PASCO COUNTY FLORIDA
OPEN SPACES. VIBRANT PLACES.

Pasco County Utilities Services Branch
Environmental Laboratory
8864 Government Dr.
New Port Richey, Fl 34654

Phone: (727) 847-8902
Fax: (727) 847-8112

DHRS No: E44123

13 Feb 2020

Waste Management Section
Florida Department of
Environmental Protection
13051 N. Telecom Pkwy.
Temple Terrace, FL 33637

RE: Pasco County Resource Recovery
WACs FAC ID: 45799
Semester II, 2019 – Resample Results

To Whom It May Concern:

This submittal contains the analytical results of resampling of groundwater monitoring wells 4MW-23, 2MW-24D, and 2MW-25D at the Pasco County Resource Recovery site. These resamples were taken as a result of samples being analyzed out of hold time for various analytes as defined in the submittal for the October, 2019 sampling event. Unfortunately, the semivolatile organic contaminants (8270D) were once again analyzed out of hold time by the contract laboratory for samples taken at 4MW-23. This well is scheduled to be sampled in April at which time samples for the semivolatile organics (8270D) will be taken.

If you have any questions please feel free to contact me.

Sincerely,

Candia E. Mulhern
Laboratory Manager

cc: Charles Cullen, PI Engineering Director
John Power, Solid Waste Director
Justin Roessler, Solid Waste Assistant Director

Florida Department of Environmental Protection

Bob Martinez Center
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

DEP Form #: 62-701.900(31), F.A.C
Form Title: Water Quality Monitoring Certification
Effective Date: January 6, 2010
Incorporated in Rule 62-701.510(9), F.A.C.

WATER QUALITY MONITORING CERTIFICATION

PART I GENERAL INFORMATION

(1) Facility Name PASCO COUNTY RESOURCE RECOVERY

Address 14230 HAYS RD.

City SPRING HILL Zip 34610 County PASCO

Telephone Number (727) 856-0119

(2) WACS Facility ID 45799

(3) DEP Permit Number

(4) Authorized Representative's Name Candia E. Mulhern Title Laboratory Manager

Address 8864 Government Dr.

City New Port Richey Zip 34654 County PASCO

Telephone Number (727) 847-8902

Email address (if available) cmulhern@pascocountyfl.net

CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submission of false information including the possibility of fine and imprisonment.

13 Feb 2020 (Date)

Candia E. Mulhern (Owner or Authorized Representative's Signature)

Digitally signed by Candia E. Mulhern
Date: 2020.02.13 10:30:54 -05'00'

PART II QUALITY ASSURANCE REQUIREMENTS

Sampling Organization Pasco County Utilities Environmental Laboratory

Analytical Lab NELAC / HRS Certification # E44123

Lab Name Pasco County Utilities Environmental Laboratory

Address 8864 Government Dr.

Phone Number (727) 847-8902

Email address (if available) cchildress@pascocountyfl.net

Pasco County Utilities Services Branch
Environmental Laboratory
8864 Government Dr.
New Port Richey, Fl 34654

Office (727) 847-8902
Fax (727) 847-8112

DHRS #E44123

Case Narrative

CLIENT: Pasco County Solid Waste
Pasco County Resource Recovery
Facility #: 45799
Date Sampled: Quarter IV, 2019
Resample

I. SAMPLING

Laboratory field staff resampled groundwater monitoring wells 4MW23, 2MW24D, and 2MW25D at the Pasco County Resource Recovery Facility on Dec 23rd, 2019. No unusual environmental conditions were noted during this sampling period. Wells 2MW24D and 2MW25D were resampled for the Appendix I analytes due to exceeded hold times on the original samples. Well 4MW23 was resampled for a variety of Appendix II analytes due to exceeded hold times on the original samples.

II. SAMPLE RECEIVING/CUSTODY

The samples were delivered by laboratory field personnel to the Pasco County Environmental Laboratory, received on wet ice, and the temperature of the samples maintained at ≤ 6°C. Samples were processed by the Sample Custody section of the laboratory. The samples, as received, were shipped to Eurofins Test America for analyses. There were no significant logistics or quality problems unless noted below.

III. ANALYTICAL DATA

The samples were analyzed by Eurofins Test America Laboratory, a TNI certified laboratory. Several issues occurred with the analysis. Due to logistical problems the laboratory, though requested to analyze for nitrate and nitrite separately, ran the analysis as Nitrate/Nitrite. Apparently, the nitrite was out of hold and consequently they analyzed for the combined analytes. Wells were resampled for Nitrate and Nitrite but again Eurofins analyzed for the combined Nitrate/Nitrite. As a result, these analyses will be conducted at the Pasco County Environmental Laboratory in all future sample events which will alleviate this ongoing problem.

Finally, Well 4MW-23 Appendix II Semivolatile Organic compounds (8270D), Cyanide and Sulfide were analyzed out of hold. This well is scheduled to be sampled in April for the semi-annual requirements and these out of hold compounds will be sampled at that time as well.

IV. QUALITY CONTROL

There were no significant quality control problems unless noted in the attached QC reports.

V. CONCLUSIONS AND RECOMMENDATIONS

The continued problems with nitrate and nitrite as well as other out of hold issues is being resolved through several avenues: 1) analyzing nitrate and nitrite at the Pasco County Environmental Laboratory; 2) Submitting samples to the contract laboratory priority overnight shipping to accommodate holding times; 3) Sending samples directly to the Eurofins laboratory that will be conducting the analysis; and immediate notification of the Pasco County Environmental Laboratory regarding out of hold samples as well as sampels with analytical (data qualifier "J") issues.

The County is committed to ensuring that the problems encountered with the contract laboratory are corrected and recommends continuing to sample consistent with the approved groundwater monitoring plan.

Candia E. Mulhern
Laboratory Manager
cmulhern@pascocountyfl.net
(727) 847-8902

Pasco County Utilities Environmental Laboratory Report

8864 Government Drive
New Port Richey, FL 34654
Phone: (727) 847-8902 Fax: (727) 847-8112
Contacts: Annamarie Cangialosi, Administrative Secretary
Chris Childress, QA/QC Officer
Hours: Mon-Fri 8am-5pm

CLIENT/SAMPLE INFORMATION

Resource Recovery
Class I Landfill
Hays Road
Shady Hills, Fl

John Power

Report Date: 12/23/2019

Sample Number:	**AC89554**	Sample ID:	2MW-24D @ RESREC
Sample Method:	SP	Sample Matrix:	AQUEOUS-Groundwater
Date Sampled:	12/23/2019	Date Received:	12/23/2019
Time Sampled:	11:39	Time Received:	14:45
Sampled By:	GTORREY	Received By:	LR
		Delivered By:	GT

REPORT OF ANALYSES These results relate only to the sample indicated above and meet all requirements of the 2016 TNI standards.

Analysis	Method	Date	Time	By	Result	Qualifier	Unit	Detection Limit
Water Level (NGVD)	DEP-SOP	12/23/2019	11:39	GST	33.2	D	Ft.	0
Color by Observation	Observation	12/23/2019	11:39	GST	CLEAR	D	ObsColor	0
Turbidity Field	FDEP FT 1600	12/23/2019	11:39	GST	1.3	D	NTU	0.00
Dissolved Oxygen Field	FDEP FT 1500	12/23/2019	11:39	GST	1.68	D	mg/L	0.01
Conductivity Field	FDEP FT 1200	12/23/2019	11:39	GST	520	D	umhos/cm	1
Temperature Field	FDEP FT 1400	12/23/2019	11:39	GST	25.57	D	Deg C	0.00
pH Field	FDEP FT 1100	12/23/2019	11:39	GST	7.08	D	Std Units	0.10

Analysis Comments

Candia E. Mulhern, Laboratory Manager

U = Indicates that the compound was analyzed for but not detected.

I = Reported value is greater than or equal to the detection limit, but less than PQL.

XC = Reported value exceeds the MCL (F.A.C. 62-550).

MCL=Maximum Contaminant Level

This Document Meets All the Requirements of the 2016 TNI Standards

State Laboratory ID: E44123
EPA Lab Code: FL00137

Pasco County Utilities Environmental Laboratory Report

8864 Government Drive
New Port Richey, FL 34654
Phone: (727) 847-8902 Fax: (727) 847-8112
Contacts: Annamarie Cangialosi, Administrative Secretary
Chris Childress, QA/QC Officer
Hours: Mon-Fri 8am-5pm

CLIENT/SAMPLE INFORMATION

West Pasco Landfill
Hays Road
Shady Hills, Fl

Report Date: 12/23/2019

John Power

Sample Number:	**AC89555**	Sample ID:	4MW23 @ RES REC
Sample Method:	SP	Sample Matrix:	AQUEOUS-Groundwater
Date Sampled:	12/23/2019	Date Received:	12/23/2019
Time Sampled:	13:06	Time Received:	14:45
Sampled By:	GTORREY	Received By:	LR
		Delivered By:	GT

REPORT OF ANALYSES These results relate only to the sample indicated above and meet all requirements of the 2016 TNI standards.

Analysis	Method	Date	Time	By	Result	Qualifier	Unit	Detection Limit
Water Level (NGVD)	DEP-SOP	12/23/2019	13:06	GST	31.46	D	Ft.	0
pH Field	FDEP FT 1100	12/23/2019	13:06	GST	7.18	D	Std Units	0.10
Temperature Field	FDEP FT 1400	12/23/2019	13:06	GST	23.87	D	Deg C	0.00
Color by Observation	Observation	12/23/2019	13:06	GST	CLOUDY	D	ObsColor	0
Conductivity Field	FDEP FT 1200	12/23/2019	13:06	GST	534	D	umhos/cm	1
Dissolved Oxygen Field	FDEP FT 1500	12/23/2019	13:06	GST	1.67	D	mg/L	0.01
Turbidity Field	FDEP FT 1600	12/23/2019	13:06	GST	15.4	D	NTU	0.00

Analysis Comments

Candia E. Mulhern, Laboratory Manager

U = Indicates that the compound was analyzed for but not detected.

I = Reported value is greater than or equal to the detection limit, but less than PQL.

XC = Reported value exceeds the MCL (F.A.C. 62-550).

MCL=Maximum Contaminant Level

This Document Meets All the Requirements of the 2016 TNI Standards

State Laboratory ID: E44123
EPA Lab Code: FL00137

Pasco County Utilities Environmental Laboratory Report

8864 Government Drive
New Port Richey, FL 34654
Phone: (727) 847-8902 Fax: (727) 847-8112
Contacts: Annamarie Cangialosi, Administrative Secretary
Chris Childress, QA/QC Officer
Hours: Mon-Fri 8am-5pm

CLIENT/SAMPLE INFORMATION

Resource Recovery
Class I Landfill
Hays Road
Shady Hills, Fl

John Power

Report Date: 12/23/2019

Sample Number:	**AC89553**	Sample ID:	2MW-25D @ RESREC
Sample Method:	SP	Sample Matrix:	AQUEOUS-Groundwater
Date Sampled:	12/23/2019	Date Received:	12/23/2019
Time Sampled:	10:56	Time Received:	14:45
Sampled By:	GTORREY	Received By:	LR
		Delivered By:	GT

REPORT OF ANALYSES These results relate only to the sample indicated above and meet all requirements of the 2016 TNI standards.

Analysis	Method	Date	Time	By	Result	Qualifier	Unit	Detection Limit
Dissolved Oxygen Field	FDEP FT 1500	12/23/2019	10:56	GST	2.51	D	mg/L	0.01
Water Level (NGVD)	DEP-SOP	12/23/2019	10:56	GST	33.28	D	Ft.	0
pH Field	FDEP FT 1100	12/23/2019	10:56	GST	7.04	D	Std Units	0.10
Conductivity Field	FDEP FT 1200	12/23/2019	10:56	GST	658	D	umhos/cm	1
Turbidity Field	FDEP FT 1600	12/23/2019	10:56	GST	4.9	D	NTU	0.00
Color by Observation	Observation	12/23/2019	10:56	GST	CLEAR	D	ObsColor	0
Temperature Field	FDEP FT 1400	12/23/2019	10:56	GST	26.27	D	Deg C	0.00

Analysis Comments

Candia E. Mulhern, Laboratory Manager

U = Indicates that the compound was analyzed for but not detected.

I = Reported value is greater than or equal to the detection limit, but less than PQL.

XC = Reported value exceeds the MCL (F.A.C. 62-550).

MCL=Maximum Contaminant Level

This Document Meets All the Requirements of the 2016 TNI Standards

State Laboratory ID: E44123
EPA Lab Code: FL00137

eurofins | Environment Testing TestAmerica

ANALYTICAL REPORT

Eurofins TestAmerica, Tampa
6712 Benjamin Road
Suite 100
Tampa, FL 33634
Tel: (813)885-7427

Laboratory Job ID: 660-99522-1
Client Project/Site: Resource Recovery

For:
Pasco Co Board of Commissioners
8864 Government Dr
New Port Richey, Florida 34654

Attn: Candia E Mulhern

Authorized for release by:
1/15/2020 4:56:02 PM
Haukur Gudnason, Project Manager II
(813)280-8342
haukur.gudnason@testamericainc.com

Designee for

Jess Hornsby, Project Manager II
(813)280-8340
jess.hornsby@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

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.

