



Eurofins TestAmerica Canton Sample Receipt Form/Narrative		Login # : _____
Canton Facility		
Client <u>TA D.H</u>	Site Name _____	Cooler unpacked by: <u>[Signature]</u>
Cooler Received on <u>6/29/19</u>	Opened on <u>7/1/19</u>	
FedEx: 1 st Grd <input checked="" type="checkbox"/> Exp <input type="checkbox"/> UPS <input type="checkbox"/> FAS <input type="checkbox"/> Clipper <input type="checkbox"/>	Client Drop Off <input type="checkbox"/> TestAmerica Courier <input checked="" type="checkbox"/>	Other <input type="checkbox"/>
Receipt After-hours: Drop-off Date/Time		Storage Location
TestAmerica Cooler # <u>46</u>	Foam Box <input type="checkbox"/> Client Cooler <input type="checkbox"/> Box <input type="checkbox"/> Other _____	
Packing material used: <u>Bubble Wrap</u> <u>Foam</u> <u>Plastic Bag</u>	None <input type="checkbox"/> Other _____	
COOLANT: <u>Wet Ice</u>	Blue Ice <input type="checkbox"/> Dry Ice <input type="checkbox"/> Water <input type="checkbox"/> None <input type="checkbox"/>	
1. Cooler temperature upon receipt	<input checked="" type="checkbox"/> See Multiple Cooler Form	
IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
IR GUN #36 (CF +0.6°C) Observed Cooler Temp. _____ °C	Corrected Cooler Temp. _____ °C	
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity <u>1</u>	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
-Were the seals on the outside of the cooler(s) signed & dated?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
-Were tamper/custody seals intact and uncompromised?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
3. Shippers' packing slip attached to the cooler(s)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
4. Did custody papers accompany the sample(s)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
5. Were the custody papers relinquished & signed in the appropriate place?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
6. Was/were the person(s) who collected the samples clearly identified on the COC?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
7. Did all bottles arrive in good condition (Unbroken)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
8. Could all bottle labels be reconciled with the COC?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
9. Were correct bottle(s) used for the test(s) indicated?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
10. Sufficient quantity received to perform indicated analyses?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
11. Are these work share samples?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
If yes, Questions 12-16 have been checked at the originating laboratory.		
12. Were all preserved sample(s) at the correct pH upon receipt?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	pH Strip Lot# <u>HC984738</u>
13. Were VOAs on the COC?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
14. Were air bubbles >6 mm in any VOA vials? ← Larger than this.	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA <input type="checkbox"/>	
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
16. Was a LL Hg or Me Hg trip blank present? _____	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Contacted PM _____ Date _____ by _____	via Verbal <input checked="" type="checkbox"/> Voice Mail <input type="checkbox"/> Other <input type="checkbox"/>	
Concerning _____		
17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES		Samples processed by: _____
_____ _____ _____ _____		
18. SAMPLE CONDITION		
Sample(s) _____ were received after the recommended holding time had expired.		
Sample(s) _____ were received in a broken container.		
Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)		
19. SAMPLE PRESERVATION		
Sample(s) _____ were further preserved in the laboratory.		
Time preserved: _____ Preservative(s) added/Lot number(s): _____		
VOA Sample Preservation - Date/Time VOAs Frozen: _____		

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

TestAmerica Canton Sample Receipt Multiple Cooler Form

Cooler Description (Circle)				IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
<input checked="" type="radio"/> TA	<input type="radio"/> Client	<input type="radio"/> Box	<input type="radio"/> Other	<input checked="" type="radio"/> IR-8 #36	3.8	3.9	<input checked="" type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
<input checked="" type="radio"/> TA	<input type="radio"/> Client	<input type="radio"/> Box	<input type="radio"/> Other	<input checked="" type="radio"/> IR-8 #36	1.4	1.5	<input checked="" type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
<input checked="" type="radio"/> TA	<input type="radio"/> Client	<input type="radio"/> Box	<input type="radio"/> Other	<input checked="" type="radio"/> IR-8 #36	0.6	0.7	<input checked="" type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
<input checked="" type="radio"/> TA	<input type="radio"/> Client	<input type="radio"/> Box	<input type="radio"/> Other	<input checked="" type="radio"/> IR-8 #36	1.2	1.3	<input checked="" type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
<input checked="" type="radio"/> TA	<input type="radio"/> Client	<input type="radio"/> Box	<input type="radio"/> Other	<input checked="" type="radio"/> IR-8 #36	21.0	21.1	<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input checked="" type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	
TA	Client	Box	Other	IR-8 #36			<input type="radio"/> Wet Ice	<input type="radio"/> Blue Ice	<input type="radio"/> Dry Ice
							<input type="radio"/> Water	<input type="radio"/> None	

See Temperature Excursion Form

Login Sample Receipt Checklist

Client: Civil & Environmental Consultants Inc

Job Number: 180-91943-1

Login Number: 91943

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





1803 Philadelphia Street
 Indiana, PA 15701
 P: (724) 463-8378
 F: (724) 465-4209
 PADEP: 32-00382

1276 Bentleyville Road
 Van Voorhis, PA 15366
 P: (724) 258-8378
 F: (724) 258-8376
 PADEP: 63-04247

435 Broad Street
 Montoursville, PA 17754
 P: (570) 321-9002
 F: (570) 321-1957
 PADEP: 41-04880

950 West Main Street
 Sharpsville, PA 16150
 P: (724) 463-8378 x 500
 F: (724) 465-4209
 PADEP: 43-04934

28 June 2019

Civil & Environmental Consultants, Inc.
 Attn: Jackie Rockey
 333 Baldwin Road
 Pittsburgh, PA 15205

Work Order: 9062501
Project: Fecal Testing
Project Description: Fecal Testing

Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
GR-1	9062501-01	Water	06/26/2019 11:50	6/26/19 18:10	
GR-2	9062501-02	Water	06/26/2019 10:55	6/26/19 18:10	
FR-1	9062501-03	Water	06/26/2019 13:40	6/26/19 18:10	
FR-2	9062501-04	Water	06/26/2019 13:00	6/26/19 18:10	

Report Narrative

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

Definitions

RL Reporting Limit

Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.

Environmental Service Laboratories, Inc., Indiana, PA/TNI Certification #32-00382

Approved By

Sean Mintzer
 Project Manager





1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 06/28/2019 09:59

Lab Sample ID#: 9062501-01
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-1

Sample Date: 06/26/2019 11:50
Receipt Date: 06/26/2019 18:10

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	1986	MPN/100 mL		1	DAA	06/26/19 18:21	06/27/19 12:42

Lab Sample ID#: 9062501-02
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-2

Sample Date: 06/26/2019 10:55
Receipt Date: 06/26/2019 18:10

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	1414	MPN/100 mL		1	DAA	06/26/19 18:21	06/27/19 12:42

Lab Sample ID#: 9062501-03
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-1

Sample Date: 06/26/2019 13:40
Receipt Date: 06/26/2019 18:10

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	1120	MPN/100 mL		1	DAA	06/26/19 18:21	06/27/19 12:42



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 06/28/2019 09:59

Lab Sample ID#: 9062501-04
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-2

Sample Date: 06/26/2019 13:00
Receipt Date: 06/26/2019 18:10

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	1553	MPN/100 mL		1	DAA	06/26/19 18:21	06/27/19 12:42

ENVIRONMENTAL SERVICE LABORATORIES, INC.

SAMPLE REQUEST & CHAIN OF CUSTODY

PAGE 1 OF 1

Page 4 of 4

HEADQUARTERS
1803 Philadelphia St.
Indiana, PA 15701
(724) 463-TEST
FAX: (724) 465-4209



SOUTHERN DIVISION
1276 Bentleyville Road
Van Voorhis, PA 15366
(724) 258-TEST
FAX: (724) 258-8376



NORTHERN DIVISION
435 Broad Street
Montoursville, PA 17754
(570) 321-9003
FAX: (570) 321-1957



NORTHWEST DIVISION
950 Main Street
Sharpsville, PA 16150
(724) 463-TEST
FAX: (724) 465-4209



9062501

FOR INTERNAL LABORATORY USE ONLY

Sample Identification	ESL#	Sample Type				Matrix	# of Containers	Container Type Preservative	Analysis Requested
		Composite		Grab					
		Date on/off	Time on/off	Date	Time				
GR-1	01	/	/	6/26/19	11:50	WW	1	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform
GR-2	02	/	/	6/26/19	10:55	↓	↓	↓	↓
FR-1	03	/	/	6/26/19	13:40	↓	↓	↓	↓
FR-2	04	/	/	6/26/19	13:00	↓	↓	↓	↓
		/	/			4-211a 6/26/19	1570 ③ LMT		
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						

THE UNDERSIGNED PURCHASER HEREBY AGREES TO PAY SERVICE CHARGES ON ACCOUNTS OVER 31 DAYS OLD.
1. THESE SERVICE CHARGES WILL ACCRUE AT THE RATE OF 1 1/2% PER MONTH (18% PER ANNUM OR THE MAXIMUM ALLOWED BY LAW.)
2. THE UNDERSIGNED PURCHASER AGREES TO PAY, IN THE EVENT HIS ACCOUNT BECOMES DELINQUENT AND IS TURNED OVER TO ANY ATTORNEY FOR COLLECTION, REASONABLE ATTORNEY'S FEES PLUS ALL COURT AND ATTENDANT COLLECTION COSTS.

Project Notes:
Fecal Analysis

Michael J. Dawson 6/26/19
 Sampled By: (Signature) Date/ Time
 Michael J. Dawson 6/26/19 15:23
 Relinquished By: (Signature) Date/ Time
 [Signature] 6-26-19 1800
 Relinquished By: (Signature) Date/ Time
 Relinquished By: (Signature) Date/ Time

Company/Name: Civil & Environmental Consultants, Inc.
Address: 333 Baldwin Road
 Pittsburgh, PA 15205
Contact Person: Jackie Rocky
Mobile: 412-559-7035
Phone Number: 412-249-3140
Fax Number: (412) 429-2114
Email: bvalli@cecinc.com

Correct Preservations Y / N / NA Correct Containers Y / N / NA Receipt Temperature _____

ANALYTICAL LABORATORY REPORTS
FLETCHER RUN WATER SAMPLING EVENT
JULY 25, 2019

ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-93263-1
Client Project/Site: Grinnage and Fletcher Run
Revision: 1

For:
Civil & Environmental Consultants Inc
333 Baldwin Rd.
Pittsburgh, Pennsylvania 15205

Attn: Jackie Rockey



Authorized for release by:
8/27/2019 10:34:05 AM
Jennifer Rumble, Project Manager I
(412)963-7058
jennifer.rumble@testamericainc.com

Designee for
Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	7
Method Summary	8
Lab Chronicle	9
Client Sample Results	12
QC Sample Results	16
QC Association Summary	20
Chain of Custody	23
Receipt Checklists	24

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Job ID: 180-93263-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-93263-1

This report was revised to include missing methods.

Receipt

The samples were received on 7/26/2019 10:26 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 0.7° C.

GC Semi VOA

Method 300.0: The following samples were analyzed outside of analytical holding time for Nitrate analysis due to improper login, whereas the tests were added after holding time expiration. FR-2 (180-93263-1), FR-1 (180-93263-2), GR-2 (180-93263-3) and GR-1 (180-93263-4).

Metals

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

General Chemistry

Method 350.1: The matrix spike duplicate (MSD) recovery for preparation batch 180-287629 and analytical batch 180-287969 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) and matrix spike (MS) recoveries were within acceptance limits.

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



Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
H	Sample was prepped or analyzed beyond the specified holding time
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
⌘	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)

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State Program	142	01-31-20

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
SM 2340B		Water	Calcium hardness as calcium carbonate
SM 2340B		Water	Hardness as calcium carbonate
SM 2340B		Water	Magnesium hardness as calcium carbonate

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-20
California	State Program	2927	02-23-20
Connecticut	State	PH-0590	12-31-19
Connecticut	State Program	PH-0590	12-31-19
Florida	NELAP	E87225	06-30-20
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20
Georgia	State Program	N/A	02-23-20
Illinois	NELAP	200004	07-31-20
Illinois	NELAP	004498	07-31-20
Iowa	State Program	421	06-01-21
Kansas	NELAP	E-10336	04-30-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State Program	58	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Kentucky (WW)	State Program	98016	12-31-19
Minnesota	NELAP	039-999-348	12-31-19 *
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
Nevada	State Program	OH00048	07-31-19
New Jersey	NELAP	OH001	06-30-20
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Ohio VAP	State Program	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20
Oregon	NELAP	4062	02-23-20
Pennsylvania	NELAP	68-00340	08-31-19 *
Pennsylvania	NELAP	68-00340	08-31-19
Texas	NELAP	T104704517-19-11	08-31-20
Texas	NELAP	T104704517-18-10	08-31-19
USDA	Federal	P330-16-00404	12-28-19
Virginia	NELAP	460175	09-14-19 *
Virginia	NELAP	010101	09-14-19
Washington	State	C971	01-12-20
Washington	State Program	C971	01-12-20 *

* Accreditation/Certification renewal pending - accreditation/certification considered valid.

Eurofins TestAmerica, Pittsburgh

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Laboratory: Eurofins TestAmerica, Canton (Continued)

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State	210	12-31-19
West Virginia DEP	State Program	210	12-31-19

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-93263-1	FR-2	Water	07/25/19 11:17	07/26/19 10:26	
180-93263-2	FR-1	Water	07/25/19 12:39	07/26/19 10:26	
180-93263-3	GR-2	Water	07/25/19 13:19	07/26/19 10:26	
180-93263-4	GR-1	Water	07/25/19 13:58	07/26/19 10:26	

1

2

3

4

5

6

7

8

9

10

11

12

13

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	TAL PIT
SM 2340B	Total Hardness (as CaCO ₃) by calculation	SM	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 4500 H+ B	pH	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
SM4500 P E-2011	Phosphorus	SM	TAL CAN
200.8	Preparation, Total Recoverable Metals	EPA	TAL PIT
Distill/Ammonia	Distillation, Ammonia	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Client Sample ID: FR-2

Lab Sample ID: 180-93263-1

Date Collected: 07/25/19 11:17

Matrix: Water

Date Received: 07/26/19 10:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			288584	08/20/19 07:23	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	286756	08/01/19 12:09	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			286990	08/03/19 18:53	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	286756	08/01/19 12:09	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			286990	08/03/19 18:33	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			288717	08/20/19 14:20	RJR	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	287629	08/09/19 14:25	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			287969	08/13/19 18:19	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	286586	07/31/19 11:29	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			289207	08/24/19 09:09	MRD	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: PCTITRATOR		1			287121	08/05/19 21:49	JAS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	393728	07/31/19 11:10	TPH	TAL CAN

Client Sample ID: FR-1

Lab Sample ID: 180-93263-2

Date Collected: 07/25/19 12:39

Matrix: Water

Date Received: 07/26/19 10:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			288584	08/20/19 07:39	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	286756	08/01/19 12:09	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			286990	08/03/19 19:00	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	286756	08/01/19 12:09	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			286990	08/03/19 18:57	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			288717	08/20/19 14:20	RJR	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	287629	08/09/19 14:25	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			287969	08/13/19 18:20	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	286586	07/31/19 11:29	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			289207	08/24/19 09:09	MRD	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Client Sample ID: FR-1

Date Collected: 07/25/19 12:39

Date Received: 07/26/19 10:26

Lab Sample ID: 180-93263-2

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM2320 B		1			287121	08/05/19 21:56	JAS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	393728	07/31/19 11:25	TPH	TAL CAN

Client Sample ID: GR-2

Date Collected: 07/25/19 13:19

Date Received: 07/26/19 10:26

Lab Sample ID: 180-93263-3

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			288584	08/20/19 07:55	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	286756	08/01/19 12:09	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			286990	08/03/19 19:07	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	286756	08/01/19 12:09	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			286990	08/03/19 19:03	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			288717	08/20/19 14:20	RJR	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	287629	08/09/19 14:25	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			287969	08/13/19 18:22	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	286586	07/31/19 11:29	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			289207	08/24/19 09:09	MRD	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: PCTITRATOR		1			287268	08/06/19 16:19	JAS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	393728	07/31/19 11:30	TPH	TAL CAN

Client Sample ID: GR-1

Date Collected: 07/25/19 13:58

Date Received: 07/26/19 10:26

Lab Sample ID: 180-93263-4

Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			288584	08/20/19 08:11	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	286756	08/01/19 12:09	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			286990	08/03/19 19:14	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	286756	08/01/19 12:09	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			286990	08/03/19 19:10	WTR	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Client Sample ID: GR-1

Lab Sample ID: 180-93263-4

Date Collected: 07/25/19 13:58

Matrix: Water

Date Received: 07/26/19 10:26

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total Recoverable	Analysis	SM 2340B		1			288717	08/20/19 14:20	RJR	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	287629	08/09/19 14:25	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			287969	08/13/19 18:26	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	286586	07/31/19 11:29	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			289207	08/24/19 09:09	MRD	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: PCTITRATOR		1			287268	08/06/19 16:25	JAS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	393728	07/31/19 11:35	TPH	TAL CAN

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

TPH = Tom Harshman

Lab: TAL PIT

Batch Type: Prep

BSH = Brandon Hough

NAM = Nicole Marfisi

Batch Type: Analysis

AVS = Abbey Smith

BSH = Brandon Hough

JAS = Joshua Schmidt

MJH = Matthew Hartman

MRD = Madeline Daugherty

RJR = Ron Rosenbaum

WTR = Bill Reinheimer

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Client Sample ID: FR-2

Lab Sample ID: 180-93263-1

Date Collected: 07/25/19 11:17

Matrix: Water

Date Received: 07/26/19 10:26

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	28		1.0	0.71	mg/L			08/20/19 07:23	1
Nitrate as N	0.052	J H	0.10	0.023	mg/L			08/20/19 07:23	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	36		30	12	ug/L		08/01/19 12:09	08/03/19 18:33	1
Calcium	70000		500	180	ug/L		08/01/19 12:09	08/03/19 18:33	1
Iron	180		50	15	ug/L		08/01/19 12:09	08/03/19 18:33	1
Magnesium	13000		500	70	ug/L		08/01/19 12:09	08/03/19 18:33	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		08/01/19 12:09	08/03/19 18:53	1
Arsenic	0.73	J	1.0	0.17	ug/L		08/01/19 12:09	08/03/19 18:53	1
Cadmium	1.0	U	1.0	0.21	ug/L		08/01/19 12:09	08/03/19 18:53	1
Copper	2.0	U	2.0	0.99	ug/L		08/01/19 12:09	08/03/19 18:53	1
Lead	1.0	U	1.0	0.16	ug/L		08/01/19 12:09	08/03/19 18:53	1
Nickel	0.61	J	1.0	0.46	ug/L		08/01/19 12:09	08/03/19 18:53	1
Selenium	5.0	U	5.0	0.81	ug/L		08/01/19 12:09	08/03/19 18:53	1
Zinc	2.8	J B	5.0	2.2	ug/L		08/01/19 12:09	08/03/19 18:53	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	230		0.67	0.022	mg/L			08/20/19 14:20	1
Calcium hardness as calcium carbonate	170		0.25	0.0071	mg/L			08/20/19 14:20	1
Magnesium hardness as calcium carbonate	54		0.41	0.0048	mg/L			08/20/19 14:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		08/09/19 14:25	08/13/19 18:19	1
Total Dissolved Solids	360		10	10	mg/L			07/31/19 11:29	1
pH	8.2		0.1	0.1	SU			08/24/19 09:09	1
Total Alkalinity as CaCO3 to pH 4.!	210		5.0	5.0	mg/L			08/05/19 21:49	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			07/31/19 11:10	1

Client Sample ID: FR-1

Lab Sample ID: 180-93263-2

Date Collected: 07/25/19 12:39

Matrix: Water

Date Received: 07/26/19 10:26

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	27		1.0	0.71	mg/L			08/20/19 07:39	1
Nitrate as N	0.19	H	0.10	0.023	mg/L			08/20/19 07:39	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	110		30	12	ug/L		08/01/19 12:09	08/03/19 18:57	1
Calcium	86000		500	180	ug/L		08/01/19 12:09	08/03/19 18:57	1
Iron	630		50	15	ug/L		08/01/19 12:09	08/03/19 18:57	1
Magnesium	17000		500	70	ug/L		08/01/19 12:09	08/03/19 18:57	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Client Sample ID: FR-1

Lab Sample ID: 180-93263-2

Date Collected: 07/25/19 12:39

Matrix: Water

Date Received: 07/26/19 10:26

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		08/01/19 12:09	08/03/19 19:00	1
Arsenic	0.53	J	1.0	0.17	ug/L		08/01/19 12:09	08/03/19 19:00	1
Cadmium	1.0	U	1.0	0.21	ug/L		08/01/19 12:09	08/03/19 19:00	1
Copper	2.0	U	2.0	0.99	ug/L		08/01/19 12:09	08/03/19 19:00	1
Lead	1.0	U	1.0	0.16	ug/L		08/01/19 12:09	08/03/19 19:00	1
Nickel	1.0		1.0	0.46	ug/L		08/01/19 12:09	08/03/19 19:00	1
Selenium	5.0	U	5.0	0.81	ug/L		08/01/19 12:09	08/03/19 19:00	1
Zinc	3.0	J B	5.0	2.2	ug/L		08/01/19 12:09	08/03/19 19:00	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	280		0.67	0.022	mg/L			08/20/19 14:20	1
Calcium hardness as calcium carbonate	210		0.25	0.0071	mg/L			08/20/19 14:20	1
Magnesium hardness as calcium carbonate	71		0.41	0.0048	mg/L			08/20/19 14:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		08/09/19 14:25	08/13/19 18:20	1
Total Dissolved Solids	550		10	10	mg/L			07/31/19 11:29	1
pH	8.3		0.1	0.1	SU			08/24/19 09:09	1
Total Alkalinity as CaCO3 to pH 4.!	220		5.0	5.0	mg/L			08/05/19 21:56	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			07/31/19 11:25	1

Client Sample ID: GR-2

Lab Sample ID: 180-93263-3

Date Collected: 07/25/19 13:19

Matrix: Water

Date Received: 07/26/19 10:26

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	18		1.0	0.71	mg/L			08/20/19 07:55	1
Nitrate as N	0.099	J H	0.10	0.023	mg/L			08/20/19 07:55	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	59		30	12	ug/L		08/01/19 12:09	08/03/19 19:03	1
Calcium	63000		500	180	ug/L		08/01/19 12:09	08/03/19 19:03	1
Iron	170		50	15	ug/L		08/01/19 12:09	08/03/19 19:03	1
Magnesium	11000		500	70	ug/L		08/01/19 12:09	08/03/19 19:03	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		08/01/19 12:09	08/03/19 19:07	1
Arsenic	0.74	J	1.0	0.17	ug/L		08/01/19 12:09	08/03/19 19:07	1
Cadmium	1.0	U	1.0	0.21	ug/L		08/01/19 12:09	08/03/19 19:07	1
Copper	2.0	U	2.0	0.99	ug/L		08/01/19 12:09	08/03/19 19:07	1
Lead	1.0	U	1.0	0.16	ug/L		08/01/19 12:09	08/03/19 19:07	1
Nickel	0.50	J	1.0	0.46	ug/L		08/01/19 12:09	08/03/19 19:07	1
Selenium	5.0	U	5.0	0.81	ug/L		08/01/19 12:09	08/03/19 19:07	1
Zinc	3.3	J B	5.0	2.2	ug/L		08/01/19 12:09	08/03/19 19:07	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Client Sample ID: GR-2
Date Collected: 07/25/19 13:19
Date Received: 07/26/19 10:26

Lab Sample ID: 180-93263-3
Matrix: Water

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	210		0.67	0.022	mg/L			08/20/19 14:20	1
Calcium hardness as calcium carbonate	160		0.25	0.0071	mg/L			08/20/19 14:20	1
Magnesium hardness as calcium carbonate	47		0.41	0.0048	mg/L			08/20/19 14:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.16	F1	0.10	0.088	mg/L		08/09/19 14:25	08/13/19 18:22	1
Total Dissolved Solids	360		10	10	mg/L			07/31/19 11:29	1
pH	8.3		0.1	0.1	SU			08/24/19 09:09	1
Total Alkalinity as CaCO3 to pH 4.!	200		5.0	5.0	mg/L			08/06/19 16:19	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			07/31/19 11:30	1

Client Sample ID: GR-1
Date Collected: 07/25/19 13:58
Date Received: 07/26/19 10:26

Lab Sample ID: 180-93263-4
Matrix: Water

Method: EPA 300.0 R2.1 - Anions, Ion Chromatgraphy

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	69		1.0	0.71	mg/L			08/20/19 08:11	1
Nitrate as N	0.11	H	0.10	0.023	mg/L			08/20/19 08:11	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	69		30	12	ug/L		08/01/19 12:09	08/03/19 19:10	1
Calcium	68000		500	180	ug/L		08/01/19 12:09	08/03/19 19:10	1
Iron	170		50	15	ug/L		08/01/19 12:09	08/03/19 19:10	1
Magnesium	12000		500	70	ug/L		08/01/19 12:09	08/03/19 19:10	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		08/01/19 12:09	08/03/19 19:14	1
Arsenic	0.59	J	1.0	0.17	ug/L		08/01/19 12:09	08/03/19 19:14	1
Cadmium	1.0	U	1.0	0.21	ug/L		08/01/19 12:09	08/03/19 19:14	1
Copper	2.0	U	2.0	0.99	ug/L		08/01/19 12:09	08/03/19 19:14	1
Lead	1.0	U	1.0	0.16	ug/L		08/01/19 12:09	08/03/19 19:14	1
Nickel	0.53	J	1.0	0.46	ug/L		08/01/19 12:09	08/03/19 19:14	1
Selenium	5.0	U	5.0	0.81	ug/L		08/01/19 12:09	08/03/19 19:14	1
Zinc	3.4	J B	5.0	2.2	ug/L		08/01/19 12:09	08/03/19 19:14	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	220		0.67	0.022	mg/L			08/20/19 14:20	1
Calcium hardness as calcium carbonate	170		0.25	0.0071	mg/L			08/20/19 14:20	1
Magnesium hardness as calcium carbonate	51		0.41	0.0048	mg/L			08/20/19 14:20	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		08/09/19 14:25	08/13/19 18:26	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Client Sample ID: GR-1

Lab Sample ID: 180-93263-4

Date Collected: 07/25/19 13:58

Matrix: Water

Date Received: 07/26/19 10:26

General Chemistry (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	350		10	10	mg/L			07/31/19 11:29	1
pH	8.3		0.1	0.1	SU			08/24/19 09:09	1
Total Alkalinity as CaCO3 to pH 4.!	200		5.0	5.0	mg/L			08/06/19 16:25	1
Total Phosphorus as P	0.051	J	0.10	0.037	mg/L			07/31/19 11:35	1

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-288584/6
Matrix: Water
Analysis Batch: 288584

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.71	mg/L			08/20/19 05:26	1
Nitrate as N	0.10	U	0.10	0.023	mg/L			08/20/19 05:26	1

Lab Sample ID: LCS 180-288584/5
Matrix: Water
Analysis Batch: 288584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.25	1.31		mg/L	105	90 - 110	

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-286756/1-A
Matrix: Water
Analysis Batch: 286990

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 286756

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	30	U	30	12	ug/L		08/01/19 12:09	08/03/19 17:56	1
Arsenic	1.0	U	1.0	0.17	ug/L		08/01/19 12:09	08/03/19 17:56	1
Calcium	500	U	500	180	ug/L		08/01/19 12:09	08/03/19 17:56	1
Cadmium	1.0	U	1.0	0.21	ug/L		08/01/19 12:09	08/03/19 17:56	1
Iron	50	U	50	15	ug/L		08/01/19 12:09	08/03/19 17:56	1
Copper	2.0	U	2.0	0.99	ug/L		08/01/19 12:09	08/03/19 17:56	1
Magnesium	500	U	500	70	ug/L		08/01/19 12:09	08/03/19 17:56	1
Lead	1.0	U	1.0	0.16	ug/L		08/01/19 12:09	08/03/19 17:56	1
Nickel	1.0	U	1.0	0.46	ug/L		08/01/19 12:09	08/03/19 17:56	1
Selenium	5.0	U	5.0	0.81	ug/L		08/01/19 12:09	08/03/19 17:56	1
Zinc	2.64	J B	5.0	2.2	ug/L		08/01/19 12:09	08/03/19 17:56	1

Lab Sample ID: LCS 180-286756/2-A
Matrix: Water
Analysis Batch: 286990

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 286756

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	1030		ug/L	103	85 - 115	
Calcium	25000	26100		ug/L	105	85 - 115	
Cadmium	500	518		ug/L	104	85 - 115	
Iron	5000	5120		ug/L	102	85 - 115	
Copper	500	518		ug/L	104	85 - 115	
Magnesium	25000	26300		ug/L	105	85 - 115	
Lead	500	550		ug/L	110	85 - 115	
Nickel	500	531		ug/L	106	85 - 115	
Selenium	1000	1010		ug/L	101	85 - 115	
Zinc	250	264		ug/L	106	85 - 115	

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-93263-1 MS
Matrix: Water
Analysis Batch: 286990

Client Sample ID: FR-2
Prep Type: Total Recoverable
Prep Batch: 286756

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aluminum	36		5000	5380		ug/L		107	70 - 130
Arsenic	0.72	J	1000	1030		ug/L		103	70 - 130
Calcium	70000		25000	96200		ug/L		106	70 - 130
Cadmium	1.0	U	500	517		ug/L		103	70 - 130
Iron	180		5000	5270		ug/L		102	70 - 130
Copper	2.0	U	500	510		ug/L		102	70 - 130
Magnesium	13000		25000	39400		ug/L		106	70 - 130
Lead	1.0	U	500	557		ug/L		111	70 - 130
Nickel	0.58	J	500	520		ug/L		104	70 - 130
Selenium	5.0	U	1000	1000		ug/L		100	70 - 130
Zinc	2.7	J B	250	265		ug/L		105	70 - 130

Lab Sample ID: 180-93263-1 MSD
Matrix: Water
Analysis Batch: 286990

Client Sample ID: FR-2
Prep Type: Total Recoverable
Prep Batch: 286756

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	36		5000	5290		ug/L		105	70 - 130	2	20
Arsenic	0.72	J	1000	1020		ug/L		102	70 - 130	1	20
Calcium	70000		25000	94000		ug/L		98	70 - 130	2	20
Cadmium	1.0	U	500	508		ug/L		102	70 - 130	2	20
Iron	180		5000	5210		ug/L		101	70 - 130	1	20
Copper	2.0	U	500	504		ug/L		101	70 - 130	1	20
Magnesium	13000		25000	38700		ug/L		103	70 - 130	2	20
Lead	1.0	U	500	541		ug/L		108	70 - 130	3	20
Nickel	0.58	J	500	516		ug/L		103	70 - 130	1	20
Selenium	5.0	U	1000	975		ug/L		97	70 - 130	3	20
Zinc	2.7	J B	250	259		ug/L		102	70 - 130	2	20

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-287629/6-A
Matrix: Water
Analysis Batch: 287969

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 287629

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		08/09/19 14:25	08/13/19 17:58	1

Lab Sample ID: LCS 180-287629/7-A
Matrix: Water
Analysis Batch: 287969

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 287629

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia, distilled	2.00	1.90		mg/L		95	90 - 110

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Method: EPA 350.1 - Nitrogen, Ammonia (Continued)

Lab Sample ID: 180-93263-3 MS
Matrix: Water
Analysis Batch: 287969

Client Sample ID: GR-2
Prep Type: Total/NA
Prep Batch: 287629
 %Rec.

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Ammonia, distilled	0.16	F1	2.00	2.10		mg/L		97	90 - 110

Lab Sample ID: 180-93263-3 MSD
Matrix: Water
Analysis Batch: 287969

Client Sample ID: GR-2
Prep Type: Total/NA
Prep Batch: 287629
 %Rec. RPD

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Ammonia, distilled	0.16	F1	2.00	1.91	F1	mg/L		87	90 - 110	9	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-286586/2
Matrix: Water
Analysis Batch: 286586

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L			07/31/19 11:29	1

Lab Sample ID: LCS 180-286586/1
Matrix: Water
Analysis Batch: 286586

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	585	588		mg/L		101	80 - 120

Lab Sample ID: 180-93263-1 DU
Matrix: Water
Analysis Batch: 286586

Client Sample ID: FR-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	360		368		mg/L		2	10

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 180-289207/1
Matrix: Water
Analysis Batch: 289207

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.1		SU		101	99 - 101

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-287121/61
Matrix: Water
Analysis Batch: 287121

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L			08/05/19 19:28	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Method: SM2320 B - Alkalinity, Total (Continued)

Lab Sample ID: LCS 180-287121/60
Matrix: Water
Analysis Batch: 287121

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	250	241		mg/L		96	90 - 110

Lab Sample ID: 180-93263-2 DU
Matrix: Water
Analysis Batch: 287121

Client Sample ID: FR-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5	220		218		mg/L		0.4	20

Lab Sample ID: MB 180-287268/5
Matrix: Water
Analysis Batch: 287268

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L			08/06/19 16:12	1

Lab Sample ID: LCS 180-287268/4
Matrix: Water
Analysis Batch: 287268

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	250	249		mg/L		99	90 - 110

Method: SM4500 P E-2011 - Phosphorus

Lab Sample ID: MB 240-393728/3
Matrix: Water
Analysis Batch: 393728

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			07/31/19 09:25	1

Lab Sample ID: LCS 240-393728/4
Matrix: Water
Analysis Batch: 393728

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.412		mg/L		102	77 - 120

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

HPLC/IC

Analysis Batch: 288584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-1	FR-2	Total/NA	Water	EPA 300.0 R2.1	
180-93263-2	FR-1	Total/NA	Water	EPA 300.0 R2.1	
180-93263-3	GR-2	Total/NA	Water	EPA 300.0 R2.1	
180-93263-4	GR-1	Total/NA	Water	EPA 300.0 R2.1	
MB 180-288584/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-288584/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 286756

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-1	FR-2	Dissolved	Water	200.8	
180-93263-1	FR-2	Total Recoverable	Water	200.8	
180-93263-2	FR-1	Dissolved	Water	200.8	
180-93263-2	FR-1	Total Recoverable	Water	200.8	
180-93263-3	GR-2	Dissolved	Water	200.8	
180-93263-3	GR-2	Total Recoverable	Water	200.8	
180-93263-4	GR-1	Dissolved	Water	200.8	
180-93263-4	GR-1	Total Recoverable	Water	200.8	
MB 180-286756/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-286756/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
180-93263-1 MS	FR-2	Total Recoverable	Water	200.8	
180-93263-1 MSD	FR-2	Total Recoverable	Water	200.8	

Analysis Batch: 286990

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-1	FR-2	Dissolved	Water	EPA 200.8 Rev 5	286756
180-93263-1	FR-2	Total Recoverable	Water	EPA 200.8 Rev 5	286756
180-93263-2	FR-1	Dissolved	Water	EPA 200.8 Rev 5	286756
180-93263-2	FR-1	Total Recoverable	Water	EPA 200.8 Rev 5	286756
180-93263-3	GR-2	Dissolved	Water	EPA 200.8 Rev 5	286756
180-93263-3	GR-2	Total Recoverable	Water	EPA 200.8 Rev 5	286756
180-93263-4	GR-1	Dissolved	Water	EPA 200.8 Rev 5	286756
180-93263-4	GR-1	Total Recoverable	Water	EPA 200.8 Rev 5	286756
MB 180-286756/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	286756
LCS 180-286756/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	286756
180-93263-1 MS	FR-2	Total Recoverable	Water	EPA 200.8 Rev 5	286756
180-93263-1 MSD	FR-2	Total Recoverable	Water	EPA 200.8 Rev 5	286756

Analysis Batch: 288717

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-1	FR-2	Total Recoverable	Water	SM 2340B	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

Metals (Continued)

Analysis Batch: 288717 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-2	FR-1	Total Recoverable	Water	SM 2340B	
180-93263-3	GR-2	Total Recoverable	Water	SM 2340B	
180-93263-4	GR-1	Total Recoverable	Water	SM 2340B	

General Chemistry

Analysis Batch: 286586

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-1	FR-2	Total/NA	Water	SM 2540C	
180-93263-2	FR-1	Total/NA	Water	SM 2540C	
180-93263-3	GR-2	Total/NA	Water	SM 2540C	
180-93263-4	GR-1	Total/NA	Water	SM 2540C	
MB 180-286586/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-286586/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-93263-1 DU	FR-2	Total/NA	Water	SM 2540C	

Analysis Batch: 287121

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-1	FR-2	Total/NA	Water	SM2320 B	
180-93263-2	FR-1	Total/NA	Water	SM2320 B	
MB 180-287121/61	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-287121/60	Lab Control Sample	Total/NA	Water	SM2320 B	
180-93263-2 DU	FR-1	Total/NA	Water	SM2320 B	

Analysis Batch: 287268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-3	GR-2	Total/NA	Water	SM2320 B	
180-93263-4	GR-1	Total/NA	Water	SM2320 B	
MB 180-287268/5	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-287268/4	Lab Control Sample	Total/NA	Water	SM2320 B	

Prep Batch: 287629

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-1	FR-2	Total/NA	Water	Distill/Ammonia	
180-93263-2	FR-1	Total/NA	Water	Distill/Ammonia	
180-93263-3	GR-2	Total/NA	Water	Distill/Ammonia	
180-93263-4	GR-1	Total/NA	Water	Distill/Ammonia	
MB 180-287629/6-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 180-287629/7-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
180-93263-3 MS	GR-2	Total/NA	Water	Distill/Ammonia	
180-93263-3 MSD	GR-2	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 287969

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-1	FR-2	Total/NA	Water	EPA 350.1	287629
180-93263-2	FR-1	Total/NA	Water	EPA 350.1	287629
180-93263-3	GR-2	Total/NA	Water	EPA 350.1	287629
180-93263-4	GR-1	Total/NA	Water	EPA 350.1	287629
MB 180-287629/6-A	Method Blank	Total/NA	Water	EPA 350.1	287629
LCS 180-287629/7-A	Lab Control Sample	Total/NA	Water	EPA 350.1	287629
180-93263-3 MS	GR-2	Total/NA	Water	EPA 350.1	287629

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Grinnage and Fletcher Run

Job ID: 180-93263-1

General Chemistry (Continued)

Analysis Batch: 287969 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-3 MSD	GR-2	Total/NA	Water	EPA 350.1	287629

Analysis Batch: 289207

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-1	FR-2	Total/NA	Water	SM 4500 H+ B	
180-93263-2	FR-1	Total/NA	Water	SM 4500 H+ B	
180-93263-3	GR-2	Total/NA	Water	SM 4500 H+ B	
180-93263-4	GR-1	Total/NA	Water	SM 4500 H+ B	
LCS 180-289207/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 393728

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-93263-1	FR-2	Total/NA	Water	SM4500 P E-2011	
180-93263-2	FR-1	Total/NA	Water	SM4500 P E-2011	
180-93263-3	GR-2	Total/NA	Water	SM4500 P E-2011	
180-93263-4	GR-1	Total/NA	Water	SM4500 P E-2011	
MB 240-393728/3	Method Blank	Total/NA	Water	SM4500 P E-2011	
LCS 240-393728/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	

Chain of Custody Record

301 Alpha Drive RIDC Park
Pittsburgh, PA 15238
Phone: 412-963-7058 Fax: 412-963-2468

Client Information Client Contact: Jackie Rocky Company: Civil & Environmental Consultants Inc Address: 333 Baldwin Rd. City: Pittsburgh State, Zip: PA, 15205 Phone: 412-429-2324 Email: jrockey@cecinc.com Project Name: Grinnage Run - Fletcher Run Project No. 191-398 Site:		Lab P.M.: Nestasie, Dominic J E-Mail: dominic.nestasie@lestamericainc.com Carrier Tracking No(s): Q3 Job #:		COC No: 180-53048-10639.1 Page: Page 1 of 1	
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #:		Analysis Requested Perform MS/MSD (Yes or No) <input checked="" type="checkbox"/> Field Filtered Sample (Yes or No) <input checked="" type="checkbox"/> 350.1 - Nitrogen, Ammonia <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> 2320B, 300_ORGFM, SM4500_H+ <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> 2540C, Calcd - TDS <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> 4500_P_E - Total Phosphorus as P <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> 200.8 - (MOD) Special List 200.8 <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/> Field Filtered Discard Metals <input checked="" type="checkbox"/> S <input checked="" type="checkbox"/> N <input checked="" type="checkbox"/> D <input checked="" type="checkbox"/>			
Sample Identification Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (W=water, S=solid, O=wastewater, BT=Tissue, A=Air) Preservation Code:		Total Number of containers: <input checked="" type="checkbox"/>			
FR-2 FR-1 GR-2 GR-1 FR-2 FR-1 GR-2 GR-1		7-25-19 11:17am 7-25-19 12:39pm 7-25-19 1:19pm 7-25-19 1:58pm 7-25-19 11:17am 7-25-19 12:39pm 7-25-19 1:19pm 7-25-19 1:58pm		G G G G G G G G	
Water Water Water Water Water Water Water Water		Special Instructions/Note: 180-93263 Chain of Custody			
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input checked="" type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months			
Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements:			
Empty Kit Relinquished by:		Method of Shipment: courier			
Relinquished by: <i>Jackie Rocky</i>		Date/Time: 7/25/19 10:30		Received by: <i>Robyn</i> Date/Time: 7/26/19 9:00 Company: CEC	
Relinquished by: <i>Jackie Rocky</i>		Date/Time: 7/26/19 1:026		Received by: <i>Jackie Rocky</i> Date/Time: 7/26/19 10:26 Company: CEC	
Relinquished by: <i>Jackie Rocky</i>		Date/Time:		Received by: <i>Jackie Rocky</i> Date/Time: Company:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks:			



Login Sample Receipt Checklist

Client: Civil & Environmental Consultants Inc

Job Number: 180-93263-1

Login Number: 93263

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: DiNardo, Nicholas J

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





1803 Philadelphia Street
 Indiana, PA 15701
 P: (724) 463-8378
 F: (724) 465-4209
 PADEP: 32-00382

1276 Bentleyville Road
 Van Voorhis, PA 15366
 P: (724) 258-8378
 F: (724) 258-8376
 PADEP: 63-04247

435 Broad Street
 Montoursville, PA 17754
 P: (570) 321-9002
 F: (570) 321-1957
 PADEP: 41-04880

950 West Main Street
 Sharpsville, PA 16150
 P: (724) 463-8378 x 500
 F: (724) 465-4209
 PADEP: 43-04934

28 July 2019

Civil & Environmental Consultants, Inc.
 Attn: Jackie Rockey
 333 Baldwin Road
 Pittsburgh, PA 15205

Work Order: 9072753
Project: Fecal Testing
Project Description: Fecal Testing

Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
FR-2	9072753-01	Water	07/25/2019 11:17	7/25/19 18:05	
FR-1	9072753-02	Water	07/25/2019 12:39	7/25/19 18:05	
GR-2	9072753-03	Water	07/25/2019 13:19	7/25/19 18:05	
GR-1	9072753-04	Water	07/25/2019 13:58	7/25/19 18:05	

Report Narrative

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

Definitions

RL Reporting Limit

Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.
 Environmental Service Laboratories, Inc., Indiana, PA/TNI Certification #32-00382

Approved By

Sean Mintzer
 Project Manager





1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 07/28/2019 17:29

Lab Sample ID#: 9072753-01
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-2

Sample Date: 07/25/2019 11:17
Receipt Date: 07/25/2019 18:05

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	93	MPN/100 mL		1	LNP	07/25/19 18:15	07/26/19 14:35

Lab Sample ID#: 9072753-02
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-1

Sample Date: 07/25/2019 12:39
Receipt Date: 07/25/2019 18:05

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	84	MPN/100 mL		1	LNP	07/25/19 18:15	07/26/19 14:35

Lab Sample ID#: 9072753-03
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-2

Sample Date: 07/25/2019 13:19
Receipt Date: 07/25/2019 18:05

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	328	MPN/100 mL		1	LNP	07/25/19 18:15	07/26/19 14:35



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 07/28/2019 17:29

Lab Sample ID#: 9072753-04
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-1

Sample Date: 07/25/2019 13:58
Receipt Date: 07/25/2019 18:05

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/ Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	1300	MPN/100 mL		1	LNP	07/25/19 18:15	07/26/19 14:35

ENVIRONMENTAL SERVICE LABORATORIES, INC.

HEADQUARTERS
1803 Philadelphia St.
Indiana, PA 15701
(724) 463-TEST
FAX: (724) 465-4209

SOUTHERN DIVISION
1276 Bentleyville Road
Van Voorhis, PA 15366
(724) 258-TEST
FAX: (724) 258-8376

NORTHERN DIV
435 Broad Street
Montoursville, PA
(570) 321-9003
FAX: (570) 321-1957

SAMPLE REQUEST & CHAIN OF CUSTODY

PAGE 1 OF 1

Page 4 of 4



9072753

FAX: (724) 465-4209

FOR INTERNAL LABORATORY USE ONLY

Sample Identification	ESL#	Sample Type				Matrix	# of Containers	Container Type <small>Preservative</small>	Analysis Requested
		Composite		Grab					
		Date on/off	Time on/off	Date	Time				
FR-2	0012753			7-25-19	11:17 am	WW	1 ✓ Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform	
FR-1	02			7-25-19	12:39 pm	WW	1 ✓ Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform	
GR-2	03			7-25-19	1:19 pm	WW	1 ✓ Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform	
GR-1	04			7-25-19	1:58 pm	WW	1 ✓ Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform	
							7/25/19 10:05		
							5:55		

Project Notes:

THE UNDERSIGNED PURCHASER HEREBY AGREES TO PAY SERVICE CHARGES ON ACCOUNTS OVER 31 DAYS OLD.
1. THESE SERVICE CHARGES WILL ACCRUE AT THE RATE OF 1.2% PER MONTH (18% PER ANNUM OR THE MAXIMUM ALLOWED BY LAW.)
2. THE UNDERSIGNED PURCHASER AGREES TO PAY, IN THE EVENT HIS ACCOUNT BECOMES DELINQUENT AND IS TURNED OVER TO ANY ATTORNEY FOR COLLECTION, REASONABLE ATTORNEY'S FEES PLUS ALL COURT AND ATTENDANT COLLECTION COSTS.

Fecal Analysis

Company/Name: Civil & Environmental Consultants, Inc.
Address: 333 Baldwin Road
Pittsburgh, PA 15205

Contact Person: Jackie Rocky
Mobile: 412-559-7035
Phone Number: 412-249-3140
Fax Number: (412) 429-2114
Email: bvalli@cecinc.com

Received By: (Signature) [Signature] Date/ Time 7-25-19 15:15
Relinquished By: (Signature) [Signature] Date/ Time 7-25-19 10:50

Received By: (Signature) _____ Date/ Time _____
Relinquished By: (Signature) _____ Date/ Time _____

Correct Preservations Y / N / NA Correct Containers Y / N / NA Receipt Temperature _____

ANALYTICAL LABORATORY REPORTS
FLETCHER RUN WATER SAMPLING EVENT
AUGUST 22, 2019

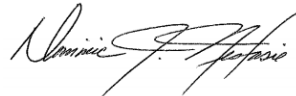
ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-94566-1
Client Project/Site: Fletcher Run

For:
Civil & Environmental Consultants Inc
333 Baldwin Rd.
Pittsburgh, Pennsylvania 15205

Attn: Jackie Rockey



Authorized for release by:
9/12/2019 2:34:00 PM

Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	6
Method Summary	7
Lab Chronicle	8
Client Sample Results	10
QC Sample Results	12
QC Association Summary	15
Chain of Custody	17
Receipt Checklists	21

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

Job ID: 180-94566-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-94566-1

Receipt

The samples were received on 8/23/2019 at 9:48 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at time of receipt was 1.6° C.

Anions

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

Metals

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

General Chemistry

The final pH check did not run due to instrument failure. The batch QC passed throughout the batch.