Table of Contents

Cover Page 1
Table of Contents 2
Sample Summary 3
Detection Summary 4
Case Narrative 5
Definitions/Glossary 7
Client Sample Results 9
QC Sample Results 18
QC Association Summary 40
Lab Chronicle 44
Method Summary 46
Certification Summary 47
Chain of Custody 48
Receipt Checklists 50

Sample Summary

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	Asset ID
660-99522-1	4MW23	Water	12/23/19 13:06	12/24/19 09:05	
660-99522-2	2MW-24D	Water	12/23/19 11:39	12/24/19 09:05	
660-99522-3	2MW-25D	Water	12/23/19 10:56	12/24/19 09:05	

Detection Summary

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Client Sample ID: 4MW23 — Lab Sample ID: 660-99522-1

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Cyanide, Total	0.0025	I Q	0.010	0.0025	mg/L	1		9012B	Total/NA

Client Sample ID: 2MW-24D — Lab Sample ID: 660-99522-2

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	41		0.50	0.20	mg/L	1		300.0-1993 R2.1	Total/NA
Iron	51	I	200	25	ug/L	1		6010D	Total Recoverable
Arsenic	2.7	I V	10	1.9	ug/L	1		6010D	Total Recoverable
Sodium	19000		1000	120	ug/L	1		6010D	Total Recoverable
Barium	16		10	0.92	ug/L	1		6010D	Total Recoverable
Nickel	1.3	I	8.0	0.81	ug/L	1		6010D	Total Recoverable
Nitrate Nitrite as N	1.2		0.015	0.0050	mg/L	1		353.2-1993 R2.0	Total/NA
Total Dissolved Solids	290		20	20	mg/L	1		SM 2540C	Total/NA

Client Sample ID: 2MW-25D — Lab Sample ID: 660-99522-3

Analyte	Result	Qualifier	PQL	MDL	Unit	Dil Fac	D	Method	Prep Type
Chloride	75		0.50	0.20	mg/L	1		300.0-1993 R2.1	Total/NA
Antimony	9.5	I	20	4.0	ug/L	1		6010D	Total Recoverable
Iron	57	I	200	25	ug/L	1		6010D	Total Recoverable
Arsenic	4.0	I V	10	1.9	ug/L	1		6010D	Total Recoverable
Sodium	34000		1000	120	ug/L	1		6010D	Total Recoverable
Barium	22		10	0.92	ug/L	1		6010D	Total Recoverable
Nickel	1.8	I	8.0	0.81	ug/L	1		6010D	Total Recoverable
Nitrate Nitrite as N	1.3		0.015	0.0050	mg/L	1		353.2-1993 R2.0	Total/NA
Total Dissolved Solids	380		20	20	mg/L	1		SM 2540C	Total/NA

This Detection Summary does not include radiochemical test results.

Job ID: 660-99522-1

Laboratory: Eurofins TestAmerica, Tampa

Narrative

Receipt
The samples were received on 12/24/2019 9:05 AM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.2º C.

Receipt Exceptions
Methods 5030B, 8260B: The following sample was collected in an improper container: 4MW23 (660-99522-1). No VOA vials were received for the 8260. Running out of an amber 1L unpreserved.

Method 9034: The following sample was received without one of the preservatives. The sample came in a container with sodium hydroxide but no zinc acetate.

GC/MS VOA
Method 8260B: The following sample was sampled into an incorrect sample container, therefore sample was poured from the 1 liter container and into a voa vial for the 8260 analysis. Batch 219979.
MW23 (660-99522-1)

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

GC/MS Semi VOA
Method 3520C: The following sample(s) was received with less than 2 days remaining on the holding time or less than one shift (8 hours) remaining on a test with a holding time of 48 hours or less. As such, the laboratory had insufficient time remaining to perform the analysis within holding time: 4MW23 (660-99522-1).

Method 8270D: The following analyte has been identified, in the reference method and/or via historical data, to be poor and/or erratic performers: p-Phenylene diamine. This analyte may have a %D >30% but must be <50% in the initial calibration verification (ICV).

Method 8270D: The initial calibration verification (ICV) result for batch 680-594388 was above the upper control limit. Sample results were non-detects, and have been reported as qualified data. 3-Methylcholanthrene

Method 8270D: The following analytes have been identified, in the reference method and/or via historical data, to be poor and/or erratic performers: 2,4-Dinitrophenol, Pentachlorophenol, N-Nitrosomethylethylamine, p-Phenylene diamine, 1,3,5-Trinitrobenzene, Hexachloropropene, Dimethoate, Methyl methanesulfonate, Disulfoton, Phorate and Diallate . These analytes may have a %D >20% but must be <50% in the continuing calibration verification (CCV).

Method 8270D: The continuing calibration verification (CCV) associated with batch 680-602921 recovered above the upper control limit for 3-Methylcholanthrene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

Method 8270D: Methapyrilene is flagged with an E because the spike concentration for the LCS and LCSD are outside of the calibration range.
(LCS 680-602298/8-A) and (LCSD 680-602298/9-A)

Method 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 680-602298 and analytical batch 680-602921 recovered outside control limits for the following analyte(s): 2,4-Dinitrophenol. This analyte has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

Method 8270D: The laboratory control sample and/or the laboratory control sample duplicate (LCS/LCSD) for preparation batch 680-602298 and analytical batch 680-602921 recovered outside control limits for the following analyte(s): Famphur, Dimethoate, Methyl parathion, p-Phenylene diamine and 3-Methylcholanthrene. Batch precision also exceeded control limits for Methyl parathion. These analytes have been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

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

Job ID: 660-99522-1 (Continued)

Laboratory: Eurofins TestAmerica, Tampa (Continued)

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

GC Semi VOA
Method 8151A: The surrogate recovery for the blank associated with preparation batch 680-602605 and analytical batch 680-602793 was outside the upper control limits.

Method 8151A: The RPD of the laboratory control sample (LCS) and laboratory control sample duplicate (LCSD) for preparation batch 680-602605 and analytical batch 680-602793 recovered outside control limits for the following analytes: Dinoseb.

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

Metals
Method 6010D: The method blank for <219949> contained <arsenic> at the method detection limit (MDL). Associated samples were not re-analyzed because results were less than the reporting limit (RL) OR practical quantitation limit (PQL). 2MW-24D (660-99522-2), 2MW-25D (660-99522-3) and (MB 660-219949/1-A)

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

General Chemistry
Method 353.2: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for nitrite in analytical batch 660-219937 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 350.1: The matrix spike / matrix spike duplicate (MS/MSD) recoveries for analytical batch 680-602763 were outside control limits. Sample matrix interference is suspected because the associated laboratory control sample (LCS) recovery was within acceptance limits.

Method 9012B: The following sample(s) was analyzed outside of analytical holding time due to preserved sample was consumed for sulfide analysis. Analysis performed on unpreserved sample outside hold time.: 4MW23 (660-99522-1).

Method 9034: The following sample was analyzed outside of analytical holding time due to scheduling error: 4MW23 (660-99522-1).

Method 9034: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate/sample duplicate (MS/MSD/DUP) associated with analytical batch 680-602662.

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

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

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.

GC/MS Semi VOA

Qualifier	Qualifier Description
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
Q	Sample held beyond the accepted holding time.
U	Indicates that the compound was analyzed for but not detected.

GC Semi VOA

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J1	Estimated value; value may not be accurate. Surrogate recovery outside of criteria.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
U	Indicates that the compound was analyzed for but not detected.

HPLC/IC

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

Metals

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
U	Indicates that the compound was analyzed for but not detected.
V	Indicates that the analyte was detected at or above the method detection limit in both the sample and the associated method blank and the value of 10 times the blank value was equal to or greater than the associated sample value.

General Chemistry

Qualifier	Qualifier Description
I	The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
J3	Estimated value; value may not be accurate. Spike recovery or RPD outside of criteria.
Q	Sample held beyond the accepted holding time.
U	Indicates that the compound 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

Glossary (Continued)

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

Client Sample Results

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Client Sample ID: 4MW23

Date Collected: 12/23/19 13:06
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.0	U	20	3.0	ug/L			12/28/19 10:52	1
Acetonitrile	20	U	60	20	ug/L			12/28/19 10:52	1
Acrolein	5.1	U	20	5.1	ug/L			12/28/19 10:52	1
Acrylonitrile	2.9	U	10	2.9	ug/L			12/28/19 10:52	1
Benzene	0.25	U	1.0	0.25	ug/L			12/28/19 10:52	1
Bromoform	1.1	U	5.0	1.1	ug/L			12/28/19 10:52	1
Bromomethane	2.5	U	10	2.5	ug/L			12/28/19 10:52	1
2-Butanone (MEK)	3.2	U	10	3.2	ug/L			12/28/19 10:52	1
Carbon disulfide	0.35	U	2.0	0.35	ug/L			12/28/19 10:52	1
Carbon tetrachloride	0.23	U	1.0	0.23	ug/L			12/28/19 10:52	1
Chlorobenzene	0.27	U	1.0	0.27	ug/L			12/28/19 10:52	1
Chlorobromomethane	0.36	U	2.0	0.36	ug/L			12/28/19 10:52	1
2-Chloro-1,3-butadiene	0.32	U	5.0	0.32	ug/L			12/28/19 10:52	1
Chlorodibromomethane	0.31	U	3.0	0.31	ug/L			12/28/19 10:52	1
Chloroethane	2.5	U	10	2.5	ug/L			12/28/19 10:52	1
Chloroform	0.29	U	1.0	0.29	ug/L			12/28/19 10:52	1
Chloromethane	0.76	U	2.0	0.76	ug/L			12/28/19 10:52	1
3-Chloro-1-propene	1.1	U	5.0	1.1	ug/L			12/28/19 10:52	1
cis-1,2-Dichloroethene	0.32	U	1.0	0.32	ug/L			12/28/19 10:52	1
cis-1,3-Dichloropropene	0.39	U	2.0	0.39	ug/L			12/28/19 10:52	1
1,2-Dibromo-3-Chloropropane	2.5	U	10	2.5	ug/L			12/28/19 10:52	1
Dibromomethane	0.46	U	2.0	0.46	ug/L			12/28/19 10:52	1
Dichlorobromomethane	0.23	U	1.0	0.23	ug/L			12/28/19 10:52	1
Dichlorodifluoromethane	2.5	U	10	2.5	ug/L			12/28/19 10:52	1
1,1-Dichloroethane	0.32	U	1.0	0.32	ug/L			12/28/19 10:52	1
1,2-Dichloroethane	0.31	U	1.0	0.31	ug/L			12/28/19 10:52	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			12/28/19 10:52	1
1,2-Dichloropropane	0.52	U	2.0	0.52	ug/L			12/28/19 10:52	1
1,3-Dichloropropane	0.22	U	1.0	0.22	ug/L			12/28/19 10:52	1
2,2-Dichloropropane	0.36	U	2.0	0.36	ug/L			12/28/19 10:52	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			12/28/19 10:52	1
Ethylbenzene	0.27	U	1.0	0.27	ug/L			12/28/19 10:52	1
Ethylene Dibromide	0.27	U	1.0	0.27	ug/L			12/28/19 10:52	1
Ethyl methacrylate	0.94	U	5.0	0.94	ug/L			12/28/19 10:52	1
2-Hexanone	4.4	U	15	4.4	ug/L			12/28/19 10:52	1
Iodomethane	4.1	U	15	4.1	ug/L			12/28/19 10:52	1
Isobutyl alcohol	10	U	50	10	ug/L			12/28/19 10:52	1
Methacrylonitrile	2.2	U	10	2.2	ug/L			12/28/19 10:52	1
Methylene Chloride	1.4	U	10	1.4	ug/L			12/28/19 10:52	1
Methyl methacrylate	0.61	U	5.0	0.61	ug/L			12/28/19 10:52	1
4-Methyl-2-pentanone (MIBK)	4.0	U	15	4.0	ug/L			12/28/19 10:52	1
Propionitrile	3.3	U	10	3.3	ug/L			12/28/19 10:52	1
Styrene	0.49	U	2.0	0.49	ug/L			12/28/19 10:52	1
1,1,1,2-Tetrachloroethane	0.36	U	2.0	0.36	ug/L			12/28/19 10:52	1
1,1,2,2-Tetrachloroethane	0.44	U	1.0	0.44	ug/L			12/28/19 10:52	1
Tetrachloroethene	0.50	U	2.0	0.50	ug/L			12/28/19 10:52	1
Toluene	0.24	U	1.0	0.24	ug/L			12/28/19 10:52	1
trans-1,4-Dichloro-2-butene	1.5	U	10	1.5	ug/L			12/28/19 10:52	1
trans-1,2-Dichloroethene	0.39	U	2.0	0.39	ug/L			12/28/19 10:52	1

Client Sample ID: 4MW23

Date Collected: 12/23/19 13:06
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-1

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
trans-1,3-Dichloropropene	0.27	U	1.0	0.27	ug/L			12/28/19 10:52	1
1,1,1-Trichloroethane	0.30	U	1.0	0.30	ug/L			12/28/19 10:52	1
1,1,2-Trichloroethane	0.29	U	1.0	0.29	ug/L			12/28/19 10:52	1
Trichloroethene	0.61	U	2.0	0.61	ug/L			12/28/19 10:52	1
Trichlorofluoromethane	0.49	U	5.0	0.49	ug/L			12/28/19 10:52	1
1,2,3-Trichloropropane	0.44	U	3.0	0.44	ug/L			12/28/19 10:52	1
Vinyl acetate	0.95	U	10	0.95	ug/L			12/28/19 10:52	1
Vinyl chloride	0.26	U	1.0	0.26	ug/L			12/28/19 10:52	1
Xylenes, Total	0.50	U	4.0	0.50	ug/L			12/28/19 10:52	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*70 - 130*		*12/28/19 10:52*	*1*
Dibromofluoromethane	*102*		*70 - 130*		*12/28/19 10:52*	*1*
Toluene-d8 (Surr)	*100*		*70 - 130*		*12/28/19 10:52*	*1*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.77	U Q	10	0.77	ug/L		12/30/19 16:45	01/07/20 03:16	1
Acenaphthylene	0.86	U Q	10	0.86	ug/L		12/30/19 16:45	01/07/20 03:16	1
Acetophenone	0.57	U Q	10	0.57	ug/L		12/30/19 16:45	01/07/20 03:16	1
2-Acetylaminofluorene	1.6	U Q	10	1.6	ug/L		12/30/19 16:45	01/07/20 03:16	1
alpha,alpha-Dimethyl phenethylamine	35	U Q	2000	35	ug/L		12/30/19 16:45	01/07/20 03:16	1
4-Aminobiphenyl	1.2	U Q	10	1.2	ug/L		12/30/19 16:45	01/07/20 03:16	1
Anthracene	0.70	U Q	10	0.70	ug/L		12/30/19 16:45	01/07/20 03:16	1
Benzo[a]anthracene	0.55	U Q	10	0.55	ug/L		12/30/19 16:45	01/07/20 03:16	1
Benzo[a]pyrene	0.72	U Q	10	0.72	ug/L		12/30/19 16:45	01/07/20 03:16	1
Benzo[b]fluoranthene	2.6	U Q	10	2.6	ug/L		12/30/19 16:45	01/07/20 03:16	1
Benzo[g,h,i]perylene	0.88	U Q	10	0.88	ug/L		12/30/19 16:45	01/07/20 03:16	1
Benzo[k]fluoranthene	1.2	U Q	10	1.2	ug/L		12/30/19 16:45	01/07/20 03:16	1
Benzyl alcohol	1.1	U Q	10	1.1	ug/L		12/30/19 16:45	01/07/20 03:16	1
Bis(2-chloroethoxy)methane	0.95	U Q	10	0.95	ug/L		12/30/19 16:45	01/07/20 03:16	1
Bis(2-chloroethyl)ether	1.1	U Q	10	1.1	ug/L		12/30/19 16:45	01/07/20 03:16	1
bis (2-chloroisopropyl) ether	0.79	U Q	10	0.79	ug/L		12/30/19 16:45	01/07/20 03:16	1
Bis(2-ethylhexyl) phthalate	1.6	U Q	10	1.6	ug/L		12/30/19 16:45	01/07/20 03:16	1
4-Bromophenyl phenyl ether	0.78	U Q	10	0.78	ug/L		12/30/19 16:45	01/07/20 03:16	1
Butyl benzyl phthalate	1.2	U Q	10	1.2	ug/L		12/30/19 16:45	01/07/20 03:16	1
4-Chloroaniline	2.2	U Q	20	2.2	ug/L		12/30/19 16:45	01/07/20 03:16	1
4-Chloro-3-methylphenol	1.0	U Q	10	1.0	ug/L		12/30/19 16:45	01/07/20 03:16	1
2-Chloronaphthalene	0.81	U Q	10	0.81	ug/L		12/30/19 16:45	01/07/20 03:16	1
2-Chlorophenol	0.88	U Q	10	0.88	ug/L		12/30/19 16:45	01/07/20 03:16	1
4-Chlorophenyl phenyl ether	0.85	U Q	10	0.85	ug/L		12/30/19 16:45	01/07/20 03:16	1
Chrysene	0.51	U Q	10	0.51	ug/L		12/30/19 16:45	01/07/20 03:16	1
Diallate	0.79	U Q	10	0.79	ug/L		12/30/19 16:45	01/07/20 03:16	1
Dibenz(a,h)anthracene	1.0	U Q	10	1.0	ug/L		12/30/19 16:45	01/07/20 03:16	1
Dibenzofuran	0.80	U Q	10	0.80	ug/L		12/30/19 16:45	01/07/20 03:16	1
1,2-Dichlorobenzene	0.53	U Q	10	0.53	ug/L		12/30/19 16:45	01/07/20 03:16	1
1,3-Dichlorobenzene	0.59	U Q	10	0.59	ug/L		12/30/19 16:45	01/07/20 03:16	1
1,4-Dichlorobenzene	0.54	U Q	10	0.54	ug/L		12/30/19 16:45	01/07/20 03:16	1
3,3'-Dichlorobenzidine	30	U Q	60	30	ug/L		12/30/19 16:45	01/07/20 03:16	1
2,4-Dichlorophenol	1.1	U Q	10	1.1	ug/L		12/30/19 16:45	01/07/20 03:16	1