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



Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
▫	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)

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
West Virginia DEP	State Program	142	01-31-20

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
SM 2340B		Water	Calcium hardness as calcium carbonate
SM 2340B		Water	Hardness as calcium carbonate
SM 2340B		Water	Magnesium hardness as calcium carbonate

Laboratory: Eurofins TestAmerica, Canton

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Pennsylvania	NELAP	68-00340	08-31-20

Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-94566-1	FR-2	Water	08/22/19 09:50	08/23/19 09:48	
180-94566-2	FR-1	Water	08/22/19 10:25	08/23/19 09:48	

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	TAL PIT
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 4500 H+ B	pH	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
SM4500 P E-2011	Phosphorus	SM	TAL CAN
200.8	Preparation, Total Recoverable Metals	EPA	TAL PIT
Distill/Ammonia	Distillation, Ammonia	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

Client Sample ID: FR-2

Lab Sample ID: 180-94566-1

Date Collected: 08/22/19 09:50

Matrix: Water

Date Received: 08/23/19 09:48

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			289058	08/23/19 19:12	CMR	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	289402	08/27/19 10:20	KAK	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			289978	08/31/19 18:17	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	289402	08/27/19 10:20	KAK	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			289978	08/31/19 18:14	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			289268	08/26/19 09:02	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	290347	09/05/19 14:09	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			290509	09/06/19 15:13	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	289743	08/29/19 15:47	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			290282	09/05/19 09:49	MRD	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: PCTITRATOR		1			289688	08/29/19 00:14	AVS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	397621	08/26/19 14:05	TPH	TAL CAN

Client Sample ID: FR-1

Lab Sample ID: 180-94566-2

Date Collected: 08/22/19 10:25

Matrix: Water

Date Received: 08/23/19 09:48

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			289058	08/23/19 20:16	CMR	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	289402	08/27/19 10:20	KAK	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			289978	08/31/19 18:24	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	289402	08/27/19 10:20	KAK	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			289978	08/31/19 18:21	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			289268	08/26/19 09:02	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	290347	09/05/19 14:09	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			290509	09/06/19 15:15	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	289743	08/29/19 15:47	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			290282	09/05/19 09:49	MRD	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

Client Sample ID: FR-1

Lab Sample ID: 180-94566-2

Date Collected: 08/22/19 10:25

Matrix: Water

Date Received: 08/23/19 09:48

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM2320 B		1			289688	08/29/19 00:21	AVS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011		1	5 mL	5 mL	398030	08/28/19 11:35	TPH	TAL CAN
Instrument ID: ERNIE										

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

TPH = Tom Harshman

Lab: TAL PIT

Batch Type: Prep

BSH = Brandon Hough

KAK = Kayla Kalamasz

Batch Type: Analysis

AVS = Abbey Smith

BSH = Brandon Hough

CMR = Carl Reagle

MM1 = Mary Beth Miller

MRD = Madeline Daugherty

WTR = Bill Reinheimer

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

Client Sample ID: FR-2

Lab Sample ID: 180-94566-1

Date Collected: 08/22/19 09:50

Matrix: Water

Date Received: 08/23/19 09:48

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	40		1.0	0.71	mg/L			08/23/19 19:12	1
Nitrate as N	0.037	J	0.10	0.023	mg/L			08/23/19 19:12	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	320		30	12	ug/L		08/27/19 10:20	08/31/19 18:14	1
Calcium	82000		500	180	ug/L		08/27/19 10:20	08/31/19 18:14	1
Iron	660		50	15	ug/L		08/27/19 10:20	08/31/19 18:14	1
Magnesium	15000		500	70	ug/L		08/27/19 10:20	08/31/19 18:14	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		08/27/19 10:20	08/31/19 18:17	1
Arsenic	0.92	J	1.0	0.17	ug/L		08/27/19 10:20	08/31/19 18:17	1
Cadmium	1.0	U	1.0	0.21	ug/L		08/27/19 10:20	08/31/19 18:17	1
Copper	1.2	J	2.0	0.99	ug/L		08/27/19 10:20	08/31/19 18:17	1
Lead	1.0	U	1.0	0.16	ug/L		08/27/19 10:20	08/31/19 18:17	1
Nickel	0.77	J	1.0	0.46	ug/L		08/27/19 10:20	08/31/19 18:17	1
Selenium	5.0	U	5.0	0.81	ug/L		08/27/19 10:20	08/31/19 18:17	1
Zinc	4.0	J	5.0	2.2	ug/L		08/27/19 10:20	08/31/19 18:17	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	270		0.67	0.022	mg/L			08/26/19 09:02	1
Calcium hardness as calcium carbonate	200		0.25	0.0071	mg/L			08/26/19 09:02	1
Magnesium hardness as calcium carbonate	62		0.41	0.0048	mg/L			08/26/19 09:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.13		0.10	0.088	mg/L		09/05/19 14:09	09/06/19 15:13	1
Total Dissolved Solids	410		10	10	mg/L			08/29/19 15:47	1
pH	8.4		0.1	0.1	SU			09/05/19 09:49	1
Total Alkalinity as CaCO3 to pH 4.!	220		5.0	5.0	mg/L			08/29/19 00:14	1
Total Phosphorus as P	0.078	J	0.10	0.037	mg/L			08/26/19 14:05	1

Client Sample ID: FR-1

Lab Sample ID: 180-94566-2

Date Collected: 08/22/19 10:25

Matrix: Water

Date Received: 08/23/19 09:48

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	90		1.0	0.71	mg/L			08/23/19 20:16	1
Nitrate as N	0.039	J	0.10	0.023	mg/L			08/23/19 20:16	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	78		30	12	ug/L		08/27/19 10:20	08/31/19 18:21	1
Calcium	100000		500	180	ug/L		08/27/19 10:20	08/31/19 18:21	1
Iron	620		50	15	ug/L		08/27/19 10:20	08/31/19 18:21	1
Magnesium	21000		500	70	ug/L		08/27/19 10:20	08/31/19 18:21	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

Client Sample ID: FR-1

Lab Sample ID: 180-94566-2

Date Collected: 08/22/19 10:25

Matrix: Water

Date Received: 08/23/19 09:48

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		08/27/19 10:20	08/31/19 18:24	1
Arsenic	0.66	J	1.0	0.17	ug/L		08/27/19 10:20	08/31/19 18:24	1
Cadmium	1.0	U	1.0	0.21	ug/L		08/27/19 10:20	08/31/19 18:24	1
Copper	2.0	U	2.0	0.99	ug/L		08/27/19 10:20	08/31/19 18:24	1
Lead	1.0	U	1.0	0.16	ug/L		08/27/19 10:20	08/31/19 18:24	1
Nickel	1.1		1.0	0.46	ug/L		08/27/19 10:20	08/31/19 18:24	1
Selenium	5.0	U	5.0	0.81	ug/L		08/27/19 10:20	08/31/19 18:24	1
Zinc	3.9	J	5.0	2.2	ug/L		08/27/19 10:20	08/31/19 18:24	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	350		0.67	0.022	mg/L			08/26/19 09:02	1
Calcium hardness as calcium carbonate	260		0.25	0.0071	mg/L			08/26/19 09:02	1
Magnesium hardness as calcium carbonate	86		0.41	0.0048	mg/L			08/26/19 09:02	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		09/05/19 14:09	09/06/19 15:15	1
Total Dissolved Solids	590		10	10	mg/L			08/29/19 15:47	1
pH	8.3		0.1	0.1	SU			09/05/19 09:49	1
Total Alkalinity as CaCO3 to pH 4.!	230		5.0	5.0	mg/L			08/29/19 00:21	1
Total Phosphorus as P	0.037	J	0.10	0.037	mg/L			08/28/19 11:35	1

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Fletcher Run

Job ID: 180-94566-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-289058/18
Matrix: Water
Analysis Batch: 289058

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.71	mg/L			08/23/19 17:10	1
Nitrate as N	0.10	U	0.10	0.023	mg/L			08/23/19 17:10	1

Lab Sample ID: LCS 180-289058/17
Matrix: Water
Analysis Batch: 289058

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	1.25	1.29		mg/L		103	90 - 110

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-289402/1-A
Matrix: Water
Analysis Batch: 289978

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 289402

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	30	U	30	12	ug/L		08/27/19 10:20	08/31/19 16:37	1
Arsenic	1.0	U	1.0	0.17	ug/L		08/27/19 10:20	08/31/19 16:37	1
Calcium	500	U	500	180	ug/L		08/27/19 10:20	08/31/19 16:37	1
Cadmium	1.0	U	1.0	0.21	ug/L		08/27/19 10:20	08/31/19 16:37	1
Iron	50	U	50	15	ug/L		08/27/19 10:20	08/31/19 16:37	1
Copper	2.0	U	2.0	0.99	ug/L		08/27/19 10:20	08/31/19 16:37	1
Magnesium	500	U	500	70	ug/L		08/27/19 10:20	08/31/19 16:37	1
Lead	1.0	U	1.0	0.16	ug/L		08/27/19 10:20	08/31/19 16:37	1
Nickel	1.0	U	1.0	0.46	ug/L		08/27/19 10:20	08/31/19 16:37	1
Selenium	5.0	U	5.0	0.81	ug/L		08/27/19 10:20	08/31/19 16:37	1
Zinc	5.0	U	5.0	2.2	ug/L		08/27/19 10:20	08/31/19 16:37	1

Lab Sample ID: LCS 180-289402/2-A
Matrix: Water
Analysis Batch: 289978

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 289402

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	964		ug/L		96	85 - 115
Calcium	25000	27100		ug/L		108	85 - 115
Cadmium	500	548		ug/L		110	85 - 115
Iron	5000	5410		ug/L		108	85 - 115
Copper	500	479		ug/L		96	85 - 115
Magnesium	25000	27100		ug/L		109	85 - 115
Lead	500	547		ug/L		109	85 - 115
Nickel	500	490		ug/L		98	85 - 115
Selenium	1000	1080		ug/L		108	85 - 115
Zinc	250	242		ug/L		97	85 - 115

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) (Continued)

Lab Sample ID: 180-94566-2 MS
Matrix: Water
Analysis Batch: 289978

Client Sample ID: FR-1
Prep Type: Dissolved
Prep Batch: 289402

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Aluminum	30	U	5000	5020		ug/L		100	70 - 130
Arsenic	0.66	J	1000	961		ug/L		96	70 - 130
Calcium	100000		25000	120000	4	ug/L		69	70 - 130
Cadmium	1.0	U	500	535		ug/L		107	70 - 130
Iron	50	U	5000	5140		ug/L		103	70 - 130
Copper	2.0	U	500	468		ug/L		94	70 - 130
Magnesium	21000		25000	46300		ug/L		102	70 - 130
Lead	1.0	U	500	521		ug/L		104	70 - 130
Nickel	1.1		500	474		ug/L		95	70 - 130
Selenium	5.0	U	1000	1030		ug/L		103	70 - 130
Zinc	3.9	J	250	235		ug/L		92	70 - 130

Lab Sample ID: 180-94566-2 MSD
Matrix: Water
Analysis Batch: 289978

Client Sample ID: FR-1
Prep Type: Dissolved
Prep Batch: 289402

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	Limit
Aluminum	30	U	5000	5090		ug/L		102	70 - 130	1	20
Arsenic	0.66	J	1000	978		ug/L		98	70 - 130	2	20
Calcium	100000		25000	122000	4	ug/L		75	70 - 130	1	20
Cadmium	1.0	U	500	535		ug/L		107	70 - 130	0	20
Iron	50	U	5000	5260		ug/L		105	70 - 130	2	20
Copper	2.0	U	500	475		ug/L		95	70 - 130	1	20
Magnesium	21000		25000	46500		ug/L		103	70 - 130	1	20
Lead	1.0	U	500	533		ug/L		107	70 - 130	2	20
Nickel	1.1		500	478		ug/L		95	70 - 130	1	20
Selenium	5.0	U	1000	1050		ug/L		105	70 - 130	2	20
Zinc	3.9	J	250	241		ug/L		95	70 - 130	2	20

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-290347/6-A
Matrix: Water
Analysis Batch: 290509

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 290347

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		09/05/19 14:09	09/06/19 14:34	1

Lab Sample ID: LCS 180-290347/7-A
Matrix: Water
Analysis Batch: 290509

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 290347

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia, distilled	2.00	1.88		mg/L		94	90 - 110

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 180-290282/1
Matrix: Water
Analysis Batch: 290282

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.1		SU		101	99 - 101

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-289688/153
Matrix: Water
Analysis Batch: 289688

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L			08/28/19 23:43	1

Lab Sample ID: LCS 180-289688/152
Matrix: Water
Analysis Batch: 289688

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	250	240		mg/L		96	90 - 110

Method: SM4500 P E-2011 - Phosphorus

Lab Sample ID: MB 240-397621/3
Matrix: Water
Analysis Batch: 397621

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			08/26/19 11:46	1

Lab Sample ID: LCS 240-397621/4
Matrix: Water
Analysis Batch: 397621

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.431		mg/L		106	77 - 120

Lab Sample ID: MB 240-398030/3
Matrix: Water
Analysis Batch: 398030

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			08/28/19 09:16	1

Lab Sample ID: LCS 240-398030/4
Matrix: Water
Analysis Batch: 398030

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.395		mg/L		98	77 - 120

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

HPLC/IC

Analysis Batch: 289058

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-1	FR-2	Total/NA	Water	EPA 300.0 R2.1	
180-94566-2	FR-1	Total/NA	Water	EPA 300.0 R2.1	
MB 180-289058/18	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-289058/17	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Analysis Batch: 289268

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-1	FR-2	Total Recoverable	Water	SM 2340B	
180-94566-2	FR-1	Total Recoverable	Water	SM 2340B	

Prep Batch: 289402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-1	FR-2	Dissolved	Water	200.8	
180-94566-1	FR-2	Total Recoverable	Water	200.8	
180-94566-2	FR-1	Dissolved	Water	200.8	
180-94566-2	FR-1	Total Recoverable	Water	200.8	
MB 180-289402/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-289402/2-A	Lab Control Sample	Total Recoverable	Water	200.8	
180-94566-2 MS	FR-1	Dissolved	Water	200.8	
180-94566-2 MSD	FR-1	Dissolved	Water	200.8	

Analysis Batch: 289978

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-1	FR-2	Dissolved	Water	EPA 200.8 Rev 5	289402
180-94566-1	FR-2	Total Recoverable	Water	EPA 200.8 Rev 5	289402
180-94566-2	FR-1	Dissolved	Water	EPA 200.8 Rev 5	289402
180-94566-2	FR-1	Total Recoverable	Water	EPA 200.8 Rev 5	289402
MB 180-289402/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	289402
LCS 180-289402/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	289402
180-94566-2 MS	FR-1	Dissolved	Water	EPA 200.8 Rev 5	289402
180-94566-2 MSD	FR-1	Dissolved	Water	EPA 200.8 Rev 5	289402

General Chemistry

Analysis Batch: 289688

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-1	FR-2	Total/NA	Water	SM2320 B	
180-94566-2	FR-1	Total/NA	Water	SM2320 B	
MB 180-289688/153	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-289688/152	Lab Control Sample	Total/NA	Water	SM2320 B	

Analysis Batch: 289743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-1	FR-2	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-94566-1

General Chemistry (Continued)

Analysis Batch: 289743 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-2	FR-1	Total/NA	Water	SM 2540C	

Analysis Batch: 290282

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-1	FR-2	Total/NA	Water	SM 4500 H+ B	
180-94566-2	FR-1	Total/NA	Water	SM 4500 H+ B	
LCS 180-290282/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Prep Batch: 290347

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-1	FR-2	Total/NA	Water	Distill/Ammonia	
180-94566-2	FR-1	Total/NA	Water	Distill/Ammonia	
MB 180-290347/6-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 180-290347/7-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 290509

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-1	FR-2	Total/NA	Water	EPA 350.1	290347
180-94566-2	FR-1	Total/NA	Water	EPA 350.1	290347
MB 180-290347/6-A	Method Blank	Total/NA	Water	EPA 350.1	290347
LCS 180-290347/7-A	Lab Control Sample	Total/NA	Water	EPA 350.1	290347

Analysis Batch: 397621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-1	FR-2	Total/NA	Water	SM4500 P E-2011	
MB 240-397621/3	Method Blank	Total/NA	Water	SM4500 P E-2011	
LCS 240-397621/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	

Analysis Batch: 398030

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-94566-2	FR-1	Total/NA	Water	SM4500 P E-2011	
MB 240-398030/3	Method Blank	Total/NA	Water	SM4500 P E-2011	
LCS 240-398030/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	

Chain of Custody Record

Client Information Client Contact: Jackie Rockey Company: Civil & Environmental Consultants Inc Address: 333 Baldwin Rd. City: Pittsburgh State, Zip: PA, 15205 Phone: 412-249-3140 Email: jrockey@cecinc.com Project Name: 18020244 Project No.: 191-398 Site: Grinnage's Fletcher Run		Lab PM: Nestasie, Dominic J E-Mail: dominic.nestasie@testamericainc.com Phone: 412-429-3100 Project #: 18020244 SSO#:																		
Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #:		Carrier Tracking No(s): COC No.: 180-53791-10639.1 Page: Page 1 of 1 Job #:																		
Sample Identification Sample Date Sample Time Sample Type (C=comp, G=grab) Matrix (Water, Solid, On-water, BT-Tissue, Air) Preservation Code:		Analysis Requested Perform MS/MSD (Yes or No) Field Filtered Sample (Yes or No) 350.1 - Nitrogen, Ammonia 2220B, 300_ORGMS, SM4500_H+ 2540C, Calcd - TDS 4500_P_E - Total Phosphorus as P 200.8 - (MOD) Special List 200.8																		
FR-2	8-22-19	9:50	G	Water																
FR-2	8-22-19	9:50		Water																
FR-1	8-22-19	10:25		Water																
FR-1	8-22-19	10:25		Water																
GR-2	8-22-19	11:05		Water																
GR-2	8-22-19	11:05		Water																
GR-1	8-22-19	11:50																		
GR-1	8-22-19	11:50																		
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <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)		Special Instructions/OC Requirements: <i>Use out for GR samples in separate reports</i>																		
Empty Kit Relinquished by:		Method of Shipment:																		
Relinquished by: <i>Jackie Rockey</i>		Received by: <i>Roberta</i>																		
Relinquished by: <i>Roberta</i>		Received by: <i>Roberta</i>																		
Relinquished by:		Received by:																		
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Cooler Temperature(s) °C and Other Remarks: <i>9.7 1.9/16.0 Therm 10</i>																		



Chain of Custody Record



Client Information (Sub Contract Lab) Client Contact: Nestasie, Dominic J Shipping/Receiving: dominic.nestasie@lestamericainc.com Company: TestAmerica Laboratories, Inc. Address: 4101 Shuffel Street NW City: North Canton State, Zip: OH, 44720 Phone: 330-497-9396(Tel) 330-497-0772(Fax) Email: Project Name: 18020244 Project No.: 191-398 Site:		Lab PM: Nestasie, Dominic J E-Mail: dominic.nestasie@lestamericainc.com State of Origin: Pennsylvania Carrier Tracking No(s): Job #: 180-94566-1 Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Anchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)					
Due Date Requested: 9/6/2019 TAT Requested (days): PO #: WO #: Project #: 18020244 SSO#: Accreditations Required (See note): State Program - West Virginia DEP		Analysis Requested Total Number of Containers: 1 Special Instructions/Note: w14					
Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	4500 P _E /Total Phosphorus as P
FR-2 (180-94566-1)	8/22/19	09:50 Eastern	Water	Water	X	X	
FR-1 (180-94566-2)	8/22/19	10:25 Eastern	Water	Water	X	X	
GR-2 (180-94566-3)	8/22/19	11:05 Eastern	Water	Water	X	X	
GR-1 (180-94566-4)	8/22/19	11:50 Eastern	Water	Water	X	X	

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/test/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.

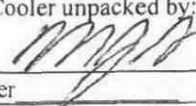
Possible Hazard Identification Unconfirmed Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2 Empty Kit Relinquished by:		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For Months Special Instructions/QC Requirements:	
Requiring by: <i>[Signature]</i> Relinquished by: Relinquished by:	Date/Time: 8/23/19 17:00 Date/Time: Date/Time:	Received by: <i>[Signature]</i> Received by: Received by:	Date/Time: 8/24/19 9:40 Date/Time: Date/Time:
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:	



Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility


Login # : _____

Client ETA Pittsburg Site Name _____
 Cooler Received on 8-24-19 Opened on 8-24-19
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Cooler unpacked by:


Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-8 (CF +0.1 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #36 (CF +0.6 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No NA
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No NA
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC987808
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Yes No NA  ← Larger than this.
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
 VOAs
 Oil and Grease
 TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login Sample Receipt Checklist

Client: Civil & Environmental Consultants Inc

Job Number: 180-94566-1

Login Number: 94566

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

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.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
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	



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

27 August 2019

Civil & Environmental Consultants, Inc.
Attn: Jackie Rockey
333 Baldwin Road
Pittsburgh, PA 15205

Work Order: 9082342
Project: Fecal Testing
Project Description: Fecal Testing

Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
FR-2	9082342-01	Water	08/22/2019 09:50	8/22/19 13:45	
FR-1	9082342-02	Water	08/22/2019 10:25	8/22/19 13:45	
GR-2	9082342-03	Water	08/22/2019 11:05	8/22/19 13:45	
GR-1	9082342-04	Water	08/22/2019 11:50	8/22/19 13:45	

Report Narrative

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

Definitions

RL Reporting Limit

Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.

S=Environmental Service Laboratories, Inc.-Southern Division, PA DEP lab ID #63-04247

Approved By

Sierra Grguric
Oil & Gas Field Supervisor/Project Manager



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 08/27/2019 06:33

Lab Sample ID#: 9082342-01
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-2

Sample Date: 08/22/2019 09:50
Receipt Date: 08/22/2019 13:45

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	2050	MPN/100 mL		5	DC/S	08/22/19 16:00	08/23/19 12:10

Lab Sample ID#: 9082342-02
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-1

Sample Date: 08/22/2019 10:25
Receipt Date: 08/22/2019 13:45

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	776	MPN/100 mL		5	DC/S	08/22/19 16:00	08/23/19 12:10

Lab Sample ID#: 9082342-03
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-2

Sample Date: 08/22/2019 11:05
Receipt Date: 08/22/2019 13:45

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	4080	MPN/100 mL		5	DC/S	08/22/19 16:00	08/23/19 12:10



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 08/27/2019 06:33

Lab Sample ID#: 9082342-04
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-1

Sample Date: 08/22/2019 11:50
Receipt Date: 08/22/2019 13:45

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/ Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	346	MPN/100 mL		5	DC/S	08/22/19 16:00	08/23/19 12:10

ENVIRONMENTAL SERVICE LABORATORIES, INC.

SAMPLE REQUEST & CHAIN OF CUSTODY

PAGE 1 OF 1

HEADQUARTERS
 1803 Philadelphia St.
 Indiana, PA 15701
 (724) 463-TEST
 FAX: (724) 465-4209

SOUTHERN DIVISION
 1276 Bentleyville Road
 Van Voorhis, PA 15366
 (724) 258-TEST
 FAX: (724) 258-8376

NORTHERN DIVISION
 435 Broad Street
 Montoursville, PA 17754
 (570) 321-9003
 FAX: (570) 321-1957

NORTHWEST DIVISION
 950 Main Street
 Sharpsville, PA 16150
 (724) 463-TEST
 FAX: (724) 465-4209

FOR INTERNAL LABORATORY USE ONLY



Sample Identification	ESL #	Composite		Date	Grab	Time	Matrix	# of Containers	Container Type	Analysis Requested
		Date on/off	Time on/off							
FR-2	9082342			8-22-19	9:50		WW	1	Sterile 125ml Na ₂ S ₂ O ₃	Fecal Coliform
FR-1				10:25	11:05		WW	1	Sterile 125ml Na ₂ S ₂ O ₃	Fecal Coliform
GR-2				11:50			WW	1	Sterile 125ml Na ₂ S ₂ O ₃	Fecal Coliform
GR-1										

THE UNDERSIGNED PURCHASER HEREBY AGREES TO PAY SERVICE CHARGES ON ACCOUNTS OVER 31 DAYS OLD.
 1. THESE SERVICE CHARGES WILL ACCRUE AT THE RATE OF 1 1/2% PER MONTH (18% PER ANNUM OR THE MAXIMUM ALLOWED BY LAW.)
 2. THE UNDERSIGNED PURCHASER AGREES TO PAY, IN THE EVENT HIS ACCOUNT BECOMES DELINQUENT AND IS TURNED OVER TO ANY ATTORNEY FOR COLLECTION, REASONABLE ATTORNEY'S FEES PLUS ALL COURT AND ATTENDANT COLLECTION COSTS.

Project Notes: Please dilute samples
 PA
 Fecal Analysis

Company Name: Civil & Environmental Consultants, Inc.

Address: 333 Baldwin Road
 Pittsburgh, PA 15205

Contact Person: Jackie Rocky
 Mobile: 412-559-7035
 Phone Number: 412-249-3140
 Fax Number: (412) 429-2114
 Email: -bvalli@cecinc.com

Sampled By: (Signature) *[Signature]*
 Date/ Time: 8/22/19 11:50

Relinquished By: (Signature) *[Signature]*
 Date/ Time: 8/22/19 13:45

Relinquished By: (Signature) *[Signature]*
 Date/ Time: 8-22-19 13:45

Relinquished By: (Signature) *[Signature]*
 Date/ Time: 8-22-19 13:45

Relinquished By: (Signature) *[Signature]*
 Date/ Time: 8-22-19 13:45

Correct Preservations Y / N / NA Correct Containers Y / N / NA Receipt Temperature *[Signature]*

ANALYTICAL LABORATORY REPORTS

**FLETCHER RUN WATER SAMPLING EVENT
SEPTEMBER 24, 2019**

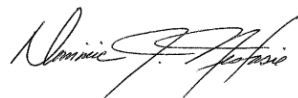
ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-96139-1
Client Project/Site: Fletcher Run

For:
Civil & Environmental Consultants Inc
333 Baldwin Rd.
Pittsburgh, Pennsylvania 15205

Attn: Jackie Rockey



Authorized for release by:
10/15/2019 11:23:08 AM

Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	7
Method Summary	8
Lab Chronicle	9
Client Sample Results	11
QC Sample Results	13
QC Association Summary	15
Chain of Custody	17
Receipt Checklists	24

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-96139-1

Job ID: 180-96139-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-96139-1

Receipt

The samples were received on 9/25/2019 at 9:30 AM; the samples arrived in good condition, properly preserved and on ice. The temperatures of the 5 coolers at time of receipt were 2.8° C, 3.3° C, 3.4° C, 4.3° C and 4.4° C.

Anions

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

Metals

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

General Chemistry

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-96139-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

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)

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Fletcher Run

Job ID: 180-96139-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	03-31-20
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-19
Louisiana	NELAP	04041	06-30-20
Minnesota	NELAP	042-999-482	12-31-19
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-04-20
New Hampshire	NELAP	2030	04-04-20
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-20
North Carolina (WW/SW)	State	434	12-31-19
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-20
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-30-19
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	01-31-20
Wisconsin	State	998027800	08-31-20



Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-96139-1

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-20
Connecticut	State	PH-0590	12-31-19
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-16-00404	12-28-19
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-20
West Virginia DEP	State	210	12-31-19

Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-96139-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-96139-1	FR-2	Water	09/24/19 10:30	09/25/19 09:30	
180-96139-2	FR-1	Water	09/24/19 11:40	09/25/19 09:30	

1

2

3

4

5

6

7

8

9

10

11

12

13

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-96139-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	TAL PIT
SM 2340B	Total Hardness (as CaCO ₃) by calculation	SM	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 4500 H+ B	pH	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
SM4500 P E-2011	Phosphorus	SM	TAL CAN
200.8	Preparation, Total Recoverable Metals	EPA	TAL PIT
Distill/Ammonia	Distillation, Ammonia	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-96139-1

Client Sample ID: FR-2

Lab Sample ID: 180-96139-1

Date Collected: 09/24/19 10:30

Matrix: Water

Date Received: 09/25/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			292561	09/25/19 17:43	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	292803	09/26/19 12:38	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	294722	10/12/19 00:56	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	292803	09/26/19 12:38	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	294722	10/12/19 00:41	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			294597	10/11/19 11:54	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	293234	09/30/19 15:16	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			293543	10/02/19 16:55	TAM	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	292957	09/27/19 11:16	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			294245	10/09/19 10:19	MRD	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: PCTITRATOR		1			292886	09/26/19 19:10	AVS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	404063	10/04/19 08:14	TPH	TAL CAN

Client Sample ID: FR-1

Lab Sample ID: 180-96139-2

Date Collected: 09/24/19 11:40

Matrix: Water

Date Received: 09/25/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			292561	09/25/19 17:58	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	292803	09/26/19 12:38	NAM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	294722	10/12/19 01:05	WTR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	292803	09/26/19 12:38	NAM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: M		1	1.0 mL	1.0 mL	294722	10/12/19 01:00	WTR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			294597	10/11/19 11:54	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	293234	09/30/19 15:16	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			293543	10/02/19 16:57	TAM	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	292957	09/27/19 11:16	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			294245	10/09/19 10:19	MRD	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-96139-1

Client Sample ID: FR-1

Lab Sample ID: 180-96139-2

Date Collected: 09/24/19 11:40

Matrix: Water

Date Received: 09/25/19 09:30

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM2320 B		1			292886	09/26/19 19:17	AVS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011		1	5 mL	5 mL	404063	10/04/19 08:24	TPH	TAL CAN
		Instrument ID: ERNIE								

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

TPH = Tom Harshman

Lab: TAL PIT

Batch Type: Prep

BSH = Brandon Hough

NAM = Nicole Marfisi

Batch Type: Analysis

AVS = Abbey Smith

MJH = Matthew Hartman

MM1 = Mary Beth Miller

MRD = Madeline Daugherty

TAM = Tessa Mastalski

WTR = Bill Reinheimer

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-96139-1

Client Sample ID: FR-2

Lab Sample ID: 180-96139-1

Date Collected: 09/24/19 10:30

Matrix: Water

Date Received: 09/25/19 09:30

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	46		1.0	0.71	mg/L			09/25/19 17:43	1
Nitrate as N	0.047	J	0.10	0.023	mg/L			09/25/19 17:43	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	74	B	30	12	ug/L		09/26/19 12:38	10/12/19 00:41	1
Calcium	73000		500	180	ug/L		09/26/19 12:38	10/12/19 00:41	1
Iron	140		50	15	ug/L		09/26/19 12:38	10/12/19 00:41	1
Magnesium	13000		500	70	ug/L		09/26/19 12:38	10/12/19 00:41	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U B	30	12	ug/L		09/26/19 12:38	10/12/19 00:56	1
Arsenic	1.0		1.0	0.17	ug/L		09/26/19 12:38	10/12/19 00:56	1
Cadmium	1.0	U	1.0	0.21	ug/L		09/26/19 12:38	10/12/19 00:56	1
Copper	1.5	J	2.0	0.99	ug/L		09/26/19 12:38	10/12/19 00:56	1
Lead	1.0	U	1.0	0.16	ug/L		09/26/19 12:38	10/12/19 00:56	1
Nickel	0.49	J	1.0	0.46	ug/L		09/26/19 12:38	10/12/19 00:56	1
Selenium	5.0	U B	5.0	0.81	ug/L		09/26/19 12:38	10/12/19 00:56	1
Zinc	3.9	J	5.0	2.2	ug/L		09/26/19 12:38	10/12/19 00:56	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	180		0.25	0.0071	mg/L			10/11/19 11:54	1
Hardness as calcium carbonate	240		0.67	0.022	mg/L			10/11/19 11:54	1
Magnesium hardness as calcium carbonate	55		0.41	0.0048	mg/L			10/11/19 11:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.16		0.10	0.088	mg/L		09/30/19 15:16	10/02/19 16:55	1
Total Dissolved Solids	380		10	10	mg/L			09/27/19 11:16	1
pH	8.2	HF	0.1	0.1	SU			10/09/19 10:19	1
Total Alkalinity as CaCO3 to pH 4.!	220		5.0	5.0	mg/L			09/26/19 19:10	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			10/04/19 08:14	1

Client Sample ID: FR-1

Lab Sample ID: 180-96139-2

Date Collected: 09/24/19 11:40

Matrix: Water

Date Received: 09/25/19 09:30

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	110		1.0	0.71	mg/L			09/25/19 17:58	1
Nitrate as N	0.027	J	0.10	0.023	mg/L			09/25/19 17:58	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	27	J B	30	12	ug/L		09/26/19 12:38	10/12/19 01:00	1
Calcium	97000		500	180	ug/L		09/26/19 12:38	10/12/19 01:00	1
Iron	340		50	15	ug/L		09/26/19 12:38	10/12/19 01:00	1
Magnesium	20000		500	70	ug/L		09/26/19 12:38	10/12/19 01:00	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-96139-1

Client Sample ID: FR-1

Lab Sample ID: 180-96139-2

Date Collected: 09/24/19 11:40

Matrix: Water

Date Received: 09/25/19 09:30

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U B	30	12	ug/L		09/26/19 12:38	10/12/19 01:05	1
Arsenic	0.80	J	1.0	0.17	ug/L		09/26/19 12:38	10/12/19 01:05	1
Cadmium	1.0	U	1.0	0.21	ug/L		09/26/19 12:38	10/12/19 01:05	1
Copper	1.9	J	2.0	0.99	ug/L		09/26/19 12:38	10/12/19 01:05	1
Lead	1.0	U	1.0	0.16	ug/L		09/26/19 12:38	10/12/19 01:05	1
Nickel	0.70	J	1.0	0.46	ug/L		09/26/19 12:38	10/12/19 01:05	1
Selenium	5.0	U B	5.0	0.81	ug/L		09/26/19 12:38	10/12/19 01:05	1
Zinc	3.5	J	5.0	2.2	ug/L		09/26/19 12:38	10/12/19 01:05	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Calcium hardness as calcium carbonate	240		0.25	0.0071	mg/L			10/11/19 11:54	1
Hardness as calcium carbonate	320		0.67	0.022	mg/L			10/11/19 11:54	1
Magnesium hardness as calcium carbonate	82		0.41	0.0048	mg/L			10/11/19 11:54	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.089	J	0.10	0.088	mg/L		09/30/19 15:16	10/02/19 16:57	1
Total Dissolved Solids	670		10	10	mg/L			09/27/19 11:16	1
pH	8.2	HF	0.1	0.1	SU			10/09/19 10:19	1
Total Alkalinity as CaCO3 to pH 4.5	250		5.0	5.0	mg/L			09/26/19 19:17	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			10/04/19 08:24	1

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Fletcher Run

Job ID: 180-96139-1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-292803/1-A
Matrix: Water
Analysis Batch: 294722

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 292803

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	12.5	J B	30	12	ug/L		09/26/19 12:38	10/11/19 23:12	1
Arsenic	1.0	U	1.0	0.17	ug/L		09/26/19 12:38	10/11/19 23:12	1
Calcium	500	U	500	180	ug/L		09/26/19 12:38	10/11/19 23:12	1
Cadmium	1.0	U	1.0	0.21	ug/L		09/26/19 12:38	10/11/19 23:12	1
Iron	50	U	50	15	ug/L		09/26/19 12:38	10/11/19 23:12	1
Copper	2.0	U	2.0	0.99	ug/L		09/26/19 12:38	10/11/19 23:12	1
Magnesium	500	U	500	70	ug/L		09/26/19 12:38	10/11/19 23:12	1
Lead	1.0	U	1.0	0.16	ug/L		09/26/19 12:38	10/11/19 23:12	1
Nickel	1.0	U	1.0	0.46	ug/L		09/26/19 12:38	10/11/19 23:12	1
Selenium	0.877	J B	5.0	0.81	ug/L		09/26/19 12:38	10/11/19 23:12	1
Zinc	5.0	U	5.0	2.2	ug/L		09/26/19 12:38	10/11/19 23:12	1

Lab Sample ID: LCS 180-292803/2-A
Matrix: Water
Analysis Batch: 294722

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 292803

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	1020		ug/L		102	85 - 115
Calcium	25000	25800		ug/L		103	85 - 115
Cadmium	500	552		ug/L		110	85 - 115
Iron	5000	4780		ug/L		96	85 - 115
Copper	500	492		ug/L		98	85 - 115
Magnesium	25000	27100		ug/L		108	85 - 115
Lead	500	534		ug/L		107	85 - 115
Nickel	500	501		ug/L		100	85 - 115
Selenium	1000	1010		ug/L		101	85 - 115
Zinc	250	256		ug/L		103	85 - 115

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-293234/1-A
Matrix: Water
Analysis Batch: 293543

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 293234

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		09/30/19 15:16	10/02/19 16:14	1

Lab Sample ID: LCS 180-293234/2-A
Matrix: Water
Analysis Batch: 293543

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 293234

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Fletcher Run

Job ID: 180-96139-1

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-292957/2
 Matrix: Water
 Analysis Batch: 292957

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L			09/27/19 11:16	1

Lab Sample ID: LCS 180-292957/1
 Matrix: Water
 Analysis Batch: 292957

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	633	586		mg/L		93	80 - 120

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 180-294245/1
 Matrix: Water
 Analysis Batch: 294245

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		101	99 - 101

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-292886/50
 Matrix: Water
 Analysis Batch: 292886

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L			09/26/19 17:36	1

Lab Sample ID: LCS 180-292886/49
 Matrix: Water
 Analysis Batch: 292886

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	250	236		mg/L		94	90 - 110

Method: SM4500 P E-2011 - Phosphorus

Lab Sample ID: MB 240-404063/3
 Matrix: Water
 Analysis Batch: 404063

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			10/04/19 07:06	1

Lab Sample ID: LCS 240-404063/4
 Matrix: Water
 Analysis Batch: 404063

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.423		mg/L		105	77 - 120

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-96139-1

HPLC/IC

Analysis Batch: 292561

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96139-1	FR-2	Total/NA	Water	EPA 300.0 R2.1	
180-96139-2	FR-1	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 292803

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96139-1	FR-2	Dissolved	Water	200.8	
180-96139-1	FR-2	Total Recoverable	Water	200.8	
180-96139-2	FR-1	Dissolved	Water	200.8	
180-96139-2	FR-1	Total Recoverable	Water	200.8	
MB 180-292803/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-292803/2-A	Lab Control Sample	Total Recoverable	Water	200.8	

Analysis Batch: 294597

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96139-1	FR-2	Total Recoverable	Water	SM 2340B	
180-96139-2	FR-1	Total Recoverable	Water	SM 2340B	

Analysis Batch: 294722

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96139-1	FR-2	Dissolved	Water	EPA 200.8 Rev 5	292803
180-96139-1	FR-2	Total Recoverable	Water	EPA 200.8 Rev 5	292803
180-96139-2	FR-1	Dissolved	Water	EPA 200.8 Rev 5	292803
180-96139-2	FR-1	Total Recoverable	Water	EPA 200.8 Rev 5	292803
MB 180-292803/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	292803
LCS 180-292803/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	292803

General Chemistry

Analysis Batch: 292886

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96139-1	FR-2	Total/NA	Water	SM2320 B	
180-96139-2	FR-1	Total/NA	Water	SM2320 B	
MB 180-292886/50	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-292886/49	Lab Control Sample	Total/NA	Water	SM2320 B	

Analysis Batch: 292957

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96139-1	FR-2	Total/NA	Water	SM 2540C	
180-96139-2	FR-1	Total/NA	Water	SM 2540C	
MB 180-292957/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-292957/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Prep Batch: 293234

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96139-1	FR-2	Total/NA	Water	Distill/Ammonia	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Fletcher Run

Job ID: 180-96139-1

General Chemistry (Continued)

Prep Batch: 293234 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96139-2	FR-1	Total/NA	Water	Distill/Ammonia	
MB 180-293234/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 180-293234/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 293543

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96139-1	FR-2	Total/NA	Water	EPA 350.1	293234
180-96139-2	FR-1	Total/NA	Water	EPA 350.1	293234
MB 180-293234/1-A	Method Blank	Total/NA	Water	EPA 350.1	293234
LCS 180-293234/2-A	Lab Control Sample	Total/NA	Water	EPA 350.1	293234

Analysis Batch: 294245

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96139-1	FR-2	Total/NA	Water	SM 4500 H+ B	
180-96139-2	FR-1	Total/NA	Water	SM 4500 H+ B	
LCS 180-294245/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Analysis Batch: 404063

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-96139-1	FR-2	Total/NA	Water	SM4500 P E-2011	
180-96139-2	FR-1	Total/NA	Water	SM4500 P E-2011	
MB 240-404063/3	Method Blank	Total/NA	Water	SM4500 P E-2011	
LCS 240-404063/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	

Chain of Custody Record



Client Information Company: Civil & Environmental Consultants Inc Address: 333 Baldwin Rd. City: Pittsburgh State: PA, Zip: 15205 Phone: 412-429-2324 Email: jrockey@cecinc.com Project Name: 18020244 Project No. 191-398 Site: GINNARE RUN; FLETCHER RUN		Due Date Requested: TAT Requested (days): PO #: Purchase Order not required WO #:		Sampler: MICHAEL DAVISON Lab PM: Nestasie, Dominic J Phone: 412-335-6893 E-Mail: dominic.nestasie@testamericainc.com		Carrier Tracking No(s): COC No: 180-54487-10639.1 Page: Page 1 of 1 Job #:	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input checked="" type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Deliverable Requested: I, II, III, IV, Other (specify)		Empty Kit Relinquished by:		Date:	
Relinquished by: <i>Michael Davison</i>		Date/Time: 9/24/19 17:10		Company: CEC		Regulated by: <i>[Signature]</i>	
Relinquished by: <i>[Signature]</i>		Date/Time: 9/25/19 0930		Company: Quick		Received by: <i>[Signature]</i>	
Relinquished by:		Date/Time:		Company:		Received by:	
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks:		Method of Shipment:	

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteoil, BT=Tissue, A=Air)	Field Filtered Sample (Yes/No)		Perform MS/MSD (Yes/No)		350.1 - Nitrogen, Ammonia		2320B, 300. ORGMS, SM4500 H+		2540C, Calcd - TDS		4500 P, E - Total Phosphorus as P		200.8 - (MOD) Special List 200.8		Analysis Requested	Total Number of Containers	Special Instructions/Note:
					Field Filtered	MS/MSD	S	N	S	D	S	N	S	D	S	D	S	D			
FR-2	9-24-19	10:30	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
FR-1	9-24-19	11:40	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	X			Q1-25
GR-2	9-24-19	12:45	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	X			28°C
GR-1	9-24-19	14:00	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	X			3.4°C
FR-2	9-24-19	10:30	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	X			4.0°C
FR-1	9-24-19	11:40	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	X			3.3°C
GR-2	9-24-19	12:45	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	X			4.4°C
GR-1	9-24-19	14:00	G	Water	X	X	X	X	X	X	X	X	X	X	X	X	X	X			

180-96139 Chain of Custody



Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : _____

Client TA P, H Site Name _____
 Cooler Received on 9/26/19 Opened on 9/27/19
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Cooler unpacked by:
Derry Burns

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box _____ Client Cooler _____ Box _____ Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN #IR-10 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #IR-11 (CF +0.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity each Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
 3. Shippers' packing slip attached to the cooler(s)? Yes No
 4. Did custody papers accompany the sample(s)? Yes No
 5. Were the custody papers relinquished & signed in the appropriate place? Yes No
 6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
 7. Did all bottles arrive in good condition (Unbroken)? Yes No
 8. Could all bottle labels be reconciled with the COC? Yes No
 9. Were correct bottle(s) used for the test(s) indicated? Yes No
 10. Sufficient quantity received to perform indicated analyses? Yes No
 11. Are these work share samples? Yes No
- If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC991818
 13. Were VOAs on the COC? Yes No
 14. Were air bubbles >6 mm in any VOA vials? Yes No NA ● ← Larger than this.
 15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
 16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:

 VOAs
 Oil and Grease
 TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____
 VOA Sample Preservation - Date/Time VOAs Frozen: _____

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	COC No:	
Client Contact: Shipping/Receiving		Phone:	Nestastie, Dominic J		180-374395.1	
Company: TestAmerica Laboratories, Inc.		E-Mail: dominic.nestastie@testamericainc.com	State of Origin: Pennsylvania	Page: 1 of 1		
Address: 4101 Shuffel Street NW		Accreditations Required (See note): State Program - West Virginia DEP		Job #: 180-96139-2		
City: North Canton	Due Date Requested: 10/8/2019	Analysis Requested				Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:
State, Zip: OH, 44720	TAT Requested (days):					
Phone: 330-497-9396(Tel) 330-497-0772(Fax)	PO #:	Field Filtered Sample (Yes or No)	4500 P E/ Total Phosphorus as P	Total Number of Containers		
Email:	WO #:	Perform MS/MSD (Yes or No)				
Project Name: Grinnage Run	Project #: 18020244	Matrix (W=water, S=solid, O=wastewater, G=grab)	Preservation Code:	Special Instructions/Note:		
Site:	SSOW#:	Sample Type (C=Comp, G=grab)	Sample Time			
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time			
GR-2 (180-96139-3)	9/24/19	Water	12:45 Eastern	X	1	
GR-1 (180-96139-4)	9/24/19	Water	14:00 Eastern	X	1	
<p>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/test/mark 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.</p>						
Possible Hazard Identification						
Unconfirmed						
Deliverable Requested: I, II, III, IV, Other (specify)						
Primary Deliverable Rank: 2						
Empty Kit Relinquished by:						
Relinquished by: <i>[Signature]</i>						
Relinquished by:						
Relinquished by:						
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No						
Custody Seal No.:						
Cooler Temperature(s) °C and Other Remarks:						
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For <input type="checkbox"/> Months						
Special Instructions/QC Requirements:						
Method of Shipment:						
Received by: <i>[Signature]</i> Company: <i>[Signature]</i>						
Received by: Company:						
Received by: Company:						
Cooler Temperature(s) °C and Other Remarks:						



Eurofins TestAmerica Canton Sample Receipt Form/Narrative
Canton Facility

Login # : _____

Client TA P, H Site Name _____
 Cooler Received on 9/26/19 Opened on 9/27/19
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Cooler unpacked by:
Derry Burns

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # _____ Foam Box _____ Client Cooler _____ Box _____ Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity lost Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No NA
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No

Tests that are not checked for pH by Receiving:

 VOAs
 Oil and Grease
 TOC

- If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC991818
 13. Were VOAs on the COC? Yes No
 14. Were air bubbles >6 mm in any VOA vials? Yes No NA Larger than this.
 15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
 16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____
 VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login Sample Receipt Checklist

Client: Civil & Environmental Consultants Inc

Job Number: 180-96139-1

Login Number: 96139

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

27 September 2019

Civil & Environmental Consultants, Inc.
Attn: Jackie Rockey
333 Baldwin Road
Pittsburgh, PA 15205

Work Order: 9092053
Project: Fecal Testing
Project Description: Fecal Testing

Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
FR-2	9092053-01	Water	09/24/2019 10:38	9/24/19 15:45	
FR-1	9092053-02	Water	09/24/2019 11:45	9/24/19 15:45	
GR-2	9092053-03	Water	09/24/2019 12:45	9/24/19 15:45	
GR-1	9092053-04	Water	09/24/2019 14:00	9/24/19 15:45	

Report Narrative

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

Definitions

RL Reporting Limit

Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.

S=Environmental Service Laboratories, Inc.-Southern Division, PA DEP lab ID #63-04247

Approved By

Sierra Grguric
Oil & Gas Field Supervisor/Project Manager



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 09/27/2019 10:24

Lab Sample ID#: 9092053-01
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-2

Sample Date: 09/24/2019 10:38
Receipt Date: 09/24/2019 15:45

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	862	MPN/100 mL		5	DC/S	09/24/19 15:55	09/25/19 11:10

Lab Sample ID#: 9092053-02
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-1

Sample Date: 09/24/2019 11:45
Receipt Date: 09/24/2019 15:45

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	2440	MPN/100 mL		5	DC/S	09/24/19 15:55	09/25/19 11:10

Lab Sample ID#: 9092053-03
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-2

Sample Date: 09/24/2019 12:45
Receipt Date: 09/24/2019 15:45

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	599	MPN/100 mL		5	DC/S	09/24/19 15:55	09/25/19 11:10



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 09/27/2019 10:24

Lab Sample ID#: 9092053-04
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-1

Sample Date: 09/24/2019 14:00
Receipt Date: 09/24/2019 15:45

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/ Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	335	MPN/100 mL		5	DC/S	09/24/19 15:55	09/25/19 11:10

ANALYTICAL LABORATORY REPORTS
FLETCHER RUN WATER SAMPLING EVENT
OCTOBER 24, 2019

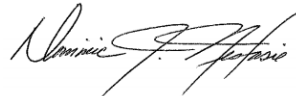
ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-97787-1
Client Project/Site: Fletcher Run

For:
Civil & Environmental Consultants Inc
333 Baldwin Rd.
Pittsburgh, Pennsylvania 15205

Attn: Jackie Rockey



Authorized for release by:
11/14/2019 1:05:33 PM

Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	7
Method Summary	8
Lab Chronicle	9
Client Sample Results	11
QC Sample Results	13
QC Association Summary	16
Chain of Custody	18
Receipt Checklists	25

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

Job ID: 180-97787-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative 180-97787-1

Receipt

The samples were received on 10/25/2019 at 10:21 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at time of receipt was 1.9° C.