Client Sample ID: 4MW23

Date Collected: 12/23/19 13:06
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dichlorophenol	0.74	U Q	10	0.74	ug/L		12/30/19 16:45	01/07/20 03:16	1
Diethyl phthalate	0.89	U Q	10	0.89	ug/L		12/30/19 16:45	01/07/20 03:16	1
Dimethoate	0.76	U Q J3	10	0.76	ug/L		12/30/19 16:45	01/07/20 03:16	1
7,12-Dimethylbenz(a)anthracene	1.2	U Q	10	1.2	ug/L		12/30/19 16:45	01/07/20 03:16	1
3,3'-Dimethylbenzidine	10	U Q	20	10	ug/L		12/30/19 16:45	01/07/20 03:16	1
2,4-Dimethylphenol	4.0	U Q	10	4.0	ug/L		12/30/19 16:45	01/07/20 03:16	1
Dimethyl phthalate	1.0	U Q	10	1.0	ug/L		12/30/19 16:45	01/07/20 03:16	1
Di-n-butyl phthalate	0.84	U Q	10	0.84	ug/L		12/30/19 16:45	01/07/20 03:16	1
1,3-Dinitrobenzene	0.60	U Q J3	10	0.60	ug/L		12/30/19 16:45	01/07/20 03:16	1
4,6-Dinitro-2-methylphenol	10	U Q	50	10	ug/L		12/30/19 16:45	01/07/20 03:16	1
2,4-Dinitrophenol	10	U Q J3	50	10	ug/L		12/30/19 16:45	01/07/20 03:16	1
2,4-Dinitrotoluene	1.2	U Q	10	1.2	ug/L		12/30/19 16:45	01/07/20 03:16	1
2,6-Dinitrotoluene	1.1	U Q	10	1.1	ug/L		12/30/19 16:45	01/07/20 03:16	1
Di-n-octyl phthalate	1.4	U Q	10	1.4	ug/L		12/30/19 16:45	01/07/20 03:16	1
Dinoseb	5.0	U Q	10	5.0	ug/L		12/30/19 16:45	01/07/20 03:16	1
Disulfoton	0.80	U Q	10	0.80	ug/L		12/30/19 16:45	01/07/20 03:16	1
Ethyl methanesulfonate	0.97	U Q	10	0.97	ug/L		12/30/19 16:45	01/07/20 03:16	1
Ethyl Parathion	1.3	U Q	10	1.3	ug/L		12/30/19 16:45	01/07/20 03:16	1
Famphur	1.1	U Q J3	10	1.1	ug/L		12/30/19 16:45	01/07/20 03:16	1
Fluoranthene	0.75	U Q	10	0.75	ug/L		12/30/19 16:45	01/07/20 03:16	1
Fluorene	0.97	U Q	10	0.97	ug/L		12/30/19 16:45	01/07/20 03:16	1
Hexachlorobenzene	0.80	U Q	10	0.80	ug/L		12/30/19 16:45	01/07/20 03:16	1
Hexachlorobutadiene	0.63	U Q	10	0.63	ug/L		12/30/19 16:45	01/07/20 03:16	1
Hexachlorocyclopentadiene	2.5	U Q	10	2.5	ug/L		12/30/19 16:45	01/07/20 03:16	1
Hexachloroethane	0.77	U Q	10	0.77	ug/L		12/30/19 16:45	01/07/20 03:16	1
Hexachloropropene	1.4	U Q	10	1.4	ug/L		12/30/19 16:45	01/07/20 03:16	1
Indeno[1,2,3-cd]pyrene	1.0	U Q	10	1.0	ug/L		12/30/19 16:45	01/07/20 03:16	1
Isophorone	0.91	U Q	10	0.91	ug/L		12/30/19 16:45	01/07/20 03:16	1
Isosafrole	0.50	U Q	10	0.50	ug/L		12/30/19 16:45	01/07/20 03:16	1
Methapyrilene	2.7	U Q	2000	2.7	ug/L		12/30/19 16:45	01/07/20 03:16	1
3-Methylcholanthrene	1.4	U Q J3	10	1.4	ug/L		12/30/19 16:45	01/07/20 03:16	1
Methyl methanesulfonate	0.60	U Q	10	0.60	ug/L		12/30/19 16:45	01/07/20 03:16	1
2-Methylnaphthalene	0.79	U Q	10	0.79	ug/L		12/30/19 16:45	01/07/20 03:16	1
Methyl parathion	0.89	U Q J3	10	0.89	ug/L		12/30/19 16:45	01/07/20 03:16	1
2-Methylphenol	0.90	U Q	10	0.90	ug/L		12/30/19 16:45	01/07/20 03:16	1
3 & 4 Methylphenol	1.3	U Q	10	1.3	ug/L		12/30/19 16:45	01/07/20 03:16	1
Naphthalene	0.71	U Q	10	0.71	ug/L		12/30/19 16:45	01/07/20 03:16	1
1,4-Naphthoquinone	0.63	U Q	10	0.63	ug/L		12/30/19 16:45	01/07/20 03:16	1
1-Naphthylamine	1.1	U Q	10	1.1	ug/L		12/30/19 16:45	01/07/20 03:16	1
2-Naphthylamine	1.5	U Q	10	1.5	ug/L		12/30/19 16:45	01/07/20 03:16	1
2-Nitroaniline	1.3	U Q	50	1.3	ug/L		12/30/19 16:45	01/07/20 03:16	1
3-Nitroaniline	5.0	U Q	50	5.0	ug/L		12/30/19 16:45	01/07/20 03:16	1
4-Nitroaniline	5.0	U Q	50	5.0	ug/L		12/30/19 16:45	01/07/20 03:16	1
Nitrobenzene	0.74	U Q	10	0.74	ug/L		12/30/19 16:45	01/07/20 03:16	1
2-Nitrophenol	0.77	U Q	10	0.77	ug/L		12/30/19 16:45	01/07/20 03:16	1
4-Nitrophenol	1.9	U Q	50	1.9	ug/L		12/30/19 16:45	01/07/20 03:16	1
N-Nitro-o-toluidine	1.5	U Q	10	1.5	ug/L		12/30/19 16:45	01/07/20 03:16	1
N-Nitrosodiethylamine	0.94	U Q	10	0.94	ug/L		12/30/19 16:45	01/07/20 03:16	1
N-Nitrosodimethylamine	2.8	U Q	10	2.8	ug/L		12/30/19 16:45	01/07/20 03:16	1

Client Sample ID: 4MW23

Date Collected: 12/23/19 13:06
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-1

Matrix: Water

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
N-Nitrosodi-n-butylamine	0.97	U Q	10	0.97	ug/L		12/30/19 16:45	01/07/20 03:16	1
N-Nitrosodi-n-propylamine	0.73	U Q	10	0.73	ug/L		12/30/19 16:45	01/07/20 03:16	1
N-Nitrosodiphenylamine	0.93	U Q	10	0.93	ug/L		12/30/19 16:45	01/07/20 03:16	1
N-Nitrosomethylethylamine	3.3	U Q	10	3.3	ug/L		12/30/19 16:45	01/07/20 03:16	1
N-Nitrosopiperidine	0.89	U Q	10	0.89	ug/L		12/30/19 16:45	01/07/20 03:16	1
N-Nitrosopyrrolidine	1.0	U Q	10	1.0	ug/L		12/30/19 16:45	01/07/20 03:16	1
o,o',o''-Triethylphosphorothioate	1.0	U Q	10	1.0	ug/L		12/30/19 16:45	01/07/20 03:16	1
p-Dimethylamino azobenzene	0.80	U Q	10	0.80	ug/L		12/30/19 16:45	01/07/20 03:16	1
Pentachlorobenzene	0.52	U Q	10	0.52	ug/L		12/30/19 16:45	01/07/20 03:16	1
Pentachloronitrobenzene	0.79	U Q	10	0.79	ug/L		12/30/19 16:45	01/07/20 03:16	1
Pentachlorophenol	2.0	U Q	50	2.0	ug/L		12/30/19 16:45	01/07/20 03:16	1
Phenacetin	1.4	U Q	10	1.4	ug/L		12/30/19 16:45	01/07/20 03:16	1
Phenanthrene	0.78	U Q	10	0.78	ug/L		12/30/19 16:45	01/07/20 03:16	1
Phenol	0.84	U Q	10	0.84	ug/L		12/30/19 16:45	01/07/20 03:16	1
Phorate	0.88	U Q	10	0.88	ug/L		12/30/19 16:45	01/07/20 03:16	1
p-Phenylene diamine	10	U Q J3	2000	10	ug/L		12/30/19 16:45	01/07/20 03:16	1
Pronamide	0.90	U Q	10	0.90	ug/L		12/30/19 16:45	01/07/20 03:16	1
Pyrene	0.64	U Q	10	0.64	ug/L		12/30/19 16:45	01/07/20 03:16	1
Safrole, Total	0.81	U Q	10	0.81	ug/L		12/30/19 16:45	01/07/20 03:16	1
1,2,4,5-Tetrachlorobenzene	0.77	U Q J3	10	0.77	ug/L		12/30/19 16:45	01/07/20 03:16	1
2,3,4,6-Tetrachlorophenol	0.73	U Q J3	10	0.73	ug/L		12/30/19 16:45	01/07/20 03:16	1
Thionazin	0.92	U Q	10	0.92	ug/L		12/30/19 16:45	01/07/20 03:16	1
2-Toluidine	1.4	U Q	10	1.4	ug/L		12/30/19 16:45	01/07/20 03:16	1
1,2,4-Trichlorobenzene	0.56	U Q	10	0.56	ug/L		12/30/19 16:45	01/07/20 03:16	1
2,4,5-Trichlorophenol	1.2	U Q	10	1.2	ug/L		12/30/19 16:45	01/07/20 03:16	1
2,4,6-Trichlorophenol	0.86	U Q	10	0.86	ug/L		12/30/19 16:45	01/07/20 03:16	1
1,3,5-Trinitrobenzene	2.0	U Q	10	2.0	ug/L		12/30/19 16:45	01/07/20 03:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*83*		*32 - 113*	*12/30/19 16:45*	*01/07/20 03:16*	*1*
2-Fluorophenol (Surr)	*68*		*26 - 109*	*12/30/19 16:45*	*01/07/20 03:16*	*1*
Nitrobenzene-d5 (Surr)	*83*		*32 - 118*	*12/30/19 16:45*	*01/07/20 03:16*	*1*
Phenol-d5 (Surr)	*76*		*27 - 110*	*12/30/19 16:45*	*01/07/20 03:16*	*1*
Terphenyl-d14 (Surr)	*102*		*10 - 126*	*12/30/19 16:45*	*01/07/20 03:16*	*1*
2,4,6-Tribromophenol (Surr)	*105*		*39 - 124*	*12/30/19 16:45*	*01/07/20 03:16*	*1*

Method: 8081B - Organochlorine Pesticides (GC)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.0036	U	0.025	0.0036	ug/L		12/30/19 12:55	01/13/20 18:59	1
alpha-BHC	0.0017	U	0.025	0.0017	ug/L		12/30/19 12:55	01/13/20 18:59	1
beta-BHC	0.0046	U	0.025	0.0046	ug/L		12/30/19 12:55	01/13/20 18:59	1
Chlordane (technical)	0.048	U	0.25	0.048	ug/L		12/30/19 12:55	01/13/20 18:59	1
4,4'-DDD	0.0032	U	0.025	0.0032	ug/L		12/30/19 12:55	01/13/20 18:59	1
4,4'-DDE	0.0026	U	0.025	0.0026	ug/L		12/30/19 12:55	01/13/20 18:59	1
4,4'-DDT	0.0035	U	0.025	0.0035	ug/L		12/30/19 12:55	01/13/20 18:59	1
delta-BHC	0.0038	U	0.025	0.0038	ug/L		12/30/19 12:55	01/13/20 18:59	1
Dieldrin	0.0019	U	0.025	0.0019	ug/L		12/30/19 12:55	01/13/20 18:59	1
Endosulfan I	0.0018	U	0.025	0.0018	ug/L		12/30/19 12:55	01/13/20 18:59	1
Endosulfan II	0.0021	U	0.025	0.0021	ug/L		12/30/19 12:55	01/13/20 18:59	1
Endosulfan sulfate	0.0026	U	0.025	0.0026	ug/L		12/30/19 12:55	01/13/20 18:59	1