Anions

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

Metals

Method 200.8: The continuing calibration blank (CCB) associated with batch 180-296956 recovered above the upper control limit for sodium. The samples associated with this CCB were 10X the RL for the affected analytes; therefore, the data has been reported.

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

General Chemistry

Ammonia: The matrix spike duplicate (MSD) recovery for preparation batch 180-297813 and analytical batch 180-298164 was outside control limits. Sample matrix interference and/or non-homogeneity are suspected because the associated laboratory control sample (LCS) and matrix spike (MS) recovery was within acceptance limits.

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



Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
F1	MS and/or MSD Recovery is outside acceptance limits.
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
♠	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)

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Fletcher Run

Job ID: 180-97787-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	03-31-20
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-19
Louisiana	NELAP	04041	06-30-20
Minnesota	NELAP	042-999-482	12-31-19
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-04-20
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-20
North Carolina (WW/SW)	State	434	12-31-19
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-20
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-30-19
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	01-31-20
Wisconsin	State	998027800	08-31-20



Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-20
Connecticut	State	PH-0590	12-31-19
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-16-00404	12-28-19
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-20
West Virginia DEP	State	210	12-31-19

Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-97787-1	FR-2	Water	10/24/19 10:40	10/25/19 10:21	
180-97787-2	FR-1	Water	10/24/19 11:45	10/25/19 10:21	

1

2

3

4

5

6

7

8

9

10

11

12

13

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	TAL PIT
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 4500 H+ B	pH	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
SM4500 P E-2011	Phosphorus	SM	TAL CAN
200.8	Preparation, Total Recoverable Metals	EPA	TAL PIT
Distill/Ammonia	Distillation, Ammonia	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

Client Sample ID: FR-2

Lab Sample ID: 180-97787-1

Date Collected: 10/24/19 10:40

Matrix: Water

Date Received: 10/25/19 10:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			296025	10/25/19 14:12	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	296445	10/29/19 16:20	MWW	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			296956	11/02/19 20:08	RSK	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	296445	10/29/19 16:20	MWW	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			296956	11/02/19 20:05	RSK	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			296715	10/31/19 13:04	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	297813	11/11/19 12:35	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			298164	11/13/19 18:26	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	296518	10/30/19 10:36	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			297412	11/07/19 13:56	PM	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: PCTITRATOR		1			296689	10/31/19 08:18	AVS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	409627	11/07/19 07:48	TPH	TAL CAN

Client Sample ID: FR-1

Lab Sample ID: 180-97787-2

Date Collected: 10/24/19 11:45

Matrix: Water

Date Received: 10/25/19 10:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			296174	10/26/19 06:30	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	296445	10/29/19 16:20	MWW	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			296956	11/02/19 20:15	RSK	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	296445	10/29/19 16:20	MWW	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			296956	11/02/19 20:11	RSK	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			296715	10/31/19 14:26	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			50 mL	50 mL	297813	11/11/19 12:35	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: ASTORIA1		1			298164	11/13/19 18:30	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	296518	10/30/19 10:36	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			297412	11/07/19 13:58	PM	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

Client Sample ID: FR-1

Lab Sample ID: 180-97787-2

Date Collected: 10/24/19 11:45

Matrix: Water

Date Received: 10/25/19 10:21

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM2320 B		1			296689	10/31/19 08:24	AVS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011		1	5 mL	5 mL	409627	11/07/19 08:03	TPH	TAL CAN
		Instrument ID: ERNIE								

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

TPH = Tom Harshman

Lab: TAL PIT

Batch Type: Prep

BSH = Brandon Hough

MWW = Margaret Wanyoike

Batch Type: Analysis

AVS = Abbey Smith

BSH = Brandon Hough

MJH = Matthew Hartman

MM1 = Mary Beth Miller

PM = Paloma Hoelzle

RSK = Robert Kurtz

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

Client Sample ID: FR-2

Lab Sample ID: 180-97787-1

Date Collected: 10/24/19 10:40

Matrix: Water

Date Received: 10/25/19 10:21

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	41		1.0	0.32	mg/L			10/25/19 14:12	1
Nitrate as N	0.049	J	0.10	0.023	mg/L			10/25/19 14:12	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	95		30	12	ug/L		10/29/19 16:20	11/02/19 20:05	1
Calcium	72000		500	180	ug/L		10/29/19 16:20	11/02/19 20:05	1
Iron	210		50	15	ug/L		10/29/19 16:20	11/02/19 20:05	1
Magnesium	13000		500	70	ug/L		10/29/19 16:20	11/02/19 20:05	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		10/29/19 16:20	11/02/19 20:08	1
Arsenic	0.54	J B	1.0	0.17	ug/L		10/29/19 16:20	11/02/19 20:08	1
Cadmium	1.0	U	1.0	0.21	ug/L		10/29/19 16:20	11/02/19 20:08	1
Copper	1.2	J	2.0	0.99	ug/L		10/29/19 16:20	11/02/19 20:08	1
Lead	1.0	U	1.0	0.16	ug/L		10/29/19 16:20	11/02/19 20:08	1
Nickel	0.59	J	1.0	0.46	ug/L		10/29/19 16:20	11/02/19 20:08	1
Selenium	5.0	U	5.0	0.81	ug/L		10/29/19 16:20	11/02/19 20:08	1
Zinc	5.7		5.0	2.2	ug/L		10/29/19 16:20	11/02/19 20:08	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	230		0.67	0.022	mg/L			10/31/19 13:04	1
Calcium hardness as calcium carbonate	180		0.25	0.0071	mg/L			10/31/19 13:04	1
Magnesium hardness as calcium carbonate	52		0.41	0.0048	mg/L			10/31/19 13:04	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U F1	0.10	0.088	mg/L		11/11/19 12:35	11/13/19 18:26	1
Total Dissolved Solids	390		10	10	mg/L			10/30/19 10:36	1
pH	8.0	HF	0.1	0.1	SU			11/07/19 13:56	1
Total Alkalinity as CaCO3 to pH 4.!	220		5.0	5.0	mg/L			10/31/19 08:18	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			11/07/19 07:48	1

Client Sample ID: FR-1

Lab Sample ID: 180-97787-2

Date Collected: 10/24/19 11:45

Matrix: Water

Date Received: 10/25/19 10:21

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	82		1.0	0.32	mg/L			10/26/19 06:30	1
Nitrate as N	0.071	J	0.10	0.023	mg/L			10/26/19 06:30	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	19	J	30	12	ug/L		10/29/19 16:20	11/02/19 20:11	1
Calcium	86000		500	180	ug/L		10/29/19 16:20	11/02/19 20:11	1
Iron	610		50	15	ug/L		10/29/19 16:20	11/02/19 20:11	1
Magnesium	17000		500	70	ug/L		10/29/19 16:20	11/02/19 20:11	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

Client Sample ID: FR-1

Lab Sample ID: 180-97787-2

Date Collected: 10/24/19 11:45

Matrix: Water

Date Received: 10/25/19 10:21

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		10/29/19 16:20	11/02/19 20:15	1
Arsenic	0.47	J B	1.0	0.17	ug/L		10/29/19 16:20	11/02/19 20:15	1
Cadmium	1.0	U	1.0	0.21	ug/L		10/29/19 16:20	11/02/19 20:15	1
Copper	2.0	U	2.0	0.99	ug/L		10/29/19 16:20	11/02/19 20:15	1
Lead	1.0	U	1.0	0.16	ug/L		10/29/19 16:20	11/02/19 20:15	1
Nickel	0.91	J	1.0	0.46	ug/L		10/29/19 16:20	11/02/19 20:15	1
Selenium	5.0	U	5.0	0.81	ug/L		10/29/19 16:20	11/02/19 20:15	1
Zinc	4.6	J	5.0	2.2	ug/L		10/29/19 16:20	11/02/19 20:15	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	280		0.67	0.022	mg/L			10/31/19 14:26	1
Calcium hardness as calcium carbonate	210		0.25	0.0071	mg/L			10/31/19 14:26	1
Magnesium hardness as calcium carbonate	70		0.41	0.0048	mg/L			10/31/19 14:26	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		11/11/19 12:35	11/13/19 18:30	1
Total Dissolved Solids	590		10	10	mg/L			10/30/19 10:36	1
pH	8.1	HF	0.1	0.1	SU			11/07/19 13:58	1
Total Alkalinity as CaCO3 to pH 4.5	220		5.0	5.0	mg/L			10/31/19 08:24	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			11/07/19 08:03	1

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Fletcher Run

Job ID: 180-97787-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-296025/6
Matrix: Water
Analysis Batch: 296025

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.32	mg/L			10/25/19 05:11	1
Nitrate as N	0.10	U	0.10	0.023	mg/L			10/25/19 05:11	1

Lab Sample ID: LCS 180-296025/5
Matrix: Water
Analysis Batch: 296025

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	24.7		mg/L		99	90 - 110
Nitrate as N	1.25	1.27		mg/L		101	90 - 110

Lab Sample ID: MB 180-296174/6
Matrix: Water
Analysis Batch: 296174

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.32	mg/L			10/26/19 05:58	1
Nitrate as N	0.10	U	0.10	0.023	mg/L			10/26/19 05:58	1

Lab Sample ID: LCS 180-296174/5
Matrix: Water
Analysis Batch: 296174

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	50.0	47.0		mg/L		94	90 - 110
Nitrate as N	2.50	2.36		mg/L		94	90 - 110

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-296445/1-A
Matrix: Water
Analysis Batch: 296956

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 296445

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		10/29/19 16:20	11/02/19 18:47	1
Arsenic	0.176	J B	1.0	0.17	ug/L		10/29/19 16:20	11/02/19 18:47	1
Calcium	500	U	500	180	ug/L		10/29/19 16:20	11/02/19 18:47	1
Cadmium	1.0	U	1.0	0.21	ug/L		10/29/19 16:20	11/02/19 18:47	1
Iron	50	U	50	15	ug/L		10/29/19 16:20	11/02/19 18:47	1
Copper	2.0	U	2.0	0.99	ug/L		10/29/19 16:20	11/02/19 18:47	1
Magnesium	500	U	500	70	ug/L		10/29/19 16:20	11/02/19 18:47	1
Lead	1.0	U	1.0	0.16	ug/L		10/29/19 16:20	11/02/19 18:47	1
Nickel	1.0	U	1.0	0.46	ug/L		10/29/19 16:20	11/02/19 18:47	1
Selenium	5.0	U	5.0	0.81	ug/L		10/29/19 16:20	11/02/19 18:47	1
Zinc	5.0	U	5.0	2.2	ug/L		10/29/19 16:20	11/02/19 18:47	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) (Continued)

Lab Sample ID: LCS 180-296445/2-A
Matrix: Water
Analysis Batch: 296956

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 296445

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Aluminum	5000	4940		ug/L		99	85 - 115
Arsenic	1000	927		ug/L		93	85 - 115
Calcium	25000	25400		ug/L		101	85 - 115
Cadmium	500	503		ug/L		101	85 - 115
Iron	5000	5010		ug/L		100	85 - 115
Copper	500	503		ug/L		101	85 - 115
Magnesium	25000	25300		ug/L		101	85 - 115
Lead	500	487		ug/L		97	85 - 115
Nickel	500	507		ug/L		101	85 - 115
Selenium	1000	1020		ug/L		102	85 - 115
Zinc	250	268		ug/L		107	85 - 115

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-297813/1-A
Matrix: Water
Analysis Batch: 298164

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 297813

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		11/11/19 12:35	11/13/19 18:19	1

Lab Sample ID: LCS 180-297813/2-A
Matrix: Water
Analysis Batch: 298164

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 297813

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia, distilled	2.00	2.08		mg/L		104	90 - 110

Lab Sample ID: 180-97787-1 MS
Matrix: Water
Analysis Batch: 298164

Client Sample ID: FR-2
Prep Type: Total/NA
Prep Batch: 297813

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	Limits
Ammonia, distilled	0.10	U F1	2.00	2.15		mg/L		107	90 - 110

Lab Sample ID: 180-97787-1 MSD
Matrix: Water
Analysis Batch: 298164

Client Sample ID: FR-2
Prep Type: Total/NA
Prep Batch: 297813

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	Limits	RPD	RPD Limit
Ammonia, distilled	0.10	U F1	2.00	2.21	F1	mg/L		111	90 - 110	3	20

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-296518/2
Matrix: Water
Analysis Batch: 296518

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L			10/30/19 10:36	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

Method: SM 2540C - Solids, Total Dissolved (TDS) (Continued)

Lab Sample ID: LCS 180-296518/1
Matrix: Water
Analysis Batch: 296518

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	188	212		mg/L		113	80 - 120

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 180-297412/1
Matrix: Water
Analysis Batch: 297412

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		100	99 - 101

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-296689/215
Matrix: Water
Analysis Batch: 296689

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L			10/31/19 06:38	1

Lab Sample ID: LCS 180-296689/214
Matrix: Water
Analysis Batch: 296689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	250	260		mg/L		104	90 - 110

Method: SM4500 P E-2011 - Phosphorus

Lab Sample ID: MB 240-409627/3
Matrix: Water
Analysis Batch: 409627

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			11/07/19 06:00	1

Lab Sample ID: LCS 240-409627/4
Matrix: Water
Analysis Batch: 409627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.376		mg/L		93	77 - 120

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

HPLC/IC

Analysis Batch: 296025

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-1	FR-2	Total/NA	Water	EPA 300.0 R2.1	
MB 180-296025/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-296025/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Analysis Batch: 296174

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-2	FR-1	Total/NA	Water	EPA 300.0 R2.1	
MB 180-296174/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-296174/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 296445

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-1	FR-2	Dissolved	Water	200.8	
180-97787-1	FR-2	Total Recoverable	Water	200.8	
180-97787-2	FR-1	Dissolved	Water	200.8	
180-97787-2	FR-1	Total Recoverable	Water	200.8	
MB 180-296445/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-296445/2-A	Lab Control Sample	Total Recoverable	Water	200.8	

Analysis Batch: 296715

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-1	FR-2	Total Recoverable	Water	SM 2340B	
180-97787-2	FR-1	Total Recoverable	Water	SM 2340B	

Analysis Batch: 296956

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-1	FR-2	Dissolved	Water	EPA 200.8 Rev 5	296445
180-97787-1	FR-2	Total Recoverable	Water	EPA 200.8 Rev 5	296445
180-97787-2	FR-1	Dissolved	Water	EPA 200.8 Rev 5	296445
180-97787-2	FR-1	Total Recoverable	Water	EPA 200.8 Rev 5	296445
MB 180-296445/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	296445
LCS 180-296445/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	296445

General Chemistry

Analysis Batch: 296518

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-1	FR-2	Total/NA	Water	SM 2540C	
180-97787-2	FR-1	Total/NA	Water	SM 2540C	
MB 180-296518/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-296518/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 296689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-1	FR-2	Total/NA	Water	SM2320 B	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-97787-1

General Chemistry (Continued)

Analysis Batch: 296689 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-2	FR-1	Total/NA	Water	SM2320 B	
MB 180-296689/215	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-296689/214	Lab Control Sample	Total/NA	Water	SM2320 B	

Analysis Batch: 297412

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-1	FR-2	Total/NA	Water	SM 4500 H+ B	
180-97787-2	FR-1	Total/NA	Water	SM 4500 H+ B	
LCS 180-297412/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Prep Batch: 297813

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-1	FR-2	Total/NA	Water	Distill/Ammonia	
180-97787-2	FR-1	Total/NA	Water	Distill/Ammonia	
MB 180-297813/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 180-297813/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	
180-97787-1 MS	FR-2	Total/NA	Water	Distill/Ammonia	
180-97787-1 MSD	FR-2	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 298164

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-1	FR-2	Total/NA	Water	EPA 350.1	297813
180-97787-2	FR-1	Total/NA	Water	EPA 350.1	297813
MB 180-297813/1-A	Method Blank	Total/NA	Water	EPA 350.1	297813
LCS 180-297813/2-A	Lab Control Sample	Total/NA	Water	EPA 350.1	297813
180-97787-1 MS	FR-2	Total/NA	Water	EPA 350.1	297813
180-97787-1 MSD	FR-2	Total/NA	Water	EPA 350.1	297813

Analysis Batch: 409627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-97787-1	FR-2	Total/NA	Water	SM4500 P E-2011	
180-97787-2	FR-1	Total/NA	Water	SM4500 P E-2011	
MB 240-409627/3	Method Blank	Total/NA	Water	SM4500 P E-2011	
LCS 240-409627/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	

Chain of Custody Record

Eurofins

Environment Testing
 TestAmerica



Client Information
 Client Contact: Jackie Rocky
 Company: Civil & Environmental Consultants Inc
 Address: 333 Baldwin Rd.
 City: Pittsburgh
 State, Zip: PA, 15205
 Phone: 412-429-2324
 Email: jrockey@cecinc.com
 Project Name: 18020244
 Project No. 191-398
 Site: GRINAGE RUN/FLETCHER

Sampler: MIKE DAVISON
 Lab PM: Nestasie, Dominic J
 Phone: 412-335-6893
 E-Mail: dominic.nestasie@testamerica.com

C No: J-55414-10639.1
 Job #: je 1 of 1

Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (Water, Seawater, Other)	Preservation Code	Analysis Requested				Total Number of Containers	Special Instructions/Note
						Perform MS/MSD (Yes or No)	350.1 - Nitrogen, Ammonia	2320B, 300_ORGFMS, SM4500_H+	2540C_Calcd - TDS		
FR-2	10-24-19	10:40	G	Water		X	X	X	X	5	
FR-1	10-24-19	11:45	G	Water		X	X	X	X	5	
GR-2	10-24-19	12:40	G	Water		X	X	X	X	5	Q5 1.94
GR-1	10-24-19	13:25	G	Water		X	X	X	X	5	Phase 10
FR-2	10-24-19	10:40	G	Water		X	X	X	X	1	CFD
FR-1	10-24-19	11:45	G	Water		X	X	X	X	1	
GR-2	10-24-19	12:40	G	Water		X	X	X	X	1	
GR-1	10-24-19	13:25	G	Water		X	X	X	X	1	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Unknown Radiological
 Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: [Signature] Date: 10/24/19 16:47
 Relinquished by: [Signature] Date: 10/25/19 10:21
 Relinquished by: [Signature] Date: 10/25/19 10:21

Method of Shipment: COURIER
 Received by: [Signature] Date: 10/25/19 9:00
 Received by: [Signature] Date: 10/25/19 10:21
 Received by: [Signature] Date: 10/25/19 10:21

Cooler Temperature(s) °C and Other Remarks:

Eurofins TestAmerica Canton Sample Receipt Form/Narrative

Login # : _____

Canton Facility

Client ETA Pittsburgh Site Name _____
 Cooler Received on 10-26-19 Opened on 10-26-19
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Cooler unpacked by: [Signature]

Receipt After-hours: Drop-off Date/Time

Storage Location _____

TestAmerica Cooler # 111 Foam Box Client Cooler Box Other
 Packing material used: Bubble Wrap Foam Plastic Bag None Other
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No NA
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples?
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC991818
13. Were VOAs on the COC? Yes No NA
14. Were air bubbles >6 mm in any VOA vials? Yes No NA Larger than this.
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Nestasio, Dominic J		Carrier Tracking No(s): 180-377164.1	
Client Contact: Shipping/Receiving		E-Mail: dominic.nestasio@testamericainc.com		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		State of Origin: Pennsylvania		Job #: 180-97787-1	
Address: 4101 Shuffel Street NW, North Canton State, Zip: OH, 44720		Accreditations Required (See note): State Program - West Virginia DEP		Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other: W - pH 4-5 Z - other (specify)	
Due Date Requested: 11/7/2019		TAT Requested (days):		Analysis Requested	
PO #	WO #	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	4500 P, E Total Phosphorus as P	Total Number of Containers
Project #: 18020244	SSOW#	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=tissue, A=AV)
Site: Fletcher Run		Sample Date	Sample Time	Sample Type	Matrix
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type	Matrix
FR-2 (180-97787-1)		10/24/19	10:40 Eastern	Water	Water
FR-1 (180-97787-2)		10/24/19	11:45 Eastern	Water	Water
Special Instructions/Note: 350					

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/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
 Unconfirmed
 Deliverable Requested: I, II, III, IV, Other (specify) _____ Primary Deliverable Rank: 2
 Empty Kit Relinquished by: _____ Date: _____ Method of Shipment: _____
 Relinquished by: _____ Date/Time: 10/25/19 1700 Company: PAJ
 Relinquished by: _____ Date/Time: _____ Company: _____
 Relinquished by: _____ Date/Time: _____ Company: _____
 Custody Seals Intact: _____ Custody Seal No.: _____
 Δ Yes Δ No
 Cooler Temperature(s) °C and Other Remarks: _____

Special Instructions/QC Requirements:
 Return To Client Disposal By Lab Archive For _____ Months

Received by: _____ Date/Time: 10-26-19 1000 Company: E-PAE
 Received by: _____ Date/Time: _____ Company: _____
 Received by: _____ Date/Time: _____ Company: _____



Canton Facility

Client ETA Pittsburgh Site Name _____ Cooler unpacked by: [Signature]

Cooler Received on 10-26-19 Opened on 10-26-19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1A Foam Box _____ Client Cooler _____ Box _____ Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None _____ Other _____

COOLANT: Wet Ice Blue Ice _____ Dry Ice _____ Water _____ None _____

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No _____
4. Did custody papers accompany the sample(s)? Yes No _____
5. Were the custody papers relinquished & signed in the appropriate place? Yes No _____
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No _____
7. Did all bottles arrive in good condition (Unbroken)? Yes No _____
8. Could all bottle labels be reconciled with the COC? Yes No _____
9. Were correct bottle(s) used for the test(s) indicated? Yes No _____
10. Sufficient quantity received to perform indicated analyses? Yes No _____
11. Are these work share samples?
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC991818
13. Were VOAs on the COC? Yes No _____
14. Were air bubbles >6 mm in any VOA vials? Yes No NA Larger than this.
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No _____
16. Was a LL Hg or Me Hg trip blank present? Yes No _____

Tests that are not checked for pH by Receiving:

 VOAs
 Oil and Grease
 TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login # : _____

Eurofins TestAmerica Canton Sample Receipt Multiple Cooler Form						
Cooler Description (Circle)	IR Gun # (Circle)	Observed Temp °C	Corrected Temp °C	Coolant (Circle)		
TA Client Box Other	IR-10 IR-11	1.3	2.0	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11	3.0	3.7	Water	None	
TA Client Box Other	IR-10 IR-11	1.9	2.6	Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11	1.6	2.3	Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	
TA Client Box Other	IR-10 IR-11			Wet Ice	Blue Ice	Dry Ice
TA Client Box Other	IR-10 IR-11			Water	None	

See Temperature Excursion Form

Login Sample Receipt Checklist

Client: Civil & Environmental Consultants Inc

Job Number: 180-97787-1

Login Number: 97787

List Source: Eurofins TestAmerica, Pittsburgh

List Number: 1

Creator: Say, Thomas C

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





1803 Philadelphia Street
 Indiana, PA 15701
 P: (724) 463-8378
 F: (724) 465-4209
 PADEP: 32-00382

1276 Bentleyville Road
 Van Voorhis, PA 15366
 P: (724) 258-8378
 F: (724) 258-8376
 PADEP: 63-04247

435 Broad Street
 Montoursville, PA 17754
 P: (570) 321-9002
 F: (570) 321-1957
 PADEP: 41-04880

950 West Main Street
 Sharpsville, PA 16150
 P: (724) 463-8378 x 500
 F: (724) 465-4209
 PADEP: 43-04934

28 October 2019

Civil & Environmental Consultants, Inc.
 Attn: Jackie Rockey
 333 Baldwin Road
 Pittsburgh, PA 15205

Work Order: 9102287
Project: Fecal Testing
Project Description: Fecal Testing

Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
FR-2	9102287-01	Water	10/24/2019 10:40	10/24/19 15:23	
FR-1	9102287-02	Water	10/24/2019 11:45	10/24/19 15:23	
GR-2	9102287-03	Water	10/24/2019 12:40	10/24/19 15:23	
GR-1	9102287-04	Water	10/24/2019 13:25	10/24/19 15:23	

Report Narrative

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

Definitions

RL Reporting Limit

Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.

S=Environmental Service Laboratories, Inc.-Southern Division, PA DEP lab ID #63-04247

Approved By

Sierra Grguric
 Oil & Gas Field Supervisor/Project Manager



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 10/28/2019 09:49

Lab Sample ID#: 9102287-01
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-2

Sample Date: 10/24/2019 10:40
Receipt Date: 10/24/2019 15:23

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	302	MPN/100 mL		5	JJN/S	10/24/19 15:45	10/25/19 10:30

Lab Sample ID#: 9102287-02
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-1

Sample Date: 10/24/2019 11:45
Receipt Date: 10/24/2019 15:23

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	43	MPN/100 mL		5	JJN/S	10/24/19 15:45	10/25/19 10:30

Lab Sample ID#: 9102287-03
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-2

Sample Date: 10/24/2019 12:40
Receipt Date: 10/24/2019 15:23

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	750	MPN/100 mL		5	JJN/S	10/24/19 15:45	10/25/19 10:30



1803 Philadelphia Street
 Indiana, PA 15701
 P: (724) 463-8378
 F: (724) 465-4209
 PADEP: 32-00382

1276 Bentleyville Road
 Van Voorhis, PA 15366
 P: (724) 258-8378
 F: (724) 258-8376
 PADEP: 63-04247

435 Broad Street
 Montoursville, PA 17754
 P: (570) 321-9002
 F: (570) 321-1957
 PADEP: 41-04880

950 West Main Street
 Sharpsville, PA 16150
 P: (724) 463-8378 x 500
 F: (724) 465-4209
 PADEP: 43-04934

Civil & Environmental Consultants, Inc.
 333 Baldwin Road
 Pittsburgh, PA 15205

Reported: 10/28/2019 09:49

Lab Sample ID#: 9102287-04
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-1

Sample Date: 10/24/2019 13:25
Receipt Date: 10/24/2019 15:23

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	252	MPN/100 mL		5	JJN/S	10/24/19 15:45	10/25/19 10:30

ENVIRONMENTAL SERVICE LABORATORIES, INC.

SAMPLE REQUEST & CHAIN OF CUSTODY

PAGE 1 OF 1

HEADQUARTERS
1803 Philadelphia St.
Indiana, PA 15701
(724) 463-TEST
FAX: (724) 465-4209

SOUTHERN DIVISION
1276 Bentleyville Road
Van Voorhis, PA 15366
(724) 258-TEST
FAX: (724) 258-8376

NORTHERN DIVISION
435 Broad Street
Montoursville, PA 17754
(570) 321-9003
FAX: (570) 321-1957

NORTHWEST DIVISION
950 Main Street
Sharpsville, PA 16150
(724) 463-TEST
FAX: (724) 465-4209

FOR INTERNAL LABORATORY USE ONLY

9102287

Sample Identification	ESL#	Composite		Date	Grab Time	Matrix	# of Containers	Container Type Preservative	Analysis Requested
		Date on/off	Time on/off						
FR-2	9102287			10/24/19	10:40	WW	1	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform
FR-1	02				11:45	WW	1	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform
GR-2	03				12:40	WW	1	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform
GR-1	04				13:25	WW	1	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform

THE UNDERSIGNED PURCHASER HEREBY AGREES TO PAY SERVICE CHARGES ON ACCOUNTS OVER 31 DAYS OLD.
1. THESE SERVICE CHARGES WILL ACCRUE AT THE RATE OF 1.12% PER MONTH (18% PER ANNUM OR THE MAXIMUM ALLOWED BY LAW.)
2. THE UNDERSIGNED PURCHASER AGREES TO PAY, IN THE EVENT HIS ACCOUNT BECOMES DELINQUENT AND IS TURNED OVER TO ANY ATTORNEY FOR COLLECTION, REASONABLE ATTORNEY'S FEES PLUS ALL COURT AND ATTENDANT COLLECTION COSTS.

Project Notes: 15:33 6:30 Ice

PLEASE DRIVE SAMPLES
Fecal Analysis

Company Name: Civil & Environmental Consultants, Inc.

Address: 333 Baldwin Road

Pittsburgh, PA 15205

Contact Person: Jackie Rocky

Mobile: 412-559-7035

Phone Number: 412-249-3140

Fax Number: (412) 429-2114

Email: bvallii@cecinc.com

Sampled By: (Signature) Michael Davina 10/24/19 15:25

Received By: (Signature) 10/24/19 15:33

Relinquished By: (Signature) 10/24/19 15:33

Received By: (Signature) 6:30 Ice

Relinquished By: (Signature) Date/ Time

Received By: (Signature) Date/ Time

Correct Preservations Y / N / NA Correct Containers Y / N / NA Receipt Temperature

ANALYTICAL LABORATORY REPORTS

**FLETCHER RUN WATER SAMPLING EVENT
NOVEMBER 19, 2019**

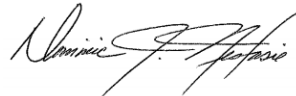
ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-98928-1
Client Project/Site: Fletcher Run

For:
Civil & Environmental Consultants Inc
333 Baldwin Rd.
Pittsburgh, Pennsylvania 15205

Attn: Jackie Rockey



Authorized for release by:
12/9/2019 2:25:11 PM

Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	7
Method Summary	8
Lab Chronicle	9
Client Sample Results	11
QC Sample Results	13
QC Association Summary	16
Chain of Custody	18
Receipt Checklists	27

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Job ID: 180-98928-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

**Job Narrative
180-98928-1**

Receipt

The samples were received on 11/20/2019 at 9:58 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at time of receipt was 1.9° C.

Anions

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

Metals

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

General Chemistry

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
B	Compound was found in the blank and sample.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

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)

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	03-31-20
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-19
Louisiana	NELAP	04041	06-30-20
Minnesota	NELAP	042-999-482	12-31-19
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-04-20
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-20
North Carolina (WW/SW)	State	434	12-31-19
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-20
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-30-19
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	01-31-20
Wisconsin	State	998027800	08-31-20

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-20
Connecticut	State	PH-0590	12-31-19
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-16-00404	12-28-19
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-20
West Virginia DEP	State	210	12-31-19

Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-98928-1	FR-2	Water	11/19/19 10:00	11/20/19 09:58	
180-98928-2	FR-1	Water	11/19/19 11:00	11/20/19 09:58	

1

2

3

4

5

6

7

8

9

10

11

12

13

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	TAL PIT
SM 2340B	Total Hardness (as CaCO3) by calculation	SM	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 4500 H+ B	pH	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
SM4500 P E-2011	Phosphorus	SM	TAL CAN
200.8	Preparation, Total Recoverable Metals	EPA	TAL PIT
Distill/Ammonia	Distillation, Ammonia	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Client Sample ID: FR-2

Lab Sample ID: 180-98928-1

Date Collected: 11/19/19 10:00

Matrix: Water

Date Received: 11/20/19 09:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			298793	11/20/19 20:16	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	299175	11/22/19 11:31	KEM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			300229	12/03/19 20:10	RSK	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	299175	11/22/19 11:31	KEM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			300229	12/03/19 20:06	RSK	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			300475	12/05/19 12:50	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			6 mL	6 mL	300346	12/04/19 18:40	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: BLUE-ASTORIA		1			300652	12/06/19 14:53	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	299044	11/21/19 14:27	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			300117	12/03/19 16:27	PM	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: PCTITRATOR		1			299250	11/22/19 14:05	AVS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	412921	11/27/19 12:57	TPH	TAL CAN

Client Sample ID: FR-1

Lab Sample ID: 180-98928-2

Date Collected: 11/19/19 11:00

Matrix: Water

Date Received: 11/20/19 09:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHICS2100B		1			298793	11/20/19 20:32	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	299175	11/22/19 11:31	KEM	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			300229	12/03/19 20:16	RSK	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	299175	11/22/19 11:31	KEM	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: A		1			300229	12/03/19 20:13	RSK	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			300475	12/05/19 12:50	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			6 mL	6 mL	300346	12/04/19 18:40	BSH	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: BLUE-ASTORIA		1			300652	12/06/19 14:54	BSH	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	299044	11/21/19 14:27	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			300117	12/03/19 16:29	PM	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Client Sample ID: FR-1

Lab Sample ID: 180-98928-2

Date Collected: 11/19/19 11:00

Matrix: Water

Date Received: 11/20/19 09:58

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	SM2320 B		1			299250	11/22/19 14:25	AVS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011		1	5 mL	5 mL	413278	12/02/19 09:28	TPH	TAL CAN
		Instrument ID: ERNIE								

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

TPH = Tom Harshman

Lab: TAL PIT

Batch Type: Prep

BSH = Brandon Hough

KEM = Kimberly Mahoney

Batch Type: Analysis

AVS = Abbey Smith

BSH = Brandon Hough

MJH = Matthew Hartman

MM1 = Mary Beth Miller

PM = Paloma Hoelzle

RSK = Robert Kurtz

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Client Sample ID: FR-2

Lab Sample ID: 180-98928-1

Date Collected: 11/19/19 10:00

Matrix: Water

Date Received: 11/20/19 09:58

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	34		1.0	0.32	mg/L			11/20/19 20:16	1
Nitrate as N	0.026	J	0.10	0.023	mg/L			11/20/19 20:16	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	25	J	30	12	ug/L		11/22/19 11:31	12/03/19 20:06	1
Calcium	73000		500	180	ug/L		11/22/19 11:31	12/03/19 20:06	1
Iron	140		50	15	ug/L		11/22/19 11:31	12/03/19 20:06	1
Magnesium	13000		500	70	ug/L		11/22/19 11:31	12/03/19 20:06	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		11/22/19 11:31	12/03/19 20:10	1
Arsenic	0.40	J	1.0	0.17	ug/L		11/22/19 11:31	12/03/19 20:10	1
Cadmium	1.0	U	1.0	0.21	ug/L		11/22/19 11:31	12/03/19 20:10	1
Copper	2.0	U	2.0	0.99	ug/L		11/22/19 11:31	12/03/19 20:10	1
Lead	1.0	U	1.0	0.16	ug/L		11/22/19 11:31	12/03/19 20:10	1
Nickel	0.47	J	1.0	0.46	ug/L		11/22/19 11:31	12/03/19 20:10	1
Selenium	5.0	U	5.0	0.81	ug/L		11/22/19 11:31	12/03/19 20:10	1
Zinc	4.4	J B	5.0	2.2	ug/L		11/22/19 11:31	12/03/19 20:10	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	230		0.67	0.022	mg/L			12/05/19 12:50	1
Calcium hardness as calcium carbonate	180		0.25	0.0071	mg/L			12/05/19 12:50	1
Magnesium hardness as calcium carbonate	52		0.41	0.0048	mg/L			12/05/19 12:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		12/04/19 18:40	12/06/19 14:53	1
Total Dissolved Solids	350		10	10	mg/L			11/21/19 14:27	1
pH	8.1	HF	0.1	0.1	SU			12/03/19 16:27	1
Total Alkalinity as CaCO3 to pH 4.!	200		5.0	5.0	mg/L			11/22/19 14:05	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			11/27/19 12:57	1

Client Sample ID: FR-1

Lab Sample ID: 180-98928-2

Date Collected: 11/19/19 11:00

Matrix: Water

Date Received: 11/20/19 09:58

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	84		1.0	0.32	mg/L			11/20/19 20:32	1
Nitrate as N	0.049	J	0.10	0.023	mg/L			11/20/19 20:32	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	23	J	30	12	ug/L		11/22/19 11:31	12/03/19 20:13	1
Calcium	91000		500	180	ug/L		11/22/19 11:31	12/03/19 20:13	1
Iron	440		50	15	ug/L		11/22/19 11:31	12/03/19 20:13	1
Magnesium	17000		500	70	ug/L		11/22/19 11:31	12/03/19 20:13	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Client Sample ID: FR-1

Lab Sample ID: 180-98928-2

Date Collected: 11/19/19 11:00

Matrix: Water

Date Received: 11/20/19 09:58

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		11/22/19 11:31	12/03/19 20:16	1
Arsenic	0.42	J	1.0	0.17	ug/L		11/22/19 11:31	12/03/19 20:16	1
Cadmium	1.0	U	1.0	0.21	ug/L		11/22/19 11:31	12/03/19 20:16	1
Copper	2.0	U	2.0	0.99	ug/L		11/22/19 11:31	12/03/19 20:16	1
Lead	1.0	U	1.0	0.16	ug/L		11/22/19 11:31	12/03/19 20:16	1
Nickel	0.81	J	1.0	0.46	ug/L		11/22/19 11:31	12/03/19 20:16	1
Selenium	5.0	U	5.0	0.81	ug/L		11/22/19 11:31	12/03/19 20:16	1
Zinc	4.8	J B	5.0	2.2	ug/L		11/22/19 11:31	12/03/19 20:16	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	300		0.67	0.022	mg/L			12/05/19 12:50	1
Calcium hardness as calcium carbonate	230		0.25	0.0071	mg/L			12/05/19 12:50	1
Magnesium hardness as calcium carbonate	70		0.41	0.0048	mg/L			12/05/19 12:50	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		12/04/19 18:40	12/06/19 14:54	1
Total Dissolved Solids	550		10	10	mg/L			11/21/19 14:27	1
pH	8.2	HF	0.1	0.1	SU			12/03/19 16:29	1
Total Alkalinity as CaCO3 to pH 4.!	200		5.0	5.0	mg/L			11/22/19 14:25	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			12/02/19 09:28	1

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-298793/6
Matrix: Water
Analysis Batch: 298793

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Chloride	1.0	U	1.0	0.32	mg/L			11/20/19 06:09	1
Nitrate as N	0.10	U	0.10	0.023	mg/L			11/20/19 06:09	1

Lab Sample ID: LCS 180-298793/5
Matrix: Water
Analysis Batch: 298793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate as N	2.50	2.43		mg/L	97	90 - 110	

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-299175/1-A
Matrix: Water
Analysis Batch: 300229

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 299175

Analyte	MB MB		RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier							
Aluminum	30	U	30	12	ug/L		11/22/19 11:31	12/03/19 18:52	1
Arsenic	1.0	U	1.0	0.17	ug/L		11/22/19 11:31	12/03/19 18:52	1
Calcium	500	U	500	180	ug/L		11/22/19 11:31	12/03/19 18:52	1
Cadmium	1.0	U	1.0	0.21	ug/L		11/22/19 11:31	12/03/19 18:52	1
Iron	50	U	50	15	ug/L		11/22/19 11:31	12/03/19 18:52	1
Copper	2.0	U	2.0	0.99	ug/L		11/22/19 11:31	12/03/19 18:52	1
Magnesium	500	U	500	70	ug/L		11/22/19 11:31	12/03/19 18:52	1
Lead	1.0	U	1.0	0.16	ug/L		11/22/19 11:31	12/03/19 18:52	1
Nickel	1.0	U	1.0	0.46	ug/L		11/22/19 11:31	12/03/19 18:52	1
Selenium	5.0	U	5.0	0.81	ug/L		11/22/19 11:31	12/03/19 18:52	1
Zinc	2.76	J B	5.0	2.2	ug/L		11/22/19 11:31	12/03/19 18:52	1

Lab Sample ID: LCS 180-299175/2-A
Matrix: Water
Analysis Batch: 300229

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 299175

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Arsenic	1000	1050		ug/L	105	85 - 115	
Calcium	25000	27700		ug/L	111	85 - 115	
Cadmium	500	511		ug/L	102	85 - 115	
Iron	5000	5450		ug/L	109	85 - 115	
Copper	500	494		ug/L	99	85 - 115	
Magnesium	25000	26600		ug/L	106	85 - 115	
Lead	500	510		ug/L	102	85 - 115	
Nickel	500	510		ug/L	102	85 - 115	
Selenium	1000	1030		ug/L	103	85 - 115	
Zinc	250	270		ug/L	108	85 - 115	

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-300346/4-A
Matrix: Water
Analysis Batch: 300652

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 300346

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L	-	12/04/19 18:40	12/06/19 14:35	1

Lab Sample ID: LCS 180-300346/5-A
Matrix: Water
Analysis Batch: 300652

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 300346
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Ammonia, distilled	2.00	2.04		mg/L	-	102	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-299044/2
Matrix: Water
Analysis Batch: 299044

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L	-		11/21/19 14:27	1

Lab Sample ID: LCS 180-299044/1
Matrix: Water
Analysis Batch: 299044

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
Total Dissolved Solids	188	220		mg/L	-	117	80 - 120

Lab Sample ID: 180-98928-1 DU
Matrix: Water
Analysis Batch: 299044

Client Sample ID: FR-2
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Total Dissolved Solids	350		344		mg/L	-	3	10

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 180-300117/1
Matrix: Water
Analysis Batch: 300117

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
%Rec.

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	Limits
pH	7.00	7.0		SU	-	100	99 - 101

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-299250/116
Matrix: Water
Analysis Batch: 299250

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L	-		11/22/19 13:17	1

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

Method: SM2320 B - Alkalinity, Total (Continued)

Lab Sample ID: LCS 180-299250/115
Matrix: Water
Analysis Batch: 299250

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	250	252		mg/L		101	90 - 110

Lab Sample ID: 180-98928-2 DU
Matrix: Water
Analysis Batch: 299250

Client Sample ID: FR-1
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
Total Alkalinity as CaCO3 to pH 4.5	200		198		mg/L		3	20

Method: SM4500 P E-2011 - Phosphorus

Lab Sample ID: MB 240-412921/3
Matrix: Water
Analysis Batch: 412921

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			11/27/19 11:10	1

Lab Sample ID: LCS 240-412921/4
Matrix: Water
Analysis Batch: 412921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.347		mg/L		86	77 - 120

Lab Sample ID: MB 240-413278/3
Matrix: Water
Analysis Batch: 413278

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			12/02/19 07:50	1

Lab Sample ID: LCS 240-413278/4
Matrix: Water
Analysis Batch: 413278

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.391		mg/L		97	77 - 120

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

HPLC/IC

Analysis Batch: 298793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-98928-1	FR-2	Total/NA	Water	EPA 300.0 R2.1	
180-98928-2	FR-1	Total/NA	Water	EPA 300.0 R2.1	
MB 180-298793/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-298793/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 299175

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-98928-1	FR-2	Dissolved	Water	200.8	
180-98928-1	FR-2	Total Recoverable	Water	200.8	
180-98928-2	FR-1	Dissolved	Water	200.8	
180-98928-2	FR-1	Total Recoverable	Water	200.8	
MB 180-299175/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-299175/2-A	Lab Control Sample	Total Recoverable	Water	200.8	

Analysis Batch: 300229

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-98928-1	FR-2	Dissolved	Water	EPA 200.8 Rev 5	299175
180-98928-1	FR-2	Total Recoverable	Water	EPA 200.8 Rev 5	299175
180-98928-2	FR-1	Dissolved	Water	EPA 200.8 Rev 5	299175
180-98928-2	FR-1	Total Recoverable	Water	EPA 200.8 Rev 5	299175
MB 180-299175/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	299175
LCS 180-299175/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	299175

Analysis Batch: 300475

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-98928-1	FR-2	Total Recoverable	Water	SM 2340B	
180-98928-2	FR-1	Total Recoverable	Water	SM 2340B	

General Chemistry

Analysis Batch: 299044

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-98928-1	FR-2	Total/NA	Water	SM 2540C	
180-98928-2	FR-1	Total/NA	Water	SM 2540C	
MB 180-299044/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-299044/1	Lab Control Sample	Total/NA	Water	SM 2540C	
180-98928-1 DU	FR-2	Total/NA	Water	SM 2540C	

Analysis Batch: 299250

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-98928-1	FR-2	Total/NA	Water	SM2320 B	
180-98928-2	FR-1	Total/NA	Water	SM2320 B	
MB 180-299250/116	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-299250/115	Lab Control Sample	Total/NA	Water	SM2320 B	
180-98928-2 DU	FR-1	Total/NA	Water	SM2320 B	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-98928-1

General Chemistry

Analysis Batch: 300117

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-98928-1	FR-2	Total/NA	Water	SM 4500 H+ B	
180-98928-2	FR-1	Total/NA	Water	SM 4500 H+ B	
LCS 180-300117/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Prep Batch: 300346

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-98928-1	FR-2	Total/NA	Water	Distill/Ammonia	
180-98928-2	FR-1	Total/NA	Water	Distill/Ammonia	
MB 180-300346/4-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 180-300346/5-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

Analysis Batch: 300652

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-98928-1	FR-2	Total/NA	Water	EPA 350.1	300346
180-98928-2	FR-1	Total/NA	Water	EPA 350.1	300346
MB 180-300346/4-A	Method Blank	Total/NA	Water	EPA 350.1	300346
LCS 180-300346/5-A	Lab Control Sample	Total/NA	Water	EPA 350.1	300346

Analysis Batch: 412921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-98928-1	FR-2	Total/NA	Water	SM4500 P E-2011	
MB 240-412921/3	Method Blank	Total/NA	Water	SM4500 P E-2011	
LCS 240-412921/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	

Analysis Batch: 413278

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-98928-2	FR-1	Total/NA	Water	SM4500 P E-2011	
MB 240-413278/3	Method Blank	Total/NA	Water	SM4500 P E-2011	
LCS 240-413278/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	

Chain of Custody Record



Client Information Company: Jackie Rocky Address: 333 Baldwin Rd. City: Pittsburgh State, Zip: PA, 15205 Phone: 412-429-2324 Email: jrockey@ceecinc.com Project Name: 18020244 Project No. 191-398 Site: GRINAGE RUN/FLETCHER RUN		Lab PM: Nestasie, Dominic J E-Mail: dominic.nestasie@testamericainc.com Job #:					
Due Date Requested: TAT Requested (days): STANDARD PO #: 412-429-2324 Purchase Order not required WO #:		IC No: 10-56183-10639.1 Page 1 of 1					
Analysis Requested 350.1 - Nitrogen, Ammonia 2320B, 300_ORGFMS, SM4500_H+ 2540C_Calcd - TDS 4500_P_E - Total Phosphorus as P 200.8 - (MOD) Special List 200.8 FIELD FILTERED METALS		Preservation Codes: A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:					
Sample Identification Sample Date Sample Time Sample Type (C=Comp, G=grab) Matrix (W=water, S=solid, O=wastewat, BT=tissue, A=air) Preservation Code:		Total Number of Containers Special Instructions/Note:					
FR-2	11-19-19	10:00	G	Water		5	Q1 1.9°C
FR-1	11-19-19	11:00	G	Water		5	Temp 1.0
GR-2	11-19-19	12:00	G	Water		5	CFD
GR-1	11-19-19	12:45	G	Water		5	
FR-2	11-19-19	10:00	G	Water	X	1	
FR-1	11-19-19	11:00	G	Water	X	1	
GR-2	11-19-19	12:00	G	Water	X	1	
GR-1	11-17-19	12:45	G	Water	X	1	

Possible Hazard Identification
 Non-Hazard Flammable Skin Irritant Poison B Unknown Radiological

Deliverable Requested: I, II, III, IV, Other (specify)

Empty Kit Relinquished by: Date: 11-19-19 16:55 Company: CEC

Relinquished by: [Signature] Date/Time: 11/20/19 09:58 Company: QCS

Relinquished by: [Signature] Date/Time: 11/20/19 09:58 Company: QCS

Relinquished by: [Signature] Date/Time: 11/20/19 09:58 Company: QCS

Custody Seal No.: A Yes A No

Custody Seal Intact: Custody Seal No.:

Method of Shipment: COURIER

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
 Return To Client Disposal By Lab Archive For Months

Special Instructions/OC Requirements:



Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking No(s):	GOC No:
Client Contact:		Nestasia, Dominic J	Nestasia, Dominic J		180-379084.1
Shipping/Receiving		Phone:	E-Mail:	State of Origin:	Page:
Company:			dominic.nestasia@testamericainc.com	Pennsylvania	Page 1 of 1
Address:		Accreditations Required (See note):		Job #:	180-98928-2
4101 Shuffel Street NW,		State Program - West Virginia DEP			
City:	North Canton	Due Date Requested:	Analysis Requested		
State, Zip:	OH, 44720	12/4/2019	M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)		
Phone:	330-497-9396(Tel) 330-497-0772(Fax)	TAT Requested (days):	Preservation Codes:		
Email:			A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:		
Project Name:	Grinnage Run	FO #:	Total Number of containers		
Site:		WO #:	W136		
Project #:	18020244	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=volatile, BT=Trace, AA=As)
Site:		11/19/19	12:00 Eastern	Water	Water
		11/19/19	12:45 Eastern	Water	Water
Sample Identification - Client ID (Lab ID)		Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	4500 P, E Total Phosphorus as P	Special Instructions/Note:
GR-2 (180-98928-3)		X	X	X	
GR-1 (180-98928-4)		X	X	X	
<p>Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our 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/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.</p>					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify)					
Primary Deliverable Rank: 2					
Empty Kit Relinquished by:					
Date: _____ Time: _____					
Relinquished by: _____ Company: MAH					
Date/Time: 11/20/19 17W					
Relinquished by: _____ Company: _____					
Date/Time: _____					
Relinquished by: _____ Company: _____					
Date/Time: _____					
Custody Seals Intact: _____ Cooler Temperature(s) °C and Other Remarks:					
Δ Yes Δ No					



Eurofins TestAmerica Canton Sample Receipt Form/Narrative

Login # : _____

Canton Facility

Client ETA Site Name _____

Cooler unpacked by:

Cooler Received on 11-21-19 Opened on 11-21-19 910

Ryan Cobley

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box _____ Client Cooler _____ Box _____ Other _____

Packing material used Bubble Wrap Foam Plastic Bag None _____ Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 0.7 °C Corrected Cooler Temp. 1.4 °C
IR GUN #IR-11 (CF +0.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
-Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels be reconciled with the COC? Yes No

9. Were correct bottle(s) used for the test(s) indicated? Yes No

10. Sufficient quantity received to perform indicated analyses? Yes No

11. Are these work share samples? Yes No

If yes, Questions 12-16 have been checked at the originating laboratory.