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Client Sample ID: 4MW23

Date Collected: 12/23/19 13:06
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-1

Matrix: Water

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Endrin	0.0027	U	0.025	0.0027	ug/L		12/30/19 12:55	01/13/20 18:59	1
Endrin aldehyde	0.0031	U	0.025	0.0031	ug/L		12/30/19 12:55	01/13/20 18:59	1
gamma-BHC (Lindane)	0.0018	U	0.025	0.0018	ug/L		12/30/19 12:55	01/13/20 18:59	1
Heptachlor	0.0036	U	0.025	0.0036	ug/L		12/30/19 12:55	01/13/20 18:59	1
Heptachlor epoxide	0.0019	U	0.025	0.0019	ug/L		12/30/19 12:55	01/13/20 18:59	1
Isodrin	0.0036	U	0.025	0.0036	ug/L		12/30/19 12:55	01/13/20 18:59	1
Kepone	0.22	U	1.5	0.22	ug/L		12/30/19 12:55	01/13/20 18:59	1
Methoxychlor	0.0049	U	0.025	0.0049	ug/L		12/30/19 12:55	01/13/20 18:59	1
Toxaphene	0.20	U	2.5	0.20	ug/L		12/30/19 12:55	01/13/20 18:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*66*		*14 - 130*	*12/30/19 12:55*	*01/13/20 18:59*	*1*
Tetrachloro-m-xylene	*79*		*40 - 130*	*12/30/19 12:55*	*01/13/20 18:59*	*1*

Method: 8151A - Herbicides (GC)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.036	U	0.49	0.036	ug/L		12/30/19 11:24	01/01/20 05:57	1
Dinoseb	0.16	U J3	0.98	0.16	ug/L		12/30/19 11:24	01/01/20 05:57	1
Pentachlorophenol	0.036	U	0.24	0.036	ug/L		12/30/19 11:24	01/01/20 05:57	1
Silvex (2,4,5-TP)	0.060	U	0.24	0.060	ug/L		12/30/19 11:24	01/01/20 05:57	1
2,4,5-T	0.060	U	0.24	0.060	ug/L		12/30/19 11:24	01/01/20 05:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*79*		*45 - 130*	*12/30/19 11:24*	*01/01/20 05:57*	*1*

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.014	U	0.12	0.014	mg/L			12/24/19 13:22	1
Nitrate as N	0.040	U	0.12	0.040	mg/L			12/24/19 13:22	1
Cyanide, Total	**0.0025**	**I Q**	0.010	0.0025	mg/L		01/08/20 14:18	01/08/20 18:59	1
Sulfide	0.89	U Q	0.89	0.89	mg/L			12/30/19 15:27	1

Client Sample Results

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Client Sample ID: 2MW-24D

Date Collected: 12/23/19 11:39
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.0	U	20	3.0	ug/L			12/28/19 11:13	1
Acrylonitrile	2.9	U	10	2.9	ug/L			12/28/19 11:13	1
Benzene	0.25	U	1.0	0.25	ug/L			12/28/19 11:13	1
Bromoform	1.1	U	5.0	1.1	ug/L			12/28/19 11:13	1
Bromomethane	2.5	U	10	2.5	ug/L			12/28/19 11:13	1
2-Butanone (MEK)	3.2	U	10	3.2	ug/L			12/28/19 11:13	1
Carbon disulfide	0.35	U	2.0	0.35	ug/L			12/28/19 11:13	1
Carbon tetrachloride	0.23	U	1.0	0.23	ug/L			12/28/19 11:13	1
Chlorobenzene	0.27	U	1.0	0.27	ug/L			12/28/19 11:13	1
Chlorobromomethane	0.36	U	2.0	0.36	ug/L			12/28/19 11:13	1
Chlorodibromomethane	0.31	U	3.0	0.31	ug/L			12/28/19 11:13	1
Chloroethane	2.5	U	10	2.5	ug/L			12/28/19 11:13	1
Chloroform	0.29	U	1.0	0.29	ug/L			12/28/19 11:13	1
Chloromethane	0.76	U	2.0	0.76	ug/L			12/28/19 11:13	1
cis-1,2-Dichloroethene	0.32	U	1.0	0.32	ug/L			12/28/19 11:13	1
cis-1,3-Dichloropropene	0.39	U	2.0	0.39	ug/L			12/28/19 11:13	1
1,2-Dibromo-3-Chloropropane	2.5	U	10	2.5	ug/L			12/28/19 11:13	1
Dibromomethane	0.46	U	2.0	0.46	ug/L			12/28/19 11:13	1
1,2-Dichlorobenzene	0.24	U	1.0	0.24	ug/L			12/28/19 11:13	1
1,4-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			12/28/19 11:13	1
Dichlorobromomethane	0.23	U	1.0	0.23	ug/L			12/28/19 11:13	1
1,1-Dichloroethane	0.32	U	1.0	0.32	ug/L			12/28/19 11:13	1
1,2-Dichloroethane	0.31	U	1.0	0.31	ug/L			12/28/19 11:13	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			12/28/19 11:13	1
1,2-Dichloropropane	0.52	U	2.0	0.52	ug/L			12/28/19 11:13	1
Ethylbenzene	0.27	U	1.0	0.27	ug/L			12/28/19 11:13	1
Ethylene Dibromide	0.27	U	1.0	0.27	ug/L			12/28/19 11:13	1
2-Hexanone	4.4	U	15	4.4	ug/L			12/28/19 11:13	1
Iodomethane	4.1	U	15	4.1	ug/L			12/28/19 11:13	1
Methylene Chloride	1.4	U	10	1.4	ug/L			12/28/19 11:13	1
4-Methyl-2-pentanone (MIBK)	4.0	U	15	4.0	ug/L			12/28/19 11:13	1
Styrene	0.49	U	2.0	0.49	ug/L			12/28/19 11:13	1
1,1,1,2-Tetrachloroethane	0.36	U	2.0	0.36	ug/L			12/28/19 11:13	1
1,1,2,2-Tetrachloroethane	0.44	U	1.0	0.44	ug/L			12/28/19 11:13	1
Tetrachloroethene	0.50	U	2.0	0.50	ug/L			12/28/19 11:13	1
Toluene	0.24	U	1.0	0.24	ug/L			12/28/19 11:13	1
trans-1,4-Dichloro-2-butene	1.5	U	10	1.5	ug/L			12/28/19 11:13	1
trans-1,2-Dichloroethene	0.39	U	2.0	0.39	ug/L			12/28/19 11:13	1
trans-1,3-Dichloropropene	0.27	U	1.0	0.27	ug/L			12/28/19 11:13	1
1,1,1-Trichloroethane	0.30	U	1.0	0.30	ug/L			12/28/19 11:13	1
1,1,2-Trichloroethane	0.29	U	1.0	0.29	ug/L			12/28/19 11:13	1
Trichloroethene	0.61	U	2.0	0.61	ug/L			12/28/19 11:13	1
Trichlorofluoromethane	0.49	U	5.0	0.49	ug/L			12/28/19 11:13	1
1,2,3-Trichloropropane	0.44	U	3.0	0.44	ug/L			12/28/19 11:13	1
Vinyl acetate	0.95	U	10	0.95	ug/L			12/28/19 11:13	1
Vinyl chloride	0.26	U	1.0	0.26	ug/L			12/28/19 11:13	1
Xylenes, Total	0.50	U	4.0	0.50	ug/L			12/28/19 11:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*70 - 130*		*12/28/19 11:13*	*1*

Client Sample Results

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Client Sample ID: 2MW-24D

Date Collected: 12/23/19 11:39
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-2

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*100*		*70 - 130*		*12/28/19 11:13*	*1*
Toluene-d8 (Surr)	*105*		*70 - 130*		*12/28/19 11:13*	*1*

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**41**		0.50	0.20	mg/L			12/27/19 18:08	1

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	4.0	U	20	4.0	ug/L		12/27/19 06:54	12/27/19 14:08	1
Iron	**51**	**I**	200	25	ug/L		12/27/19 06:54	12/27/19 14:08	1
Arsenic	**2.7**	**I V**	10	1.9	ug/L		12/27/19 06:54	12/27/19 14:08	1
Sodium	**19000**		1000	120	ug/L		12/27/19 06:54	12/27/19 14:08	1
Barium	**16**		10	0.92	ug/L		12/27/19 06:54	12/27/19 14:08	1
Beryllium	0.50	U	2.0	0.50	ug/L		12/27/19 06:54	12/27/19 14:08	1
Cadmium	0.46	U	4.0	0.46	ug/L		12/27/19 06:54	12/27/19 14:08	1
Chromium	1.1	U	10	1.1	ug/L		12/27/19 06:54	12/27/19 14:08	1
Cobalt	2.0	U	10	2.0	ug/L		12/27/19 06:54	12/27/19 14:08	1
Copper	2.8	U	10	2.8	ug/L		12/27/19 06:54	12/27/19 14:08	1
Lead	2.0	U	10	2.0	ug/L		12/27/19 06:54	12/27/19 14:08	1
Nickel	**1.3**	**I**	8.0	0.81	ug/L		12/27/19 06:54	12/27/19 14:08	1
Selenium	5.0	U	20	5.0	ug/L		12/27/19 06:54	12/27/19 14:08	1
Silver	1.5	U	10	1.5	ug/L		12/27/19 06:54	12/27/19 14:08	1
Vanadium	4.4	U	20	4.4	ug/L		12/27/19 06:54	12/27/19 14:08	1
Zinc	14	U	20	14	ug/L		12/27/19 06:54	12/27/19 14:08	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.49	U	1.0	0.49	ug/L		01/08/20 09:12	01/08/20 14:47	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.16	U	0.40	0.16	ug/L		01/08/20 12:02	01/12/20 20:17	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.10	U	0.25	0.10	mg/L			12/31/19 14:07	1
Nitrate Nitrite as N	**1.2**		0.015	0.0050	mg/L			12/24/19 13:24	1
Total Dissolved Solids	**290**		20	20	mg/L			12/27/19 08:41	1

Client Sample Results

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Client Sample ID: 2MW-25D

Date Collected: 12/23/19 10:56
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.0	U	20	3.0	ug/L			12/28/19 11:34	1
Acrylonitrile	2.9	U	10	2.9	ug/L			12/28/19 11:34	1
Benzene	0.25	U	1.0	0.25	ug/L			12/28/19 11:34	1
Bromoform	1.1	U	5.0	1.1	ug/L			12/28/19 11:34	1
Bromomethane	2.5	U	10	2.5	ug/L			12/28/19 11:34	1
2-Butanone (MEK)	3.2	U	10	3.2	ug/L			12/28/19 11:34	1
Carbon disulfide	0.35	U	2.0	0.35	ug/L			12/28/19 11:34	1
Carbon tetrachloride	0.23	U	1.0	0.23	ug/L			12/28/19 11:34	1
Chlorobenzene	0.27	U	1.0	0.27	ug/L			12/28/19 11:34	1
Chlorobromomethane	0.36	U	2.0	0.36	ug/L			12/28/19 11:34	1
Chlorodibromomethane	0.31	U	3.0	0.31	ug/L			12/28/19 11:34	1
Chloroethane	2.5	U	10	2.5	ug/L			12/28/19 11:34	1
Chloroform	0.29	U	1.0	0.29	ug/L			12/28/19 11:34	1
Chloromethane	0.76	U	2.0	0.76	ug/L			12/28/19 11:34	1
cis-1,2-Dichloroethene	0.32	U	1.0	0.32	ug/L			12/28/19 11:34	1
cis-1,3-Dichloropropene	0.39	U	2.0	0.39	ug/L			12/28/19 11:34	1
1,2-Dibromo-3-Chloropropane	2.5	U	10	2.5	ug/L			12/28/19 11:34	1
Dibromomethane	0.46	U	2.0	0.46	ug/L			12/28/19 11:34	1
1,2-Dichlorobenzene	0.24	U	1.0	0.24	ug/L			12/28/19 11:34	1
1,4-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			12/28/19 11:34	1
Dichlorobromomethane	0.23	U	1.0	0.23	ug/L			12/28/19 11:34	1
1,1-Dichloroethane	0.32	U	1.0	0.32	ug/L			12/28/19 11:34	1
1,2-Dichloroethane	0.31	U	1.0	0.31	ug/L			12/28/19 11:34	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			12/28/19 11:34	1
1,2-Dichloropropane	0.52	U	2.0	0.52	ug/L			12/28/19 11:34	1
Ethylbenzene	0.27	U	1.0	0.27	ug/L			12/28/19 11:34	1
Ethylene Dibromide	0.27	U	1.0	0.27	ug/L			12/28/19 11:34	1
2-Hexanone	4.4	U	15	4.4	ug/L			12/28/19 11:34	1
Iodomethane	4.1	U	15	4.1	ug/L			12/28/19 11:34	1
Methylene Chloride	1.4	U	10	1.4	ug/L			12/28/19 11:34	1
4-Methyl-2-pentanone (MIBK)	4.0	U	15	4.0	ug/L			12/28/19 11:34	1
Styrene	0.49	U	2.0	0.49	ug/L			12/28/19 11:34	1
1,1,1,2-Tetrachloroethane	0.36	U	2.0	0.36	ug/L			12/28/19 11:34	1
1,1,2,2-Tetrachloroethane	0.44	U	1.0	0.44	ug/L			12/28/19 11:34	1
Tetrachloroethene	0.50	U	2.0	0.50	ug/L			12/28/19 11:34	1
Toluene	0.24	U	1.0	0.24	ug/L			12/28/19 11:34	1
trans-1,4-Dichloro-2-butene	1.5	U	10	1.5	ug/L			12/28/19 11:34	1
trans-1,2-Dichloroethene	0.39	U	2.0	0.39	ug/L			12/28/19 11:34	1
trans-1,3-Dichloropropene	0.27	U	1.0	0.27	ug/L			12/28/19 11:34	1
1,1,1-Trichloroethane	0.30	U	1.0	0.30	ug/L			12/28/19 11:34	1
1,1,2-Trichloroethane	0.29	U	1.0	0.29	ug/L			12/28/19 11:34	1
Trichloroethene	0.61	U	2.0	0.61	ug/L			12/28/19 11:34	1
Trichlorofluoromethane	0.49	U	5.0	0.49	ug/L			12/28/19 11:34	1
1,2,3-Trichloropropane	0.44	U	3.0	0.44	ug/L			12/28/19 11:34	1
Vinyl acetate	0.95	U	10	0.95	ug/L			12/28/19 11:34	1
Vinyl chloride	0.26	U	1.0	0.26	ug/L			12/28/19 11:34	1
Xylenes, Total	0.50	U	4.0	0.50	ug/L			12/28/19 11:34	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*70 - 130*		*12/28/19 11:34*	*1*

Client Sample Results

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Client Sample ID: 2MW-25D

Date Collected: 12/23/19 10:56
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-3

Matrix: Water

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Dibromofluoromethane	*102*		*70 - 130*		*12/28/19 11:34*	*1*
Toluene-d8 (Surr)	*104*		*70 - 130*		*12/28/19 11:34*	*1*

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	**75**		0.50	0.20	mg/L			12/27/19 18:20	1

Method: 6010D - Metals (ICP) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	**9.5**	**I**	20	4.0	ug/L		12/27/19 06:54	12/27/19 14:19	1
Iron	**57**	**I**	200	25	ug/L		12/27/19 06:54	12/27/19 14:19	1
Arsenic	**4.0**	**I V**	10	1.9	ug/L		12/27/19 06:54	12/27/19 14:19	1
Sodium	**34000**		1000	120	ug/L		12/27/19 06:54	12/27/19 14:19	1
Barium	**22**		10	0.92	ug/L		12/27/19 06:54	12/27/19 14:19	1
Beryllium	0.50	U	2.0	0.50	ug/L		12/27/19 06:54	12/27/19 14:19	1
Cadmium	0.46	U	4.0	0.46	ug/L		12/27/19 06:54	12/27/19 14:19	1
Chromium	1.1	U	10	1.1	ug/L		12/27/19 06:54	12/27/19 14:19	1
Cobalt	2.0	U	10	2.0	ug/L		12/27/19 06:54	12/27/19 14:19	1
Copper	2.8	U	10	2.8	ug/L		12/27/19 06:54	12/27/19 14:19	1
Lead	2.0	U	10	2.0	ug/L		12/27/19 06:54	12/27/19 14:19	1
Nickel	**1.8**	**I**	8.0	0.81	ug/L		12/27/19 06:54	12/27/19 14:19	1
Selenium	5.0	U	20	5.0	ug/L		12/27/19 06:54	12/27/19 14:19	1
Silver	1.5	U	10	1.5	ug/L		12/27/19 06:54	12/27/19 14:19	1
Vanadium	4.4	U	20	4.4	ug/L		12/27/19 06:54	12/27/19 14:19	1
Zinc	14	U	20	14	ug/L		12/27/19 06:54	12/27/19 14:19	1

Method: 6020A - Metals (ICP/MS) - Total Recoverable

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.49	U	1.0	0.49	ug/L		01/08/20 09:12	01/08/20 14:50	1

Method: 7470A - Mercury (CVAA)

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		01/08/20 12:02	01/12/20 20:13	1

General Chemistry

Analyte	Result	Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.10	U	0.25	0.10	mg/L			12/31/19 14:07	1
Nitrate Nitrite as N	**1.3**		0.015	0.0050	mg/L			12/24/19 13:25	1
Total Dissolved Solids	**380**		20	20	mg/L			12/27/19 08:41	1

Method: 8260B - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 660-219979/7
Matrix: Water
Analysis Batch: 219979

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	3.0	U	20	3.0	ug/L			12/28/19 09:59	1
Acetonitrile	20	U	60	20	ug/L			12/28/19 09:59	1
Acrolein	5.1	U	20	5.1	ug/L			12/28/19 09:59	1
Acrylonitrile	2.9	U	10	2.9	ug/L			12/28/19 09:59	1
Benzene	0.25	U	1.0	0.25	ug/L			12/28/19 09:59	1
Bromoform	1.1	U	5.0	1.1	ug/L			12/28/19 09:59	1
Bromomethane	2.5	U	10	2.5	ug/L			12/28/19 09:59	1
2-Butanone (MEK)	3.2	U	10	3.2	ug/L			12/28/19 09:59	1
Carbon disulfide	0.35	U	2.0	0.35	ug/L			12/28/19 09:59	1
Carbon tetrachloride	0.23	U	1.0	0.23	ug/L			12/28/19 09:59	1
Chlorobenzene	0.27	U	1.0	0.27	ug/L			12/28/19 09:59	1
Chlorobromomethane	0.36	U	2.0	0.36	ug/L			12/28/19 09:59	1
2-Chloro-1,3-butadiene	0.32	U	5.0	0.32	ug/L			12/28/19 09:59	1
Chlorodibromomethane	0.31	U	3.0	0.31	ug/L			12/28/19 09:59	1
Chloroethane	2.5	U	10	2.5	ug/L			12/28/19 09:59	1
Chloroform	0.29	U	1.0	0.29	ug/L			12/28/19 09:59	1
Chloromethane	0.76	U	2.0	0.76	ug/L			12/28/19 09:59	1
3-Chloro-1-propene	1.1	U	5.0	1.1	ug/L			12/28/19 09:59	1
cis-1,2-Dichloroethene	0.32	U	1.0	0.32	ug/L			12/28/19 09:59	1
1,2-Dichlorobenzene	0.24	U	1.0	0.24	ug/L			12/28/19 09:59	1
cis-1,3-Dichloropropene	0.39	U	2.0	0.39	ug/L			12/28/19 09:59	1
1,2-Dibromo-3-Chloropropane	2.5	U	10	2.5	ug/L			12/28/19 09:59	1
1,4-Dichlorobenzene	0.22	U	1.0	0.22	ug/L			12/28/19 09:59	1
Dibromomethane	0.46	U	2.0	0.46	ug/L			12/28/19 09:59	1
Dichlorobromomethane	0.23	U	1.0	0.23	ug/L			12/28/19 09:59	1
Dichlorodifluoromethane	2.5	U	10	2.5	ug/L			12/28/19 09:59	1
1,1-Dichloroethane	0.32	U	1.0	0.32	ug/L			12/28/19 09:59	1
1,2-Dichloroethane	0.31	U	1.0	0.31	ug/L			12/28/19 09:59	1
1,1-Dichloroethene	0.26	U	1.0	0.26	ug/L			12/28/19 09:59	1
1,2-Dichloropropane	0.52	U	2.0	0.52	ug/L			12/28/19 09:59	1
1,3-Dichloropropane	0.22	U	1.0	0.22	ug/L			12/28/19 09:59	1
2,2-Dichloropropane	0.36	U	2.0	0.36	ug/L			12/28/19 09:59	1
1,1-Dichloropropene	0.34	U	1.0	0.34	ug/L			12/28/19 09:59	1
Ethylbenzene	0.27	U	1.0	0.27	ug/L			12/28/19 09:59	1
Ethylene Dibromide	0.27	U	1.0	0.27	ug/L			12/28/19 09:59	1
Ethyl methacrylate	0.94	U	5.0	0.94	ug/L			12/28/19 09:59	1
2-Hexanone	4.4	U	15	4.4	ug/L			12/28/19 09:59	1
Iodomethane	4.1	U	15	4.1	ug/L			12/28/19 09:59	1
Isobutyl alcohol	10	U	50	10	ug/L			12/28/19 09:59	1
Methacrylonitrile	2.2	U	10	2.2	ug/L			12/28/19 09:59	1
Methylene Chloride	1.4	U	10	1.4	ug/L			12/28/19 09:59	1
Methyl methacrylate	0.61	U	5.0	0.61	ug/L			12/28/19 09:59	1
4-Methyl-2-pentanone (MIBK)	4.0	U	15	4.0	ug/L			12/28/19 09:59	1
Propionitrile	3.3	U	10	3.3	ug/L			12/28/19 09:59	1
Styrene	0.49	U	2.0	0.49	ug/L			12/28/19 09:59	1
1,1,1,2-Tetrachloroethane	0.36	U	2.0	0.36	ug/L			12/28/19 09:59	1
1,1,2,2-Tetrachloroethane	0.44	U	1.0	0.44	ug/L			12/28/19 09:59	1
Tetrachloroethene	0.50	U	2.0	0.50	ug/L			12/28/19 09:59	1

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 660-219979/7
Matrix: Water
Analysis Batch: 219979

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Toluene	0.24	U	1.0	0.24	ug/L			12/28/19 09:59	1
trans-1,4-Dichloro-2-butene	1.5	U	10	1.5	ug/L			12/28/19 09:59	1
trans-1,2-Dichloroethene	0.39	U	2.0	0.39	ug/L			12/28/19 09:59	1
trans-1,3-Dichloropropene	0.27	U	1.0	0.27	ug/L			12/28/19 09:59	1
1,1,1-Trichloroethane	0.30	U	1.0	0.30	ug/L			12/28/19 09:59	1
1,1,2-Trichloroethane	0.29	U	1.0	0.29	ug/L			12/28/19 09:59	1
Trichloroethene	0.61	U	2.0	0.61	ug/L			12/28/19 09:59	1
Trichlorofluoromethane	0.49	U	5.0	0.49	ug/L			12/28/19 09:59	1
1,2,3-Trichloropropane	0.44	U	3.0	0.44	ug/L			12/28/19 09:59	1
Vinyl acetate	0.95	U	10	0.95	ug/L			12/28/19 09:59	1
Vinyl chloride	0.26	U	1.0	0.26	ug/L			12/28/19 09:59	1
Xylenes, Total	0.50	U	4.0	0.50	ug/L			12/28/19 09:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*101*		*70 - 130*		*12/28/19 09:59*	*1*
Dibromofluoromethane	*101*		*70 - 130*		*12/28/19 09:59*	*1*
Toluene-d8 (Surr)	*103*		*70 - 130*		*12/28/19 09:59*	*1*

Lab Sample ID: LCS 660-219979/5
Matrix: Water
Analysis Batch: 219979

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	100	109		ug/L		109	45 - 150
Acetonitrile	100	113		ug/L		113	45 - 149
Acrolein	50.0	43.2		ug/L		86	43 - 143
Acrylonitrile	100	100		ug/L		100	64 - 124
Benzene	10.0	10.4		ug/L		104	66 - 131
Bromoform	10.0	6.40		ug/L		64	59 - 119
Bromomethane	10.0	8.48	I	ug/L		85	37 - 137
2-Butanone (MEK)	100	105		ug/L		105	46 - 146
Carbon disulfide	10.0	9.79		ug/L		98	52 - 129
Carbon tetrachloride	10.0	8.56		ug/L		86	62 - 124
Chlorobenzene	10.0	9.07		ug/L		91	67 - 130
Chlorobromomethane	10.0	10.6		ug/L		106	67 - 130
2-Chloro-1,3-butadiene	10.0	10.3		ug/L		103	66 - 132
Chlorodibromomethane	10.0	9.12		ug/L		91	58 - 124
Chloroethane	10.0	9.61	I	ug/L		96	49 - 150
Chloroform	10.0	10.5		ug/L		105	77 - 119
Chloromethane	10.0	9.58		ug/L		96	52 - 137
3-Chloro-1-propene	10.0	8.45		ug/L		84	66 - 130
cis-1,2-Dichloroethene	10.0	11.0		ug/L		110	69 - 133
1,2-Dichlorobenzene	10.0	9.14		ug/L		91	69 - 133
cis-1,3-Dichloropropene	10.0	8.77		ug/L		88	68 - 130
1,2-Dibromo-3-Chloropropane	10.0	8.73	I	ug/L		87	54 - 133
1,4-Dichlorobenzene	10.0	9.07		ug/L		91	69 - 133
Dibromomethane	10.0	10.6		ug/L		106	63 - 123
Dichlorobromomethane	10.0	9.05		ug/L		90	62 - 122

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 660-219979/5
Matrix: Water
Analysis Batch: 219979

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Dichlorodifluoromethane	10.0	6.54	I	ug/L		65	23 - 150
1,1-Dichloroethane	10.0	10.7		ug/L		107	68 - 130
1,2-Dichloroethane	10.0	9.92		ug/L		99	64 - 124
1,1-Dichloroethene	10.0	10.6		ug/L		106	62 - 133
1,2-Dichloropropane	10.0	10.4		ug/L		104	79 - 130
1,3-Dichloropropane	10.0	10.6		ug/L		106	65 - 130
2,2-Dichloropropane	10.0	9.06		ug/L		91	61 - 130
1,1-Dichloropropene	10.0	10.0		ug/L		100	63 - 126
Ethylbenzene	10.0	9.59		ug/L		96	77 - 117
Ethylene Dibromide	10.0	10.1		ug/L		101	63 - 124
Ethyl methacrylate	10.0	10.0		ug/L		100	60 - 121
2-Hexanone	100	105		ug/L		105	47 - 147
Iodomethane	10.0	7.89	I	ug/L		79	10 - 150
Isobutyl alcohol	250	269		ug/L		108	48 - 133
Methacrylonitrile	100	105		ug/L		105	65 - 130
Methylene Chloride	10.0	9.50	I	ug/L		95	64 - 124
Methyl methacrylate	20.0	20.1		ug/L		100	68 - 130
4-Methyl-2-pentanone (MIBK)	100	102		ug/L		102	46 - 146
Propionitrile	100	109		ug/L		109	64 - 129
Styrene	10.0	9.30		ug/L		93	65 - 130
1,1,1,2-Tetrachloroethane	10.0	7.71		ug/L		77	65 - 130
1,1,2,2-Tetrachloroethane	10.0	9.70		ug/L		97	67 - 130
Tetrachloroethene	10.0	10.3		ug/L		103	59 - 130
Toluene	10.0	10.4		ug/L		104	71 - 119
trans-1,4-Dichloro-2-butene	10.0	8.64	I	ug/L		86	48 - 138
trans-1,2-Dichloroethene	10.0	10.5		ug/L		105	67 - 130
trans-1,3-Dichloropropene	10.0	7.34		ug/L		73	57 - 121
1,1,1-Trichloroethane	10.0	9.51		ug/L		95	64 - 124
1,1,2-Trichloroethane	10.0	10.2		ug/L		102	68 - 130
Trichloroethene	10.0	10.1		ug/L		101	65 - 130
Trichlorofluoromethane	10.0	9.10		ug/L		91	56 - 135
1,2,3-Trichloropropane	10.0	8.47		ug/L		85	68 - 130
Vinyl acetate	20.0	15.2		ug/L		76	62 - 122
Vinyl chloride	10.0	9.69		ug/L		97	59 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
Dibromofluoromethane	*102*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Lab Sample ID: 660-99522-1 MS
Matrix: Water
Analysis Batch: 219979