12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC995364

13. Were VOAs on the COC? Yes No

14. Were air bubbles >6 mm in any VOA vials? Yes No NA Larger than this.

15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No

16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Eurofins TestAmerica Canton Sample Receipt Form/Narrative

Login # : _____

Canton Facility

Client ETA Site Name _____

Cooler unpacked by:

Ryan Cribler

Cooler Received on 11-21-19 Opened on 11-21-19 210

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time

Storage Location

TestAmerica Cooler # TA Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 0.1 °C Corrected Cooler Temp. 0.8 °C
 IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels be reconciled with the COC? Yes No

9. Were correct bottle(s) used for the test(s) indicated? Yes No

10. Sufficient quantity received to perform indicated analyses? Yes No

11. Are these work share samples? Yes No

If yes, Questions 12-16 have been checked at the originating laboratory.

12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC995364

13. Were VOAs on the COC? Yes No

14. Were air bubbles >6 mm in any VOA vials?  Larger than this. Yes No NA

15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No

16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
 VOAs
 Oil and Grease
 TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Eurofins TestAmerica Canton Sample Receipt Form/Narrative

Login # : _____

Canton Facility

Client ETA Site Name _____

Cooler unpacked by:


Cooler Received on 11-21-19 Opened on 11-21-19 210

Ryan Cribble

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box Client Cooler Box Other
 Packing material used: Bubble Wrap Foam Plastic Bag None Other
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 0.1 °C Corrected Cooler Temp. 0.8 °C
 IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples?
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC995364
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials?  Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:

VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:

Ryan C

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____
 VOA Sample Preservation - Date/Time VOAs Frozen: _____

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler: Nestasie, Dominic J		Lab PM: Nestasie, Dominic J		Carrier Tracking No(s): 180-379084.1		COC No: 180-379084.1	
Client Contact: Shipping/Receiving		Phone: dominic.nestasia@testamericainc.com		E-Mail: dominic.nestasia@testamericainc.com		State of Origin: Pennsylvania		Page: Page 1 of 1	
Company: TestAmerica Laboratories, Inc.		Address: 4101 Shuffel Street NW,		City: North Canton		State, Zip: OH, 44720		Job #: 180-98928-2	
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		Email:		Project #: 18020244		SSOW#:		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Z - other (specify)	
Due Date Requested: 12/4/2019		TAT Requested (days):		Field Filtered Sample (Yes or No)		4500_P_E Total Phosphorus as P		Total Number of Containers	
PO #:		WO #:		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)	
Project Name: Grinnage Run		Site:		Sample Date		Sample Time		Matrix (W=water, S=solid, O=water, B=trace, A=air)	
Sample Identification - Client ID (Lab ID)		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=water, B=trace, A=air)	
GR-2 (180-98928-3)		11/19/19		12:00 Eastern		Water		Field Filtered Sample (Yes or No)	
GR-1 (180-98928-4)		11/19/19		12:45 Eastern		Water		Perform MS/MSD (Yes or No)	
								Special Instructions/Note: W138	

Note: Since laboratory accreditations are subject to change, TestAmerica Laboratories, Inc. places the ownership of method, analyte & accreditation compliance upon our 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/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
 Unconfirmed
 Return To Client
 Disposal By Lab
 Archive For Months

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)

Special Instructions/QC Requirements:

Primary Deliverable Rank: 2

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by: <i>[Signature]</i>	11/20/19	17W	Company: MAH
Relinquished by:	Date/Time:	Date/Time:	Received by: <i>[Signature]</i>
Relinquished by:	Date/Time:	Date/Time:	Received by: <i>[Signature]</i>
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No	Custody Seal No.:		Received by: <i>[Signature]</i>
			Company: ETA

Eurofins TestAmerica Canton Sample Receipt Form/Narrative

Login # : _____

Canton Facility

Client ETA Site Name _____


Cooler unpacked by:
Ryan Cobley

Cooler Received on 11-21-19 Opened on 11-21-19 910

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # TA Foam Box _____ Client Cooler _____ Box _____ Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None _____ Other _____
 COOLANT: Wet Ice Blue Ice _____ Dry Ice _____ Water _____ None _____

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. 0.7 °C Corrected Cooler Temp. 1.4 °C
 IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity 1 Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples? Yes No
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC995364
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials?  Larger than this. Yes No NA
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by:
Ryan C

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____
 VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login Sample Receipt Checklist

Client: Civil & Environmental Consultants Inc

Job Number: 180-98928-1

Login Number: 98928

List Number: 1

Creator: Say, Thomas C

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

21 November 2019

Civil & Environmental Consultants, Inc.
Attn: Jackie Rockey
333 Baldwin Road
Pittsburgh, PA 15205

Work Order: 9111573
Project: Fecal Testing
Project Description: Fecal Testing

Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
FR-2	9111573-01	Water	11/19/2019 10:15	11/19/19 15:30	
FR-1	9111573-02	Water	11/19/2019 11:00	11/19/19 15:30	
GR-2	9111573-03	Water	11/19/2019 12:00	11/19/19 15:30	
GR-1	9111573-04	Water	11/19/2019 12:45	11/19/19 15:30	

Report Narrative

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

Definitions

RL Reporting Limit

Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.

S=Environmental Service Laboratories, Inc.-Southern Division, PA DEP lab ID #63-04247

Approved By

Sierra Grguric
Oil & Gas Field Supervisor/Project Manager



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 11/21/2019 16:55

Lab Sample ID#: 9111573-01
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-2

Sample Date: 11/19/2019 10:15
Receipt Date: 11/19/2019 15:30

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	252	MPN/100 mL		5	JJN/S	11/19/19 16:00	11/20/19 12:45

Lab Sample ID#: 9111573-02
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-1

Sample Date: 11/19/2019 11:00
Receipt Date: 11/19/2019 15:30

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	49	MPN/100 mL		5	JJN/S	11/19/19 16:00	11/20/19 12:45

Lab Sample ID#: 9111573-03
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-2

Sample Date: 11/19/2019 12:00
Receipt Date: 11/19/2019 15:30

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	100	MPN/100 mL		5	JJN/S	11/19/19 16:00	11/20/19 12:45



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 11/21/2019 16:55

Lab Sample ID#: 9111573-04
Sample Type: Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-1

Sample Date: 11/19/2019 12:45
Receipt Date: 11/19/2019 15:30

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/ Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: B_No Prep Micro				
Fecal Coliforms	286	MPN/100 mL		5	JJN/S	11/19/19 16:00	11/20/19 12:45

ANALYTICAL LABORATORY REPORTS

**FLETCHER RUN WATER SAMPLING EVENT
DECEMBER 19, 2019**

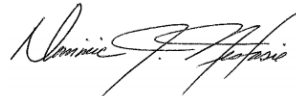
ANALYTICAL REPORT

Eurofins TestAmerica, Pittsburgh
301 Alpha Drive
RIDC Park
Pittsburgh, PA 15238
Tel: (412)963-7058

Laboratory Job ID: 180-100302-1
Client Project/Site: Fletcher Run

For:
Civil & Environmental Consultants Inc
333 Baldwin Rd.
Pittsburgh, Pennsylvania 15205

Attn: Jackie Rockey



Authorized for release by:
1/10/2020 2:24:40 PM

Dominic Nestasie, Manager of Project Management
(412)963-2453
dominic.nestasie@testamericainc.com

LINKS

Review your project
results through
TotalAccess

Have a Question?



Visit us at:
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.

PA Lab ID: 02-00416



Table of Contents

Cover Page	1
Table of Contents	2
Case Narrative	3
Definitions/Glossary	4
Certification Summary	5
Sample Summary	7
Method Summary	8
Lab Chronicle	9
Client Sample Results	11
QC Sample Results	13
QC Association Summary	16
Chain of Custody	18
Receipt Checklists	25

Case Narrative

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

Job ID: 180-100302-1

Laboratory: Eurofins TestAmerica, Pittsburgh

Narrative

Job Narrative
180-100302-1

Receipt

The samples were received on 12/20/2019 at 11:38 AM; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at time of receipt was 2.7° C.

Anions

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

Metals

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

General Chemistry

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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13

Definitions/Glossary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

Qualifiers

HPLC/IC

Qualifier	Qualifier Description
U	Indicates the analyte was analyzed for but not detected.

Metals

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
U	Indicates the analyte was analyzed for but not detected.

General Chemistry

Qualifier	Qualifier Description
HF	Field parameter with a holding time of 15 minutes. Test performed by laboratory at client's request.
U	Indicates the analyte was analyzed for but not detected.

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)

Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
 Project/Site: Fletcher Run

Job ID: 180-100302-1

Laboratory: Eurofins TestAmerica, Pittsburgh

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
Arkansas DEQ	State	19-033-0	06-27-20
California	State	2891	04-30-20
Connecticut	State	PH-0688	09-30-20
Florida	NELAP	E871008	06-30-20
Georgia	State	PA 02-00416	04-30-20
Illinois	NELAP	004375	06-30-20
Kansas	NELAP	E-10350	03-31-20
Kentucky (UST)	State	162013	04-30-20
Kentucky (WW)	State	KY98043	12-31-20
Louisiana	NELAP	04041	06-30-20
Minnesota	NELAP	042-999-482	12-31-20
Nevada	State	PA00164	07-31-20
New Hampshire	NELAP	2030	04-04-20
New Jersey	NELAP	PA005	06-30-20
New York	NELAP	11182	04-01-20
North Carolina (WW/SW)	State	434	01-01-21
North Dakota	State	R-227	04-30-20
Oregon	NELAP	PA-2151	02-06-20
Pennsylvania	NELAP	02-00416	04-30-20
Rhode Island	State	LAO00362	12-31-20
South Carolina	State	89014	04-30-20
Texas	NELAP	T104704528	03-31-20
US Fish & Wildlife	US Federal Programs	058448	07-31-20
USDA	Federal	P-Soil-01	06-26-22
USDA	US Federal Programs	P330-16-00211	06-26-22
Utah	NELAP	PA001462019-8	05-31-20
Virginia	NELAP	10043	09-15-20
West Virginia DEP	State	142	01-31-20
Wisconsin	State	998027800	08-31-20



Accreditation/Certification Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

Laboratory: Eurofins TestAmerica, Canton

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2927	02-23-20
Connecticut	State	PH-0590	12-31-19
Florida	NELAP	E87225	06-30-20
Georgia	State	4062	02-23-20
Illinois	NELAP	004498	07-31-20
Iowa	State	421	06-01-20
Kansas	NELAP	E-10336	04-30-20
Kentucky (UST)	State	112225	02-23-20
Kentucky (WW)	State	KY98016	12-31-19
Minnesota	NELAP	OH00048	12-31-19
Minnesota (Petrofund)	State Program	3506	07-31-21
New Jersey	NELAP	OH001	06-30-20
New York	NELAP	10975	03-31-20
Ohio VAP	State	CL0024	06-05-21
Oregon	NELAP	4062	02-23-20
Pennsylvania	NELAP	68-00340	08-31-20
Texas	NELAP	T104704517-18-10	08-31-20
USDA	US Federal Programs	P330-16-00404	12-28-19
Virginia	NELAP	010101	09-14-20
Washington	State	C971	01-12-20
West Virginia DEP	State	210	12-31-19

Sample Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
180-100302-1	FR-2	Water	12/19/19 10:45	12/20/19 11:38	
180-100302-2	FR-1	Water	12/19/19 11:45	12/20/19 11:38	

1

2

3

4

5

6

7

8

9

10

11

12

13

Method Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

Method	Method Description	Protocol	Laboratory
EPA 300.0 R2.1	Anions, Ion Chromatography	EPA	TAL PIT
EPA 200.8 Rev 5	Metals (ICP/MS)	EPA	TAL PIT
SM 2340B	Total Hardness (as CaCO ₃) by calculation	SM	TAL PIT
EPA 350.1	Nitrogen, Ammonia	EPA	TAL PIT
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL PIT
SM 4500 H+ B	pH	SM	TAL PIT
SM2320 B	Alkalinity, Total	SM18	TAL PIT
SM4500 P E-2011	Phosphorus	SM	TAL CAN
200.8	Preparation, Total Recoverable Metals	EPA	TAL PIT
Distill/Ammonia	Distillation, Ammonia	None	TAL PIT

Protocol References:

EPA = US Environmental Protection Agency

None = None

SM = "Standard Methods For The Examination Of Water And Wastewater"

SM18 = "Standard Methods For The Examination Of Water And Wastewater", 18th Edition, 1992.

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

Client Sample ID: FR-2

Lab Sample ID: 180-100302-1

Date Collected: 12/19/19 10:45

Matrix: Water

Date Received: 12/20/19 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			302062	12/20/19 22:46	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	302399	12/24/19 06:34	MWW	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: NEMO		1			303230	01/06/20 16:50	RJR	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	302399	12/24/19 06:34	MWW	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: NEMO		1			303402	01/08/20 10:13	RJR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	302399	12/24/19 06:34	MWW	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: NEMO		1			303230	01/06/20 16:48	RJR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			302697	12/27/19 14:17	MM1	TAL PIT
Total/NA	Prep	Distill/Ammonia			6 mL	6 mL	303274	01/07/20 11:27	KEM	TAL PIT
Total/NA	Analysis	EPA 350.1 Instrument ID: BLUE-ASTORIA		1			303545	01/09/20 17:12	KEM	TAL PIT
Total/NA	Analysis	SM 2540C Instrument ID: NOEQUIP		1	100 mL	100 mL	302247	12/21/19 11:12	AVS	TAL PIT
Total/NA	Analysis	SM 4500 H+ B Instrument ID: NOEQUIP		1			303076	01/03/20 15:07	PM	TAL PIT
Total/NA	Analysis	SM2320 B Instrument ID: PCTITRATOR		1			302621	12/24/19 16:33	AVS	TAL PIT
Total/NA	Analysis	SM4500 P E-2011 Instrument ID: ERNIE		1	5 mL	5 mL	417455	12/27/19 13:21	TPH	TAL CAN

Client Sample ID: FR-1

Lab Sample ID: 180-100302-2

Date Collected: 12/19/19 11:45

Matrix: Water

Date Received: 12/20/19 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	EPA 300.0 R2.1 Instrument ID: CHIC2100A		1			302062	12/20/19 23:01	MJH	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	302399	12/24/19 06:34	MWW	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: NEMO		1			303230	01/06/20 16:55	RJR	TAL PIT
Dissolved	Prep	200.8			50 mL	50 mL	302399	12/24/19 06:34	MWW	TAL PIT
Dissolved	Analysis	EPA 200.8 Rev 5 Instrument ID: NEMO		1			303402	01/08/20 10:16	RJR	TAL PIT
Total Recoverable	Prep	200.8			50 mL	50 mL	302399	12/24/19 06:34	MWW	TAL PIT
Total Recoverable	Analysis	EPA 200.8 Rev 5 Instrument ID: NEMO		1			303230	01/06/20 16:53	RJR	TAL PIT
Total Recoverable	Analysis	SM 2340B Instrument ID: NOEQUIP		1			302697	12/27/19 14:17	MM1	TAL PIT

Eurofins TestAmerica, Pittsburgh

Lab Chronicle

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

Client Sample ID: FR-1

Lab Sample ID: 180-100302-2

Date Collected: 12/19/19 11:45

Matrix: Water

Date Received: 12/20/19 11:38

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	Distill/Ammonia			6 mL	6 mL	303274	01/07/20 11:27	KEM	TAL PIT
Total/NA	Analysis	EPA 350.1		1			303545	01/09/20 17:18	KEM	TAL PIT
Instrument ID: BLUE-ASTORIA										
Total/NA	Analysis	SM 2540C		1	100 mL	100 mL	302247	12/21/19 11:12	AVS	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	SM 4500 H+ B		1			303076	01/03/20 15:08	PM	TAL PIT
Instrument ID: NOEQUIP										
Total/NA	Analysis	SM2320 B		1			302621	12/24/19 16:40	AVS	TAL PIT
Instrument ID: PCTITRATOR										
Total/NA	Analysis	SM4500 P E-2011		1	5 mL	5 mL	417455	12/27/19 13:25	TPH	TAL CAN
Instrument ID: ERNIE										

Laboratory References:

TAL CAN = Eurofins TestAmerica, Canton, 4101 Shuffel Street NW, North Canton, OH 44720, TEL (330)497-9396

TAL PIT = Eurofins TestAmerica, Pittsburgh, 301 Alpha Drive, RIDC Park, Pittsburgh, PA 15238, TEL (412)963-7058

Analyst References:

Lab: TAL CAN

Batch Type: Analysis

TPH = Tom Harshman

Lab: TAL PIT

Batch Type: Prep

KEM = Kimberly Mahoney

MWW = Margaret Wanyoike

Batch Type: Analysis

AVS = Abbey Smith

KEM = Kimberly Mahoney

MJH = Matthew Hartman

MM1 = Mary Beth Miller

PM = Paloma Hoelzle

RJR = Ron Rosenbaum

Client Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

Client Sample ID: FR-2

Lab Sample ID: 180-100302-1

Date Collected: 12/19/19 10:45

Matrix: Water

Date Received: 12/20/19 11:38

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	17		1.0	0.32	mg/L			12/20/19 22:46	1
Nitrate as N	0.70		0.10	0.023	mg/L			12/20/19 22:46	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	120		30	12	ug/L		12/24/19 06:34	01/06/20 16:48	1
Calcium	60000		500	180	ug/L		12/24/19 06:34	01/06/20 16:48	1
Iron	310		50	15	ug/L		12/24/19 06:34	01/06/20 16:48	1
Magnesium	9400		500	70	ug/L		12/24/19 06:34	01/06/20 16:48	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		12/24/19 06:34	01/06/20 16:50	1
Arsenic	0.20	J	1.0	0.17	ug/L		12/24/19 06:34	01/06/20 16:50	1
Cadmium	1.0	U	1.0	0.21	ug/L		12/24/19 06:34	01/06/20 16:50	1
Copper	2.0	U	2.0	0.99	ug/L		12/24/19 06:34	01/06/20 16:50	1
Lead	1.0	U	1.0	0.16	ug/L		12/24/19 06:34	01/06/20 16:50	1
Nickel	1.0	U	1.0	0.46	ug/L		12/24/19 06:34	01/08/20 10:13	1
Selenium	1.0	J	5.0	0.81	ug/L		12/24/19 06:34	01/06/20 16:50	1
Zinc	5.0	U	5.0	2.2	ug/L		12/24/19 06:34	01/06/20 16:50	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	190		0.67	0.022	mg/L			12/27/19 14:17	1
Calcium hardness as calcium carbonate	150		0.25	0.0071	mg/L			12/27/19 14:17	1
Magnesium hardness as calcium carbonate	39		0.41	0.0048	mg/L			12/27/19 14:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.22		0.10	0.088	mg/L		01/07/20 11:27	01/09/20 17:12	1
Total Dissolved Solids	250		10	10	mg/L			12/21/19 11:12	1
pH	7.9	HF	0.1	0.1	SU			01/03/20 15:07	1
Total Alkalinity as CaCO3 to pH 4.!	140		5.0	5.0	mg/L			12/24/19 16:33	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			12/27/19 13:21	1

Client Sample ID: FR-1

Lab Sample ID: 180-100302-2

Date Collected: 12/19/19 11:45

Matrix: Water

Date Received: 12/20/19 11:38

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	43		1.0	0.32	mg/L			12/20/19 23:01	1
Nitrate as N	0.80		0.10	0.023	mg/L			12/20/19 23:01	1

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	44		30	12	ug/L		12/24/19 06:34	01/06/20 16:53	1
Calcium	74000		500	180	ug/L		12/24/19 06:34	01/06/20 16:53	1
Iron	180		50	15	ug/L		12/24/19 06:34	01/06/20 16:53	1
Magnesium	13000		500	70	ug/L		12/24/19 06:34	01/06/20 16:53	1

Eurofins TestAmerica, Pittsburgh

Client Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Fletcher Run

Job ID: 180-100302-1

Client Sample ID: FR-1

Lab Sample ID: 180-100302-2

Date Collected: 12/19/19 11:45

Matrix: Water

Date Received: 12/20/19 11:38

Method: EPA 200.8 Rev 5 - Metals (ICP/MS) - Dissolved

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		12/24/19 06:34	01/06/20 16:55	1
Arsenic	0.51	J	1.0	0.17	ug/L		12/24/19 06:34	01/06/20 16:55	1
Cadmium	1.0	U	1.0	0.21	ug/L		12/24/19 06:34	01/06/20 16:55	1
Copper	2.0	U	2.0	0.99	ug/L		12/24/19 06:34	01/06/20 16:55	1
Lead	1.0	U	1.0	0.16	ug/L		12/24/19 06:34	01/06/20 16:55	1
Nickel	0.76	J	1.0	0.46	ug/L		12/24/19 06:34	01/08/20 10:16	1
Selenium	5.0	U	5.0	0.81	ug/L		12/24/19 06:34	01/06/20 16:55	1
Zinc	5.0	U	5.0	2.2	ug/L		12/24/19 06:34	01/06/20 16:55	1

Method: SM 2340B - Total Hardness (as CaCO3) by calculation - Total Recoverable

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hardness as calcium carbonate	240		0.67	0.022	mg/L			12/27/19 14:17	1
Calcium hardness as calcium carbonate	180		0.25	0.0071	mg/L			12/27/19 14:17	1
Magnesium hardness as calcium carbonate	53		0.41	0.0048	mg/L			12/27/19 14:17	1

General Chemistry

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		01/07/20 11:27	01/09/20 17:18	1
Total Dissolved Solids	380		10	10	mg/L			12/21/19 11:12	1
pH	8.1	HF	0.1	0.1	SU			01/03/20 15:08	1
Total Alkalinity as CaCO3 to pH 4.!	160		5.0	5.0	mg/L			12/24/19 16:40	1
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L			12/27/19 13:25	1