Client Sample ID: 4MW23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	3.0	U	100	108		ug/L		108	45 - 150
Acetonitrile	20	U	100	103		ug/L		103	45 - 149
Acrolein	5.1	U	50.0	58.5		ug/L		117	43 - 143

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 660-99522-1 MS
Matrix: Water
Analysis Batch: 219979

Client Sample ID: 4MW23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acrylonitrile	2.9	U	100	99.2		ug/L		99	64 - 124
Benzene	0.25	U	10.0	11.7		ug/L		117	66 - 131
Bromoform	1.1	U	10.0	6.22		ug/L		62	59 - 119
Bromomethane	2.5	U	10.0	8.72	I	ug/L		87	37 - 137
2-Butanone (MEK)	3.2	U	100	106		ug/L		106	46 - 146
Carbon disulfide	0.35	U	10.0	10.9		ug/L		109	52 - 129
Carbon tetrachloride	0.23	U	10.0	11.2		ug/L		112	62 - 124
Chlorobenzene	0.27	U	10.0	10.1		ug/L		101	67 - 130
Chlorobromomethane	0.36	U	10.0	11.5		ug/L		115	67 - 130
2-Chloro-1,3-butadiene	0.32	U	10.0	12.2		ug/L		122	66 - 132
Chlorodibromomethane	0.31	U	10.0	8.79		ug/L		88	58 - 124
Chloroethane	2.5	U	10.0	12.2		ug/L		122	49 - 150
Chloroform	0.29	U	10.0	11.8		ug/L		118	77 - 119
Chloromethane	0.76	U	10.0	10.7		ug/L		107	52 - 137
3-Chloro-1-propene	1.1	U	10.0	9.01		ug/L		90	66 - 130
cis-1,2-Dichloroethene	0.32	U	10.0	12.3		ug/L		123	69 - 133
1,2-Dichlorobenzene	0.24	U	10.0	9.92		ug/L		99	69 - 133
cis-1,3-Dichloropropene	0.39	U	10.0	9.20		ug/L		92	68 - 130
1,2-Dibromo-3-Chloropropane	2.5	U	10.0	8.70	I	ug/L		87	54 - 133
1,4-Dichlorobenzene	0.22	U	10.0	9.65		ug/L		96	69 - 133
Dibromomethane	0.46	U	10.0	10.9		ug/L		109	63 - 123
Dichlorobromomethane	0.23	U	10.0	9.51		ug/L		95	62 - 122
Dichlorodifluoromethane	2.5	U	10.0	8.02	I	ug/L		80	23 - 150
1,1-Dichloroethane	0.32	U	10.0	12.3		ug/L		123	68 - 130
1,2-Dichloroethane	0.31	U	10.0	11.1		ug/L		111	64 - 124
1,1-Dichloroethene	0.26	U	10.0	13.3		ug/L		133	62 - 133
1,2-Dichloropropane	0.52	U	10.0	11.7		ug/L		117	79 - 130
1,3-Dichloropropane	0.22	U	10.0	11.0		ug/L		110	65 - 130
2,2-Dichloropropane	0.36	U	10.0	10.6		ug/L		106	61 - 130
1,1-Dichloropropene	0.34	U	10.0	12.2		ug/L		122	63 - 126
Ethylbenzene	0.27	U	10.0	10.8		ug/L		108	77 - 117
Ethylene Dibromide	0.27	U	10.0	10.2		ug/L		102	63 - 124
Ethyl methacrylate	0.94	U	10.0	10.2		ug/L		102	60 - 121
2-Hexanone	4.4	U	100	109		ug/L		109	47 - 147
Iodomethane	4.1	U	10.0	8.45	I	ug/L		85	10 - 150
Isobutyl alcohol	10	U	250	233		ug/L		93	48 - 133
Methacrylonitrile	2.2	U	100	108		ug/L		108	65 - 130
Methylene Chloride	1.4	U	10.0	10.1		ug/L		101	64 - 124
Methyl methacrylate	0.61	U	20.0	21.1		ug/L		105	68 - 130
4-Methyl-2-pentanone (MIBK)	4.0	U	100	106		ug/L		106	46 - 146
Propionitrile	3.3	U	100	100		ug/L		100	64 - 129
Styrene	0.49	U	10.0	10.1		ug/L		101	65 - 130
1,1,1,2-Tetrachloroethane	0.36	U	10.0	8.71		ug/L		87	65 - 130
1,1,2,2-Tetrachloroethane	0.44	U	10.0	9.33		ug/L		93	67 - 130
Tetrachloroethene	0.50	U	10.0	12.6		ug/L		126	59 - 130
Toluene	0.24	U	10.0	11.7		ug/L		117	71 - 119
trans-1,4-Dichloro-2-butene	1.5	U	10.0	8.30	I	ug/L		83	48 - 138
trans-1,2-Dichloroethene	0.39	U	10.0	12.1		ug/L		121	67 - 130
trans-1,3-Dichloropropene	0.27	U	10.0	7.47		ug/L		75	57 - 121

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 660-99522-1 MS
Matrix: Water
Analysis Batch: 219979

Client Sample ID: 4MW23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
1,1,1-Trichloroethane	0.30	U	10.0	11.3		ug/L		113	64 - 124
1,1,2-Trichloroethane	0.29	U	10.0	10.7		ug/L		107	68 - 130
Trichloroethene	0.61	U	10.0	12.0		ug/L		120	65 - 130
Trichlorofluoromethane	0.49	U	10.0	13.0		ug/L		130	56 - 135
1,2,3-Trichloropropane	0.44	U	10.0	9.45		ug/L		95	68 - 130
Vinyl acetate	0.95	U	20.0	16.9		ug/L		84	62 - 122
Vinyl chloride	0.26	U	10.0	11.8		ug/L		118	59 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
4-Bromofluorobenzene	*101*		*70 - 130*
Dibromofluoromethane	*102*		*70 - 130*
Toluene-d8 (Surr)	*107*		*70 - 130*

Lab Sample ID: 660-99522-1 MSD
Matrix: Water
Analysis Batch: 219979

Client Sample ID: 4MW23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acetone	3.0	U	100	101		ug/L		101	45 - 150	7	30
Acetonitrile	20	U	100	116		ug/L		116	45 - 149	12	30
Acrolein	5.1	U	50.0	57.2		ug/L		114	43 - 143	2	30
Acrylonitrile	2.9	U	100	100		ug/L		100	64 - 124	1	30
Benzene	0.25	U	10.0	11.3		ug/L		113	66 - 131	4	30
Bromoform	1.1	U	10.0	5.89		ug/L		59	59 - 119	5	30
Bromomethane	2.5	U	10.0	8.40	I	ug/L		84	37 - 137	4	30
2-Butanone (MEK)	3.2	U	100	103		ug/L		103	46 - 146	3	30
Carbon disulfide	0.35	U	10.0	10.3		ug/L		103	52 - 129	6	30
Carbon tetrachloride	0.23	U	10.0	10.4		ug/L		104	62 - 124	7	30
Chlorobenzene	0.27	U	10.0	9.86		ug/L		99	67 - 130	2	30
Chlorobromomethane	0.36	U	10.0	10.8		ug/L		108	67 - 130	6	30
2-Chloro-1,3-butadiene	0.32	U	10.0	11.4		ug/L		114	66 - 132	7	30
Chlorodibromomethane	0.31	U	10.0	8.82		ug/L		88	58 - 124	0	30
Chloroethane	2.5	U	10.0	11.8		ug/L		118	49 - 150	4	30
Chloroform	0.29	U	10.0	11.5		ug/L		115	77 - 119	3	30
Chloromethane	0.76	U	10.0	10.3		ug/L		103	52 - 137	4	30
3-Chloro-1-propene	1.1	U	10.0	8.77		ug/L		88	66 - 130	3	30
cis-1,2-Dichloroethene	0.32	U	10.0	12.0		ug/L		120	69 - 133	3	30
1,2-Dichlorobenzene	0.24	U	10.0	9.77		ug/L		98	69 - 133	1	30
cis-1,3-Dichloropropene	0.39	U	10.0	8.82		ug/L		88	68 - 130	4	30
1,2-Dibromo-3-Chloropropane	2.5	U	10.0	8.84	I	ug/L		88	54 - 133	2	30
1,4-Dichlorobenzene	0.22	U	10.0	9.70		ug/L		97	69 - 133	1	30
Dibromomethane	0.46	U	10.0	11.0		ug/L		110	63 - 123	0	30
Dichlorobromomethane	0.23	U	10.0	9.48		ug/L		95	62 - 122	0	30
Dichlorodifluoromethane	2.5	U	10.0	7.81	I	ug/L		78	23 - 150	3	30
1,1-Dichloroethane	0.32	U	10.0	11.8		ug/L		118	68 - 130	4	30
1,2-Dichloroethane	0.31	U	10.0	11.0		ug/L		110	64 - 124	0	30
1,1-Dichloroethene	0.26	U	10.0	11.9		ug/L		119	62 - 133	11	30
1,2-Dichloropropane	0.52	U	10.0	11.2		ug/L		112	79 - 130	4	30

Method: 8260B - Volatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 660-99522-1 MSD
Matrix: Water
Analysis Batch: 219979

Client Sample ID: 4MW23
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
1,3-Dichloropropane	0.22	U	10.0	10.6		ug/L		106	65 - 130	4	30
2,2-Dichloropropane	0.36	U	10.0	9.78		ug/L		98	61 - 130	9	30
1,1-Dichloropropene	0.34	U	10.0	11.6		ug/L		116	63 - 126	6	30
Ethylbenzene	0.27	U	10.0	10.4		ug/L		104	77 - 117	4	30
Ethylene Dibromide	0.27	U	10.0	9.98		ug/L		100	63 - 124	2	30
Ethyl methacrylate	0.94	U	10.0	10.1		ug/L		101	60 - 121	1	30
2-Hexanone	4.4	U	100	104		ug/L		104	47 - 147	5	30
Iodomethane	4.1	U	10.0	8.39	I	ug/L		84	10 - 150	1	30
Isobutyl alcohol	10	U	250	270		ug/L		108	48 - 133	15	30
Methacrylonitrile	2.2	U	100	103		ug/L		103	65 - 130	5	30
Methylene Chloride	1.4	U	10.0	10.1		ug/L		101	64 - 124	1	30
Methyl methacrylate	0.61	U	20.0	20.9		ug/L		105	68 - 130	1	30
4-Methyl-2-pentanone (MIBK)	4.0	U	100	101		ug/L		101	46 - 146	5	30
Propionitrile	3.3	U	100	99.7		ug/L		100	64 - 129	0	30
Styrene	0.49	U	10.0	9.97		ug/L		100	65 - 130	1	30
1,1,1,2-Tetrachloroethane	0.36	U	10.0	8.40		ug/L		84	65 - 130	4	30
1,1,2,2-Tetrachloroethane	0.44	U	10.0	9.39		ug/L		94	67 - 130	1	30
Tetrachloroethene	0.50	U	10.0	12.2		ug/L		122	59 - 130	3	30
Toluene	0.24	U	10.0	11.5		ug/L		115	71 - 119	2	30
trans-1,4-Dichloro-2-butene	1.5	U	10.0	8.26	I	ug/L		83	48 - 138	1	30
trans-1,2-Dichloroethene	0.39	U	10.0	12.0		ug/L		120	67 - 130	1	30
trans-1,3-Dichloropropene	0.27	U	10.0	7.22		ug/L		72	57 - 121	3	30
1,1,1-Trichloroethane	0.30	U	10.0	10.7		ug/L		107	64 - 124	6	30
1,1,2-Trichloroethane	0.29	U	10.0	10.7		ug/L		107	68 - 130	1	30
Trichloroethene	0.61	U	10.0	11.7		ug/L		117	65 - 130	3	30
Trichlorofluoromethane	0.49	U	10.0	12.5		ug/L		125	56 - 135	4	30
1,2,3-Trichloropropane	0.44	U	10.0	9.78		ug/L		98	68 - 130	3	30
Vinyl acetate	0.95	U	20.0	16.1		ug/L		81	62 - 122	4	30
Vinyl chloride	0.26	U	10.0	11.0		ug/L		110	59 - 130	7	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
4-Bromofluorobenzene	*102*		*70 - 130*
Dibromofluoromethane	*100*		*70 - 130*
Toluene-d8 (Surr)	*105*		*70 - 130*

Method: 8270D - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 680-602298/5-A
Matrix: Water
Analysis Batch: 602921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602298

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acenaphthene	0.76	U	10	0.76	ug/L		12/30/19 16:45	01/06/20 20:15	1
Acenaphthylene	0.85	U	10	0.85	ug/L		12/30/19 16:45	01/06/20 20:15	1
Acetophenone	0.57	U	10	0.57	ug/L		12/30/19 16:45	01/06/20 20:15	1
2-Acetylaminofluorene	1.6	U	10	1.6	ug/L		12/30/19 16:45	01/06/20 20:15	1
alpha,alpha-Dimethyl phenethylamine	35	U	2000	35	ug/L		12/30/19 16:45	01/06/20 20:15	1
4-Aminobiphenyl	1.2	U	10	1.2	ug/L		12/30/19 16:45	01/06/20 20:15	1
Anthracene	0.69	U	10	0.69	ug/L		12/30/19 16:45	01/06/20 20:15	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-602298/5-A
Matrix: Water
Analysis Batch: 602921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602298

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[a]anthracene	0.55	U	10	0.55	ug/L		12/30/19 16:45	01/06/20 20:15	1
Benzo[a]pyrene	0.71	U	10	0.71	ug/L		12/30/19 16:45	01/06/20 20:15	1
Benzo[b]fluoranthene	2.6	U	10	2.6	ug/L		12/30/19 16:45	01/06/20 20:15	1
Benzo[g,h,i]perylene	0.87	U	10	0.87	ug/L		12/30/19 16:45	01/06/20 20:15	1
Benzo[k]fluoranthene	1.2	U	10	1.2	ug/L		12/30/19 16:45	01/06/20 20:15	1
Benzyl alcohol	1.1	U	10	1.1	ug/L		12/30/19 16:45	01/06/20 20:15	1
Bis(2-chloroethoxy)methane	0.94	U	10	0.94	ug/L		12/30/19 16:45	01/06/20 20:15	1
Bis(2-chloroethyl)ether	1.1	U	10	1.1	ug/L		12/30/19 16:45	01/06/20 20:15	1
bis (2-chloroisopropyl) ether	0.78	U	10	0.78	ug/L		12/30/19 16:45	01/06/20 20:15	1
Bis(2-ethylhexyl) phthalate	1.6	U	10	1.6	ug/L		12/30/19 16:45	01/06/20 20:15	1
4-Bromophenyl phenyl ether	0.77	U	10	0.77	ug/L		12/30/19 16:45	01/06/20 20:15	1
Butyl benzyl phthalate	1.2	U	10	1.2	ug/L		12/30/19 16:45	01/06/20 20:15	1
4-Chloroaniline	2.2	U	20	2.2	ug/L		12/30/19 16:45	01/06/20 20:15	1
4-Chloro-3-methylphenol	1.0	U	10	1.0	ug/L		12/30/19 16:45	01/06/20 20:15	1
2-Chloronaphthalene	0.80	U	10	0.80	ug/L		12/30/19 16:45	01/06/20 20:15	1
2-Chlorophenol	0.87	U	10	0.87	ug/L		12/30/19 16:45	01/06/20 20:15	1
4-Chlorophenyl phenyl ether	0.84	U	10	0.84	ug/L		12/30/19 16:45	01/06/20 20:15	1
Chrysene	0.51	U	10	0.51	ug/L		12/30/19 16:45	01/06/20 20:15	1
Diallate	0.78	U	10	0.78	ug/L		12/30/19 16:45	01/06/20 20:15	1
Dibenz(a,h)anthracene	1.0	U	10	1.0	ug/L		12/30/19 16:45	01/06/20 20:15	1
Dibenzofuran	0.79	U	10	0.79	ug/L		12/30/19 16:45	01/06/20 20:15	1
1,2-Dichlorobenzene	0.53	U	10	0.53	ug/L		12/30/19 16:45	01/06/20 20:15	1
1,3-Dichlorobenzene	0.59	U	10	0.59	ug/L		12/30/19 16:45	01/06/20 20:15	1
1,4-Dichlorobenzene	0.54	U	10	0.54	ug/L		12/30/19 16:45	01/06/20 20:15	1
3,3'-Dichlorobenzidine	30	U	60	30	ug/L		12/30/19 16:45	01/06/20 20:15	1
2,4-Dichlorophenol	1.1	U	10	1.1	ug/L		12/30/19 16:45	01/06/20 20:15	1
2,6-Dichlorophenol	0.73	U	10	0.73	ug/L		12/30/19 16:45	01/06/20 20:15	1
Diethyl phthalate	0.88	U	10	0.88	ug/L		12/30/19 16:45	01/06/20 20:15	1
Dimethoate	0.75	U	10	0.75	ug/L		12/30/19 16:45	01/06/20 20:15	1
7,12-Dimethylbenz(a)anthracene	1.2	U	10	1.2	ug/L		12/30/19 16:45	01/06/20 20:15	1
3,3'-Dimethylbenzidine	10	U	20	10	ug/L		12/30/19 16:45	01/06/20 20:15	1
2,4-Dimethylphenol	4.0	U	10	4.0	ug/L		12/30/19 16:45	01/06/20 20:15	1
Dimethyl phthalate	0.99	U	10	0.99	ug/L		12/30/19 16:45	01/06/20 20:15	1
Di-n-butyl phthalate	0.83	U	10	0.83	ug/L		12/30/19 16:45	01/06/20 20:15	1
1,3-Dinitrobenzene	0.60	U	10	0.60	ug/L		12/30/19 16:45	01/06/20 20:15	1
4,6-Dinitro-2-methylphenol	10	U	50	10	ug/L		12/30/19 16:45	01/06/20 20:15	1
2,4-Dinitrophenol	10	U	50	10	ug/L		12/30/19 16:45	01/06/20 20:15	1
2,4-Dinitrotoluene	1.2	U	10	1.2	ug/L		12/30/19 16:45	01/06/20 20:15	1
2,6-Dinitrotoluene	1.1	U	10	1.1	ug/L		12/30/19 16:45	01/06/20 20:15	1
Di-n-octyl phthalate	1.4	U	10	1.4	ug/L		12/30/19 16:45	01/06/20 20:15	1
Dinoseb	5.0	U	10	5.0	ug/L		12/30/19 16:45	01/06/20 20:15	1
Disulfoton	0.79	U	10	0.79	ug/L		12/30/19 16:45	01/06/20 20:15	1
Ethyl methanesulfonate	0.96	U	10	0.96	ug/L		12/30/19 16:45	01/06/20 20:15	1
Ethyl Parathion	1.3	U	10	1.3	ug/L		12/30/19 16:45	01/06/20 20:15	1
Famphur	1.1	U	10	1.1	ug/L		12/30/19 16:45	01/06/20 20:15	1
Fluoranthene	0.74	U	10	0.74	ug/L		12/30/19 16:45	01/06/20 20:15	1
Fluorene	0.96	U	10	0.96	ug/L		12/30/19 16:45	01/06/20 20:15	1
Hexachlorobenzene	0.79	U	10	0.79	ug/L		12/30/19 16:45	01/06/20 20:15	1
Hexachlorobutadiene	0.62	U	10	0.62	ug/L		12/30/19 16:45	01/06/20 20:15	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-602298/5-A
Matrix: Water
Analysis Batch: 602921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602298

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Hexachlorocyclopentadiene	2.5	U	10	2.5	ug/L		12/30/19 16:45	01/06/20 20:15	1
Hexachloroethane	0.76	U	10	0.76	ug/L		12/30/19 16:45	01/06/20 20:15	1
Hexachloropropene	1.4	U	10	1.4	ug/L		12/30/19 16:45	01/06/20 20:15	1
Indeno[1,2,3-cd]pyrene	1.0	U	10	1.0	ug/L		12/30/19 16:45	01/06/20 20:15	1
Isophorone	0.90	U	10	0.90	ug/L		12/30/19 16:45	01/06/20 20:15	1
Isosafrole	0.50	U	10	0.50	ug/L		12/30/19 16:45	01/06/20 20:15	1
Methapyrilene	2.7	U	2000	2.7	ug/L		12/30/19 16:45	01/06/20 20:15	1
3-Methylcholanthrene	1.4	U	10	1.4	ug/L		12/30/19 16:45	01/06/20 20:15	1
Methyl methanesulfonate	0.60	U	10	0.60	ug/L		12/30/19 16:45	01/06/20 20:15	1
2-Methylnaphthalene	0.78	U	10	0.78	ug/L		12/30/19 16:45	01/06/20 20:15	1
Methyl parathion	0.88	U	10	0.88	ug/L		12/30/19 16:45	01/06/20 20:15	1
2-Methylphenol	0.89	U	10	0.89	ug/L		12/30/19 16:45	01/06/20 20:15	1
3 & 4 Methylphenol	1.3	U	10	1.3	ug/L		12/30/19 16:45	01/06/20 20:15	1
Naphthalene	0.70	U	10	0.70	ug/L		12/30/19 16:45	01/06/20 20:15	1
1,4-Naphthoquinone	0.62	U	10	0.62	ug/L		12/30/19 16:45	01/06/20 20:15	1
1-Naphthylamine	1.1	U	10	1.1	ug/L		12/30/19 16:45	01/06/20 20:15	1
2-Naphthylamine	1.5	U	10	1.5	ug/L		12/30/19 16:45	01/06/20 20:15	1
2-Nitroaniline	1.3	U	50	1.3	ug/L		12/30/19 16:45	01/06/20 20:15	1
3-Nitroaniline	5.0	U	50	5.0	ug/L		12/30/19 16:45	01/06/20 20:15	1
4-Nitroaniline	5.0	U	50	5.0	ug/L		12/30/19 16:45	01/06/20 20:15	1
Nitrobenzene	0.73	U	10	0.73	ug/L		12/30/19 16:45	01/06/20 20:15	1
2-Nitrophenol	0.76	U	10	0.76	ug/L		12/30/19 16:45	01/06/20 20:15	1
4-Nitrophenol	1.9	U	50	1.9	ug/L		12/30/19 16:45	01/06/20 20:15	1
N-Nitro-o-toluidine	1.5	U	10	1.5	ug/L		12/30/19 16:45	01/06/20 20:15	1
N-Nitrosodiethylamine	0.93	U	10	0.93	ug/L		12/30/19 16:45	01/06/20 20:15	1
N-Nitrosodimethylamine	2.8	U	10	2.8	ug/L		12/30/19 16:45	01/06/20 20:15	1
N-Nitrosodi-n-butylamine	0.96	U	10	0.96	ug/L		12/30/19 16:45	01/06/20 20:15	1
N-Nitrosodi-n-propylamine	0.72	U	10	0.72	ug/L		12/30/19 16:45	01/06/20 20:15	1
N-Nitrosodiphenylamine	0.92	U	10	0.92	ug/L		12/30/19 16:45	01/06/20 20:15	1
N-Nitrosomethylethylamine	3.3	U	10	3.3	ug/L		12/30/19 16:45	01/06/20 20:15	1
N-Nitrosopiperidine	0.88	U	10	0.88	ug/L		12/30/19 16:45	01/06/20 20:15	1
N-Nitrosopyrrolidine	1.0	U	10	1.0	ug/L		12/30/19 16:45	01/06/20 20:15	1
o,o',o''-Triethylphosphorothioate	1.0	U	10	1.0	ug/L		12/30/19 16:45	01/06/20 20:15	1
p-Dimethylamino azobenzene	0.79	U	10	0.79	ug/L		12/30/19 16:45	01/06/20 20:15	1
Pentachlorobenzene	0.52	U	10	0.52	ug/L		12/30/19 16:45	01/06/20 20:15	1
Pentachloronitrobenzene	0.78	U	10	0.78	ug/L		12/30/19 16:45	01/06/20 20:15	1
Pentachlorophenol	2.0	U	50	2.0	ug/L		12/30/19 16:45	01/06/20 20:15	1
Phenacetin	1.4	U	10	1.4	ug/L		12/30/19 16:45	01/06/20 20:15	1
Phenanthrene	0.77	U	10	0.77	ug/L		12/30/19 16:45	01/06/20 20:15	1
Phenol	0.83	U	10	0.83	ug/L		12/30/19 16:45	01/06/20 20:15	1
Phorate	0.87	U	10	0.87	ug/L		12/30/19 16:45	01/06/20 20:15	1
p-Phenylene diamine	10	U	2000	10	ug/L		12/30/19 16:45	01/06/20 20:15	1
Pronamide	0.89	U	10	0.89	ug/L		12/30/19 16:45	01/06/20 20:15	1
Pyrene	0.63	U	10	0.63	ug/L		12/30/19 16:45	01/06/20 20:15	1
Safrole, Total	0.80	U	10	0.80	ug/L		12/30/19 16:45	01/06/20 20:15	1
1,2,4,5-Tetrachlorobenzene	0.76	U	10	0.76	ug/L		12/30/19 16:45	01/06/20 20:15	1
2,3,4,6-Tetrachlorophenol	0.72	U	10	0.72	ug/L		12/30/19 16:45	01/06/20 20:15	1
Thionazin	0.91	U	10	0.91	ug/L		12/30/19 16:45	01/06/20 20:15	1
2-Toluidine	1.4	U	10	1.4	ug/L		12/30/19 16:45	01/06/20 20:15	1

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 680-602298/5-A
Matrix: Water
Analysis Batch: 602921

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602298

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1,2,4-Trichlorobenzene	0.56	U	10	0.56	ug/L		12/30/19 16:45	01/06/20 20:15	1
2,4,5-Trichlorophenol	1.2	U	10	1.2	ug/L		12/30/19 16:45	01/06/20 20:15	1
2,4,6-Trichlorophenol	0.85	U	10	0.85	ug/L		12/30/19 16:45	01/06/20 20:15	1
1,3,5-Trinitrobenzene	2.0	U	10	2.0	ug/L		12/30/19 16:45	01/06/20 20:15	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl (Surr)	*66*		*32 - 113*	*12/30/19 16:45*	*01/06/20 20:15*	*1*
2-Fluorophenol (Surr)	*57*		*26 - 109*	*12/30/19 16:45*	*01/06/20 20:15*	*1*
Nitrobenzene-d5 (Surr)	*68*		*32 - 118*	*12/30/19 16:45*	*01/06/20 20:15*	*1*
Phenol-d5 (Surr)	*64*		*27 - 110*	*12/30/19 16:45*	*01/06/20 20:15*	*1*
Terphenyl-d14 (Surr)	*78*		*10 - 126*	*12/30/19 16:45*	*01/06/20 20:15*	*1*
2,4,6-Tribromophenol (Surr)	*83*		*39 - 124*	*12/30/19 16:45*	*01/06/20 20:15*	*1*

Lab Sample ID: LCS 680-602298/6-A
Matrix: Water
Analysis Batch: 602921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602298

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acenaphthene	100	83.1		ug/L		83	48 - 130
Acenaphthylene	100	83.8		ug/L		84	48 - 130
Acetophenone	100	76.8		ug/L		77	44 - 130
Anthracene	100	88.3		ug/L		88	49 - 130
Benzo[a]anthracene	100	91.3		ug/L		91	44 - 130
Benzo[a]pyrene	100	88.1		ug/L		88	44 - 130
Benzo[b]fluoranthene	100	88.8		ug/L		89	43 - 130
Benzo[g,h,i]perylene	100	94.1		ug/L		94	41 - 130
Benzo[k]fluoranthene	100	85.3		ug/L		85	40 - 130
Benzyl alcohol	100	80.1		ug/L		80	29 - 130
Bis(2-chloroethoxy)methane	100	78.8		ug/L		79	47 - 130
Bis(2-chloroethyl)ether	100	71.5		ug/L		72	32 - 130
bis (2-chloroisopropyl) ether	100	69.4		ug/L		69	26 - 130
Bis(2-ethylhexyl) phthalate	100	96.5		ug/L		96	45 - 130
4-Bromophenyl phenyl ether	100	88.5		ug/L		88	47 - 130
Butyl benzyl phthalate	100	97.8		ug/L		98	50 - 130
4-Chloroaniline	100	79.9		ug/L		80	42 - 130
4-Chloro-3-methylphenol	100	84.0		ug/L		84	47 - 130
2-Chloronaphthalene	100	80.5		ug/L		81	44 - 130
2-Chlorophenol	100	69.1		ug/L		69	39 - 130
4-Chlorophenyl phenyl ether	100	83.8		ug/L		84	45 - 130
Chrysene	100	93.0		ug/L		93	47 - 130
Dibenz(a,h)anthracene	100	93.1		ug/L		93	41 - 130
Dibenzofuran	100	83.7		ug/L		84	50 - 130
1,2-Dichlorobenzene	100	64.8		ug/L		65	31 - 130
1,3-Dichlorobenzene	100	63.1		ug/L		63	30 - 130
1,4-Dichlorobenzene	100	62.6		ug/L		63	31 - 130
3,3'-Dichlorobenzidine	100	90.5		ug/L		90	46 - 130
2,4-Dichlorophenol	100	78.5		ug/L		78	44 - 130
2,6-Dichlorophenol	100	77.9		ug/L		78	42 - 130