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

Method: EPA 300.0 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 180-302062/6
Matrix: Water
Analysis Batch: 302062

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	1.0	U	1.0	0.32	mg/L			12/20/19 08:28	1
Nitrate as N	0.10	U	0.10	0.023	mg/L			12/20/19 08:28	1

Lab Sample ID: LCS 180-302062/5
Matrix: Water
Analysis Batch: 302062

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Chloride	25.0	24.3		mg/L		97	90 - 110
Nitrate as N	1.25	1.24		mg/L		99	90 - 110

Method: EPA 200.8 Rev 5 - Metals (ICP/MS)

Lab Sample ID: MB 180-302399/1-A
Matrix: Water
Analysis Batch: 303230

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 302399

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aluminum	30	U	30	12	ug/L		12/24/19 06:34	01/06/20 15:56	1
Arsenic	1.0	U	1.0	0.17	ug/L		12/24/19 06:34	01/06/20 15:56	1
Cadmium	1.0	U	1.0	0.21	ug/L		12/24/19 06:34	01/06/20 15:56	1
Copper	2.0	U	2.0	0.99	ug/L		12/24/19 06:34	01/06/20 15:56	1
Lead	1.0	U	1.0	0.16	ug/L		12/24/19 06:34	01/06/20 15:56	1
Selenium	5.0	U	5.0	0.81	ug/L		12/24/19 06:34	01/06/20 15:56	1
Zinc	5.0	U	5.0	2.2	ug/L		12/24/19 06:34	01/06/20 15:56	1

Lab Sample ID: MB 180-302399/1-A
Matrix: Water
Analysis Batch: 303402

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 302399

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nickel	1.0	U	1.0	0.46	ug/L		12/24/19 06:34	01/08/20 10:11	1

Lab Sample ID: LCS 180-302399/2-A
Matrix: Water
Analysis Batch: 303290

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 302399

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aluminum	5000	5310		ug/L		106	85 - 115
Arsenic	1000	1070		ug/L		107	85 - 115
Calcium	25000	27400		ug/L		109	85 - 115
Cadmium	500	530		ug/L		106	85 - 115
Iron	5000	5190		ug/L		104	85 - 115
Copper	500	506		ug/L		101	85 - 115
Magnesium	25000	27400		ug/L		109	85 - 115
Lead	500	519		ug/L		104	85 - 115
Nickel	500	504		ug/L		101	85 - 115
Selenium	1000	1020		ug/L		102	85 - 115
Zinc	250	262		ug/L		105	85 - 115

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

Method: EPA 350.1 - Nitrogen, Ammonia

Lab Sample ID: MB 180-303274/1-A
Matrix: Water
Analysis Batch: 303545

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 303274

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia, distilled	0.10	U	0.10	0.088	mg/L		01/07/20 11:27	01/09/20 16:33	1

Lab Sample ID: LCS 180-303274/2-A
Matrix: Water
Analysis Batch: 303545

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 303274

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Ammonia, distilled	2.00	1.96		mg/L		98	90 - 110

Method: SM 2540C - Solids, Total Dissolved (TDS)

Lab Sample ID: MB 180-302247/2
Matrix: Water
Analysis Batch: 302247

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	10	U	10	10	mg/L			12/21/19 11:12	1

Lab Sample ID: LCS 180-302247/1
Matrix: Water
Analysis Batch: 302247

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	188	190		mg/L		101	80 - 120

Method: SM 4500 H+ B - pH

Lab Sample ID: LCS 180-303076/1
Matrix: Water
Analysis Batch: 303076

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
pH	7.00	7.0		SU		100	99 - 101

Method: SM2320 B - Alkalinity, Total

Lab Sample ID: MB 180-302621/29
Matrix: Water
Analysis Batch: 302621

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Alkalinity as CaCO3 to pH 4.5	5.0	U	5.0	5.0	mg/L			12/24/19 15:01	1

Lab Sample ID: LCS 180-302621/28
Matrix: Water
Analysis Batch: 302621

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Alkalinity as CaCO3 to pH 4.5	250	243		mg/L		97	90 - 110

Eurofins TestAmerica, Pittsburgh

QC Sample Results

Client: Civil & Environmental Consultants Inc
 Project/Site: Fletcher Run

Job ID: 180-100302-1

Method: SM4500 P E-2011 - Phosphorus

Lab Sample ID: MB 240-417455/3
 Matrix: Water
 Analysis Batch: 417455

Client Sample ID: Method Blank
 Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Phosphorus as P	0.10	U	0.10	0.037	mg/L	-		12/27/19 11:09	1

Lab Sample ID: LCS 240-417455/4
 Matrix: Water
 Analysis Batch: 417455

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Phosphorus as P	0.405	0.351		mg/L	-	87	77 - 120

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

HPLC/IC

Analysis Batch: 302062

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-100302-1	FR-2	Total/NA	Water	EPA 300.0 R2.1	
180-100302-2	FR-1	Total/NA	Water	EPA 300.0 R2.1	
MB 180-302062/6	Method Blank	Total/NA	Water	EPA 300.0 R2.1	
LCS 180-302062/5	Lab Control Sample	Total/NA	Water	EPA 300.0 R2.1	

Metals

Prep Batch: 302399

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-100302-1	FR-2	Dissolved	Water	200.8	
180-100302-1	FR-2	Total Recoverable	Water	200.8	
180-100302-2	FR-1	Dissolved	Water	200.8	
180-100302-2	FR-1	Total Recoverable	Water	200.8	
MB 180-302399/1-A	Method Blank	Total Recoverable	Water	200.8	
LCS 180-302399/2-A	Lab Control Sample	Total Recoverable	Water	200.8	

Analysis Batch: 302697

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-100302-1	FR-2	Total Recoverable	Water	SM 2340B	
180-100302-2	FR-1	Total Recoverable	Water	SM 2340B	

Analysis Batch: 303230

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-100302-1	FR-2	Dissolved	Water	EPA 200.8 Rev 5	302399
180-100302-1	FR-2	Total Recoverable	Water	EPA 200.8 Rev 5	302399
180-100302-2	FR-1	Dissolved	Water	EPA 200.8 Rev 5	302399
180-100302-2	FR-1	Total Recoverable	Water	EPA 200.8 Rev 5	302399
MB 180-302399/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	302399

Analysis Batch: 303290

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 180-302399/2-A	Lab Control Sample	Total Recoverable	Water	EPA 200.8 Rev 5	302399

Analysis Batch: 303402

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-100302-1	FR-2	Dissolved	Water	EPA 200.8 Rev 5	302399
180-100302-2	FR-1	Dissolved	Water	EPA 200.8 Rev 5	302399
MB 180-302399/1-A	Method Blank	Total Recoverable	Water	EPA 200.8 Rev 5	302399

General Chemistry

Analysis Batch: 302247

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-100302-1	FR-2	Total/NA	Water	SM 2540C	
180-100302-2	FR-1	Total/NA	Water	SM 2540C	

Eurofins TestAmerica, Pittsburgh

QC Association Summary

Client: Civil & Environmental Consultants Inc
Project/Site: Fletcher Run

Job ID: 180-100302-1

General Chemistry (Continued)

Analysis Batch: 302247 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 180-302247/2	Method Blank	Total/NA	Water	SM 2540C	
LCS 180-302247/1	Lab Control Sample	Total/NA	Water	SM 2540C	

Analysis Batch: 302621

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-100302-1	FR-2	Total/NA	Water	SM2320 B	
180-100302-2	FR-1	Total/NA	Water	SM2320 B	
MB 180-302621/29	Method Blank	Total/NA	Water	SM2320 B	
LCS 180-302621/28	Lab Control Sample	Total/NA	Water	SM2320 B	

Analysis Batch: 303076

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-100302-1	FR-2	Total/NA	Water	SM 4500 H+ B	
180-100302-2	FR-1	Total/NA	Water	SM 4500 H+ B	
LCS 180-303076/1	Lab Control Sample	Total/NA	Water	SM 4500 H+ B	

Prep Batch: 303274

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-100302-1	FR-2	Total/NA	Water	Distill/Ammonia	
180-100302-2	FR-1	Total/NA	Water	Distill/Ammonia	
MB 180-303274/1-A	Method Blank	Total/NA	Water	Distill/Ammonia	
LCS 180-303274/2-A	Lab Control Sample	Total/NA	Water	Distill/Ammonia	

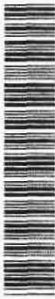
Analysis Batch: 303545

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-100302-1	FR-2	Total/NA	Water	EPA 350.1	303274
180-100302-2	FR-1	Total/NA	Water	EPA 350.1	303274
MB 180-303274/1-A	Method Blank	Total/NA	Water	EPA 350.1	303274
LCS 180-303274/2-A	Lab Control Sample	Total/NA	Water	EPA 350.1	303274

Analysis Batch: 417455

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
180-100302-1	FR-2	Total/NA	Water	SM4500 P E-2011	
180-100302-2	FR-1	Total/NA	Water	SM4500 P E-2011	
MB 240-417455/3	Method Blank	Total/NA	Water	SM4500 P E-2011	
LCS 240-417455/4	Lab Control Sample	Total/NA	Water	SM4500 P E-2011	

Chain of Custody Record



Client Information (Sub Contract Lab)		Sampler:	Lab PM:	Carrier Tracking Net(s):	COG No:
Client Contact: Shipping/Receiving		Phone:	Nestasio, Dominic J	State of Origin:	180-381254-1
Company: TestAmerica Laboratories, Inc.		E-Mail:	dominic.nestasio@testamericainc.com	Page:	Page 1 of 1
Address: 4101 Shuffel Street NW,		Due Date Requested:	Job #:		
City: North Canton		1/6/2020	180-100302-1		
State, Zip: OH, 44720		TAT Requested (days):	Preservation Codes:		
Phone: 330-497-9396(Tel) 330-497-0772(Fax)		PO #:	A - HCL M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SZO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - PH 4.5 X - EDTA Y - EDA Z - other (specify)		
Email:		WO #:	Other:		
Project Name: Fletcher Run		Project #: 18020244	Total Number of containers		
Site:		SSOW#:	Special Instructions/Note:		
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=water/oil, BT=Tissue, AsAb)
FR-2 (180-100302-1)	12/19/19	10:45 Eastern	Water	X	1
FR-1 (180-100302-2)	12/19/19	11:45 Eastern	Water	X	1
<p>Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analysis & accreditation compliance upon our 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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.</p>					
Possible Hazard Identification					
Unconfirmed					
Deliverable Requested: I, II, III, IV, Other (specify)					
Primary Deliverable Rank: 2					
Date:					
Relinquished by: [Signature]					
Date/Time: 12/20/19 1200					
Relinquished by: [Signature]					
Date/Time:					
Relinquished by:					
Date/Time:					
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No					
Custody Seal No.:					
Cooler Temperature(s) °C and Other Remarks:					



Eurofins TestAmerica Canton Sample Receipt Form/Narrative

Login # : _____

Canton Facility

Client ETA Pittsburg Site Name _____

Cooler unpacked by: _____

Cooler Received on 12-21-19 Opened on 12-21-19

FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Receipt After-hours: Drop-off Date/Time _____ Storage Location _____

TestAmerica Cooler # 1A Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
IR GUN #IR-11 (CF +0.9 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C

2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
-Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
-Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
-Were tamper/custody seals intact and uncompromised? Yes No NA

3. Shippers' packing slip attached to the cooler(s)? Yes No

4. Did custody papers accompany the sample(s)? Yes No

5. Were the custody papers relinquished & signed in the appropriate place? Yes No

6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No

7. Did all bottles arrive in good condition (Unbroken)? Yes No

8. Could all bottle labels be reconciled with the COC? Yes No

9. Were correct bottle(s) used for the test(s) indicated? Yes No

10. Sufficient quantity received to perform indicated analyses? Yes No

11. Are these work share samples? Yes No

If yes, Questions 12-16 have been checked at the originating laboratory.

12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC995364

13. Were VOAs on the COC? Yes No

14. Were air bubbles >6 mm in any VOA vials? Yes No NA  Larger than this.

15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No

16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:
VOAs
Oil and Grease
TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.

Time preserved: _____ Preservative(s) added/Lot number(s): _____

VOA Sample Preservation - Date/Time VOAs Frozen: _____

Chain of Custody Record



Client Information (Sub Contract Lab)		Lab PM: Nestlasie, Dominic J	Carrier Tracking Ref(s):	COC No: 180-381254.1
Client Contact:		E-Mail: dominic.nestlasie@testamericainc.com	State of Origin: Pennsylvania	Page: Page 1 of 1
Shipping/Receiving		Accreditations Required (See note):	Job #: 180-100302-2	
Company: TestAmerica Laboratories, Inc.		Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2OHS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 L - EDA Other:		
Address: 4101 Shuffel Street NW, City: North Canton State, Zip: OH, 44720 Phone: 330-497-9396(Tel) 330-497-0772(Fax) Email:		Analysis Requested		
Due Date Requested: 1/6/2020		Total Number of Containers		
TAT Requested (days):		4500_P/E/Total Phosphorus as P		
PO #:		Field Filtered Sample (Yes or No)		
WO #:		Perform MS/MSD (Yes or No)		
Project #: 18020244		Special Instructions/Note: V67		
SSOW#:				
Sample Identification - Client ID (Lab ID)				
Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=water, B=BT-Tissue, A=Air)	Preservation Code:
12/19/19	12:45 Eastern		Water	
12/19/19	13:45 Eastern		Water	
<p>Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon our 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/test/matrix being analyzed, the samples must be shipped back to the Eurofins TestAmerica laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins TestAmerica attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said compliance to Eurofins TestAmerica.</p>				
Possible Hazard Identification				
Unconfirmed				
Deliverable Requested: I, II, III, IV, Other (specify)				
Primary Deliverable Rank: 2				
Special Instructions/QC Requirements:				
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)				
<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months				
Method of Shipment:				
Empty Kit Relinquished by:				
Relinquished by:		Date:		
Relinquished by:		Date/Time:		
Relinquished by:		Date/Time:		
Custody Seals Intact:		Cooler Temperature(s) °C and Other Remarks:		
<input type="checkbox"/> Yes <input type="checkbox"/> No				



Eurofins TestAmerica Canton Sample Receipt Form/Narrative

Login # : _____


Canton Facility

Client ETA Pittsburgh Site Name _____
 Cooler Received on 12-21-19 Opened on 12-21-19
 FedEx: 1st Grd Exp UPS FAS Clipper Client Drop Off TestAmerica Courier Other _____

Cooler unpacked by: _____

Receipt After-hours: Drop-off Date/Time _____ **Storage Location** _____

TestAmerica Cooler # 1A Foam Box Client Cooler Box Other _____
 Packing material used: Bubble Wrap Foam Plastic Bag None Other _____
 COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt See Multiple Cooler Form
 IR GUN# IR-10 (CF +0.7 °C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
 IR GUN #IR-11 (CF +0.9°C) Observed Cooler Temp. _____ °C Corrected Cooler Temp. _____ °C
2. Were tamper/custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
 -Were the seals on the outside of the cooler(s) signed & dated? Yes No NA
 -Were tamper/custody seals on the bottle(s) or bottle kits (LLHg/MeHg)? Yes No
 -Were tamper/custody seals intact and uncompromised? Yes No NA
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Was/were the person(s) who collected the samples clearly identified on the COC? Yes No
7. Did all bottles arrive in good condition (Unbroken)? Yes No
8. Could all bottle labels be reconciled with the COC? Yes No
9. Were correct bottle(s) used for the test(s) indicated? Yes No
10. Sufficient quantity received to perform indicated analyses? Yes No
11. Are these work share samples?
 If yes, Questions 12-16 have been checked at the originating laboratory.
12. Were all preserved sample(s) at the correct pH upon receipt? Yes No NA pH Strip Lot# HC995364
13. Were VOAs on the COC? Yes No
14. Were air bubbles >6 mm in any VOA vials? Yes No NA  ← Larger than this.
15. Was a VOA trip blank present in the cooler(s)? Trip Blank Lot # _____ Yes No
16. Was a LL Hg or Me Hg trip blank present? _____ Yes No

Tests that are not checked for pH by Receiving:

 VOAs
 Oil and Grease
 TOC

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other _____

Concerning _____

17. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

Samples processed by: _____

18. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.
 Sample(s) _____ were received in a broken container.
 Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

19. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in the laboratory.
 Time preserved: _____ Preservative(s) added/Lot number(s): _____
 VOA Sample Preservation - Date/Time VOAs Frozen: _____

Login Sample Receipt Checklist

Client: Civil & Environmental Consultants Inc

Job Number: 180-100302-1

Login Number: 100302

List Number: 1

Creator: Say, Thomas C

List Source: Eurofins TestAmerica, Pittsburgh

Question	Answer	Comment
Radioactivity wasn't checked or is \leq background as measured by a survey meter.	True	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
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.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	





1803 Philadelphia Street
 Indiana, PA 15701
 P: (724) 463-8378
 F: (724) 465-4209
 PADEP: 32-00382

1276 Bentleyville Road
 Van Voorhis, PA 15366
 P: (724) 258-8378
 F: (724) 258-8376
 PADEP: 63-04247

435 Broad Street
 Montoursville, PA 17754
 P: (570) 321-9002
 F: (570) 321-1957
 PADEP: 41-04880

950 West Main Street
 Sharpsville, PA 16150
 P: (724) 463-8378 x 500
 F: (724) 465-4209
 PADEP: 43-04934

31 December 2019

Civil & Environmental Consultants, Inc.
 Attn: Jackie Rockey
 333 Baldwin Road
 Pittsburgh, PA 15205

Work Order: 9121786
Project: Fecal Testing
Project Description: Fecal Testing

Report of Analysis

Client Sample ID	Lab Sample ID	Matrix	Date Sampled	Date Received	Sample Notes
FR-2	9121786-01	Waste Water	12/19/2019 12:25	12/19/19 18:30	
FR-1	9121786-02	Waste Water	12/19/2019 11:50	12/19/19 18:30	
GR-2	9121786-03	Waste Water	12/19/2019 12:45	12/19/19 18:30	
GR-1	9121786-04	Waste Water	12/19/2019 13:45	12/19/19 18:30	

Report Narrative

The results contained in this report are only representative of the samples received. Environmental Service Laboratories, Inc. is not responsible for use or interpretation of the data included herein.

Definitions

RL Reporting Limit

Certifications

Analyses performed by Environmental Service Laboratories, Inc., Indiana PA unless otherwise specified.

Environmental Service Laboratories, Inc., Indiana, PA/TNI Certification #32-00382

Approved By

Krista Brocius for Sierra Grguric
 Project Manager Assistant





1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 12/31/2019 09:01

Lab Sample ID#: 9121786-01
Sample Type: Waste Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-2

Sample Date: 12/19/2019 12:25
Receipt Date: 12/19/2019 18:30

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	64	MPN/100 mL		1	ANP	12/19/19 18:32	12/20/19 13:22

Lab Sample ID#: 9121786-02
Sample Type: Waste Water
Sample Source: Grab
Sampler: Client
Client Sample ID: FR-1

Sample Date: 12/19/2019 11:50
Receipt Date: 12/19/2019 18:30

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	45	MPN/100 mL		1	ANP	12/19/19 18:32	12/20/19 13:22

Lab Sample ID#: 9121786-03
Sample Type: Waste Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-2

Sample Date: 12/19/2019 12:45
Receipt Date: 12/19/2019 18:30

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	>2420	MPN/100 mL		1	ANP	12/19/19 18:32	12/20/19 13:22



1803 Philadelphia Street
Indiana, PA 15701
P: (724) 463-8378
F: (724) 465-4209
PADEP: 32-00382

1276 Bentleyville Road
Van Voorhis, PA 15366
P: (724) 258-8378
F: (724) 258-8376
PADEP: 63-04247

435 Broad Street
Montoursville, PA 17754
P: (570) 321-9002
F: (570) 321-1957
PADEP: 41-04880

950 West Main Street
Sharpsville, PA 16150
P: (724) 463-8378 x 500
F: (724) 465-4209
PADEP: 43-04934

Civil & Environmental Consultants, Inc.
333 Baldwin Road
Pittsburgh, PA 15205

Reported: 12/31/2019 09:01

Lab Sample ID#: 9121786-04
Sample Type: Waste Water
Sample Source: Grab
Sampler: Client
Client Sample ID: GR-1

Sample Date: 12/19/2019 13:45
Receipt Date: 12/19/2019 18:30

Analyte	Sample Result	Units	Data Qualifier	RL	Analyst/ Certification	Prep Date/Time	Analysis Date/Time
Microbiology	Analytical Method: Colilert-18		Prep Method: No Prep - Micro				
Fecal Coliforms	225	MPN/100 mL		1	ANP	12/19/19 18:32	12/20/19 13:22

ENVIRONMENTAL SERVICE LABORATORIES, INC.

SAMPLE REQUEST & CHAIN OF CUSTODY

PAGE 1 OF 1

Page 4 of 4

HEADQUARTERS
1803 Philadelphia St.
Indiana, PA 15701
(724) 463-TEST
FAX: (724) 465-4209



SOUTHERN DIVISION
1276 Bentleyville Road
Van Voorhis, PA 15366
(724) 258-TEST
FAX: (724) 258-8376



9121786

NORTHWEST DIVISION
100 Main Street
Pittsburgh, PA 15150
(724) 463-TEST
FAX: (724) 465-4209



FOR INTERNAL LABORATORY USE ONLY

Sample Identification	ESL#	Sample Type				Matrix	# of Containers	Container Type Preservative	Analysis Requested
		Composite		Grab					
		Date on/off	Time on/off	Date	Time				
FR-2	01	/	/	12/19/19	12:25	WW	1 ✓	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform
FR-1	02	/	/	12/19/19	11:50	WW	1 ✓	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform
GR-2	03	/	/	12/19/19	12:45	WW	1 ✓	Sterile 125mL Na ₂ S ₂ O ₃	Fecal Coliform
GR-1	04	/	/	12/19/19	13:45	WW	1 ✓	Sterile 125 mL Na ₂ S ₂ O ₃	Fecal Coliform
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						
		/	/						

② 2-9/19
12/19/19
15:20

THE UNDERSIGNED PURCHASER HEREBY AGREES TO PAY SERVICE CHARGES ON ACCOUNTS OVER 31 DAYS OLD.
1. THESE SERVICE CHARGES WILL ACCRUE AT THE RATE OF 1 1/2% PER MONTH (18% PER ANNUM OR THE MAXIMUM ALLOWED BY LAW.)
2. THE UNDERSIGNED PURCHASER AGREES TO PAY, IN THE EVENT HIS ACCOUNT BECOMES DELINQUENT AND IS TURNED OVER TO ANY ATTORNEY FOR COLLECTION, REASONABLE ATTORNEY'S FEES PLUS ALL COURT AND ATTENDANT COLLECTION COSTS.

Michael Dawson 12/19/19 11:50
 Sampled By: (Signature) Date/ Time
 Michael Dawson 12/19/19 15:30
 Relinquished By: (Signature) Date/ Time
 Amanda Ahuy 12-19-19 16:30
 Relinquished By: (Signature) Date/ Time
 Amanda Ahuy 12-19-19 18:00
 Relinquished By: (Signature) Date/ Time
 Amanda Ahuy 12-19-19 18:00
 Received By: (Signature) Date/ Time
 Amanda Ahuy 12-19-19 15:30
 Received By: (Signature) Date/ Time
 Amanda Ahuy 12-19-19 16:30
 Received By: (Signature) Date/ Time
 Amanda Ahuy 12/20/19 08:57
 Received By: (Signature) Date/ Time
 Amanda Ahuy 12/20/19 08:57

Project Notes:
Fecal Analysis

Company/Name: Civil & Environmental Consultants, Inc.
 Address: 333 Baldwin Road
 Pittsburgh, PA 15205

Contact Person: Jackie Rocky jrockey@cecinc.com
 Mobile: 412-559-7035
 Phone Number: 412-249-3140
 Fax Number: (412) 429-2114
 Email: bvalli@cecinc.com

Correct Preservations Y / N / NA Correct Containers Y / N / NA Receipt Temperature _____