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-602298/6-A
Matrix: Water
Analysis Batch: 602921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602298

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diethyl phthalate	100	89.1		ug/L		89	53 - 130
2,4-Dimethylphenol	100	67.9		ug/L		68	37 - 130
Dimethyl phthalate	100	86.7		ug/L		87	53 - 130
Di-n-butyl phthalate	100	94.4		ug/L		94	51 - 130
4,6-Dinitro-2-methylphenol	200	235		ug/L		118	42 - 130
2,4-Dinitrophenol	200	269	J3	ug/L		134	31 - 130
2,4-Dinitrotoluene	100	96.0		ug/L		96	52 - 130
2,6-Dinitrotoluene	100	92.2		ug/L		92	52 - 130
Di-n-octyl phthalate	100	96.4		ug/L		96	42 - 130
Fluoranthene	100	91.4		ug/L		91	47 - 130
Fluorene	100	85.5		ug/L		85	50 - 130
Hexachlorobenzene	100	89.3		ug/L		89	43 - 130
Hexachlorobutadiene	100	68.1		ug/L		68	27 - 130
Hexachlorocyclopentadiene	100	40.6		ug/L		41	11 - 130
Hexachloroethane	100	60.2		ug/L		60	29 - 130
Indeno[1,2,3-cd]pyrene	100	100		ug/L		100	31 - 130
Isophorone	100	81.1		ug/L		81	47 - 130
2-Methylnaphthalene	100	78.9		ug/L		79	40 - 130
2-Methylphenol	100	71.9		ug/L		72	40 - 130
3 & 4 Methylphenol	100	77.0		ug/L		77	42 - 130
Naphthalene	100	72.7		ug/L		73	39 - 130
2-Nitroaniline	100	92.9		ug/L		93	51 - 130
3-Nitroaniline	100	96.1		ug/L		96	53 - 130
4-Nitroaniline	100	95.0		ug/L		95	49 - 130
Nitrobenzene	100	74.8		ug/L		75	43 - 130
2-Nitrophenol	100	82.6		ug/L		83	43 - 130
4-Nitrophenol	200	190		ug/L		95	44 - 130
N-Nitrosodimethylamine	100	67.0		ug/L		67	32 - 130
N-Nitrosodi-n-propylamine	100	74.6		ug/L		75	42 - 130
N-Nitrosodiphenylamine	100	87.2		ug/L		87	50 - 130
Pentachlorophenol	200	194		ug/L		97	33 - 130
Phenanthrene	100	89.4		ug/L		89	51 - 130
Phenol	100	70.6		ug/L		71	35 - 130
Pyrene	100	93.3		ug/L		93	52 - 130
1,2,4,5-Tetrachlorobenzene	100	80.1		ug/L		80	39 - 130
2,3,4,6-Tetrachlorophenol	100	102		ug/L		102	53 - 130
1,2,4-Trichlorobenzene	100	72.6		ug/L		73	33 - 130
2,4,5-Trichlorophenol	100	89.0		ug/L		89	48 - 130
2,4,6-Trichlorophenol	100	89.4		ug/L		89	47 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*76*		*32 - 113*
2-Fluorophenol (Surr)	*64*		*26 - 109*
Nitrobenzene-d5 (Surr)	*76*		*32 - 118*
Phenol-d5 (Surr)	*69*		*27 - 110*
Terphenyl-d14 (Surr)	*102*		*10 - 126*
2,4,6-Tribromophenol (Surr)	*100*		*39 - 124*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 680-602298/8-A
Matrix: Water
Analysis Batch: 602921

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602298

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*79*		*32 - 113*
2-Fluorophenol (Surr)	*57*		*26 - 109*
Nitrobenzene-d5 (Surr)	*77*		*32 - 118*
Phenol-d5 (Surr)	*66*		*27 - 110*
Terphenyl-d14 (Surr)	*92*		*10 - 126*
2,4,6-Tribromophenol (Surr)	*100*		*39 - 124*

Lab Sample ID: LCSD 680-602298/7-A
Matrix: Water
Analysis Batch: 602921

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 602298

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Acenaphthene	100	94.1		ug/L		94	48 - 130	12	50
Acenaphthylene	100	91.7		ug/L		92	48 - 130	9	50
Acetophenone	100	89.4		ug/L		89	44 - 130	15	50
Anthracene	100	96.8		ug/L		97	49 - 130	9	50
Benzo[a]anthracene	100	100		ug/L		100	44 - 130	9	50
Benzo[a]pyrene	100	95.1		ug/L		95	44 - 130	8	50
Benzo[b]fluoranthene	100	95.6		ug/L		96	43 - 130	7	50
Benzo[g,h,i]perylene	100	103		ug/L		103	41 - 130	9	50
Benzo[k]fluoranthene	100	95.4		ug/L		95	40 - 130	11	50
Benzyl alcohol	100	92.8		ug/L		93	29 - 130	15	50
Bis(2-chloroethoxy)methane	100	89.3		ug/L		89	47 - 130	12	50
Bis(2-chloroethyl)ether	100	84.3		ug/L		84	32 - 130	16	50
bis (2-chloroisopropyl) ether	100	82.3		ug/L		82	26 - 130	17	50
Bis(2-ethylhexyl) phthalate	100	107		ug/L		107	45 - 130	11	50
4-Bromophenyl phenyl ether	100	99.3		ug/L		99	47 - 130	11	50
Butyl benzyl phthalate	100	107		ug/L		107	50 - 130	9	50
4-Chloroaniline	100	90.3		ug/L		90	42 - 130	12	50
4-Chloro-3-methylphenol	100	94.0		ug/L		94	47 - 130	11	50
2-Chloronaphthalene	100	88.8		ug/L		89	44 - 130	10	50
2-Chlorophenol	100	82.0		ug/L		82	39 - 130	17	50
4-Chlorophenyl phenyl ether	100	91.8		ug/L		92	45 - 130	9	50
Chrysene	100	100		ug/L		100	47 - 130	8	50
Dibenz(a,h)anthracene	100	101		ug/L		101	41 - 130	8	50
Dibenzofuran	100	91.7		ug/L		92	50 - 130	9	50
1,2-Dichlorobenzene	100	75.5		ug/L		76	31 - 130	15	50
1,3-Dichlorobenzene	100	72.2		ug/L		72	30 - 130	13	50
1,4-Dichlorobenzene	100	72.1		ug/L		72	31 - 130	14	50
3,3'-Dichlorobenzidine	100	97.4		ug/L		97	46 - 130	7	50
2,4-Dichlorophenol	100	89.7		ug/L		90	44 - 130	13	50
2,6-Dichlorophenol	100	91.1		ug/L		91	42 - 130	16	20
Diethyl phthalate	100	96.2		ug/L		96	53 - 130	8	50
2,4-Dimethylphenol	100	78.7		ug/L		79	37 - 130	15	50
Dimethyl phthalate	100	94.3		ug/L		94	53 - 130	8	50
Di-n-butyl phthalate	100	100		ug/L		100	51 - 130	6	50
4,6-Dinitro-2-methylphenol	200	259		ug/L		130	42 - 130	10	50
2,4-Dinitrophenol	200	285	J3	ug/L		143	31 - 130	6	50

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-602298/7-A
Matrix: Water
Analysis Batch: 602921

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 602298

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-Dinitrotoluene			100	103		ug/L		103	52 - 130	7	50
2,6-Dinitrotoluene			100	101		ug/L		101	52 - 130	9	50
Di-n-octyl phthalate			100	107		ug/L		107	42 - 130	10	50
Fluoranthene			100	97.1		ug/L		97	47 - 130	6	50
Fluorene			100	93.4		ug/L		93	50 - 130	9	50
Hexachlorobenzene			100	96.6		ug/L		97	43 - 130	8	50
Hexachlorobutadiene			100	79.9		ug/L		80	27 - 130	16	50
Hexachlorocyclopentadiene			100	43.1		ug/L		43	11 - 130	6	50
Hexachloroethane			100	69.8		ug/L		70	29 - 130	15	50
Indeno[1,2,3-cd]pyrene			100	110		ug/L		110	31 - 130	10	50
Isophorone			100	90.4		ug/L		90	47 - 130	11	50
2-Methylnaphthalene			100	88.8		ug/L		89	40 - 130	12	50
2-Methylphenol			100	86.2		ug/L		86	40 - 130	18	50
3 & 4 Methylphenol			100	87.1		ug/L		87	42 - 130	12	50
Naphthalene			100	85.6		ug/L		86	39 - 130	16	50
2-Nitroaniline			100	98.9		ug/L		99	51 - 130	6	50
3-Nitroaniline			100	103		ug/L		103	53 - 130	7	50
4-Nitroaniline			100	102		ug/L		102	49 - 130	7	50
Nitrobenzene			100	86.6		ug/L		87	43 - 130	15	50
2-Nitrophenol			100	97.0		ug/L		97	43 - 130	16	50
4-Nitrophenol			200	212		ug/L		106	44 - 130	11	50
N-Nitrosodimethylamine			100	80.7		ug/L		81	32 - 130	19	50
N-Nitrosodi-n-propylamine			100	86.6		ug/L		87	42 - 130	15	50
N-Nitrosodiphenylamine			100	94.6		ug/L		95	50 - 130	8	50
Pentachlorophenol			200	216		ug/L		108	33 - 130	11	50
Phenanthrene			100	98.1		ug/L		98	51 - 130	9	50
Phenol			100	85.5		ug/L		85	35 - 130	19	50
Pyrene			100	102		ug/L		102	52 - 130	9	50
1,2,4,5-Tetrachlorobenzene			100	90.1		ug/L		90	39 - 130	12	30
2,3,4,6-Tetrachlorophenol			100	112		ug/L		112	53 - 130	9	40
1,2,4-Trichlorobenzene			100	83.4		ug/L		83	33 - 130	14	50
2,4,5-Trichlorophenol			100	97.0		ug/L		97	48 - 130	9	50
2,4,6-Trichlorophenol			100	98.5		ug/L		99	47 - 130	10	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*84*		*32 - 113*
2-Fluorophenol (Surr)	*77*		*26 - 109*
Nitrobenzene-d5 (Surr)	*86*		*32 - 118*
Phenol-d5 (Surr)	*82*		*27 - 110*
Terphenyl-d14 (Surr)	*109*		*10 - 126*
2,4,6-Tribromophenol (Surr)	*105*		*39 - 124*

Lab Sample ID: LCSD 680-602298/9-A
Matrix: Water
Analysis Batch: 602921

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 602298

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl (Surr)	*76*		*32 - 113*

Method: 8270D - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 680-602298/9-A
Matrix: Water
Analysis Batch: 602921

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 602298

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorophenol (Surr)	*56*		*26 - 109*
Nitrobenzene-d5 (Surr)	*74*		*32 - 118*
Phenol-d5 (Surr)	*65*		*27 - 110*
Terphenyl-d14 (Surr)	*92*		*10 - 126*
2,4,6-Tribromophenol (Surr)	*100*		*39 - 124*

Method: 8081B - Organochlorine Pesticides (GC)

Lab Sample ID: MB 680-602606/3-A
Matrix: Water
Analysis Batch: 603567

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602606

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Aldrin	0.0036	U	0.025	0.0036	ug/L		12/30/19 12:55	01/13/20 16:19	1
alpha-BHC	0.0017	U	0.025	0.0017	ug/L		12/30/19 12:55	01/13/20 16:19	1
beta-BHC	0.0046	U	0.025	0.0046	ug/L		12/30/19 12:55	01/13/20 16:19	1
Chlordane (technical)	0.048	U	0.25	0.048	ug/L		12/30/19 12:55	01/13/20 16:19	1
4,4'-DDD	0.0032	U	0.025	0.0032	ug/L		12/30/19 12:55	01/13/20 16:19	1
4,4'-DDE	0.0026	U	0.025	0.0026	ug/L		12/30/19 12:55	01/13/20 16:19	1
4,4'-DDT	0.0035	U	0.025	0.0035	ug/L		12/30/19 12:55	01/13/20 16:19	1
delta-BHC	0.0038	U	0.025	0.0038	ug/L		12/30/19 12:55	01/13/20 16:19	1
Dieldrin	0.0019	U	0.025	0.0019	ug/L		12/30/19 12:55	01/13/20 16:19	1
Endosulfan I	0.0018	U	0.025	0.0018	ug/L		12/30/19 12:55	01/13/20 16:19	1
Endosulfan II	0.0021	U	0.025	0.0021	ug/L		12/30/19 12:55	01/13/20 16:19	1
Endosulfan sulfate	0.0026	U	0.025	0.0026	ug/L		12/30/19 12:55	01/13/20 16:19	1
Endrin	0.0027	U	0.025	0.0027	ug/L		12/30/19 12:55	01/13/20 16:19	1
Endrin aldehyde	0.0031	U	0.025	0.0031	ug/L		12/30/19 12:55	01/13/20 16:19	1
gamma-BHC (Lindane)	0.0018	U	0.025	0.0018	ug/L		12/30/19 12:55	01/13/20 16:19	1
Heptachlor	0.0036	U	0.025	0.0036	ug/L		12/30/19 12:55	01/13/20 16:19	1
Heptachlor epoxide	0.0019	U	0.025	0.0019	ug/L		12/30/19 12:55	01/13/20 16:19	1
Isodrin	0.0036	U	0.025	0.0036	ug/L		12/30/19 12:55	01/13/20 16:19	1
Kepone	0.22	U	1.5	0.22	ug/L		12/30/19 12:55	01/13/20 16:19	1
Methoxychlor	0.0049	U	0.025	0.0049	ug/L		12/30/19 12:55	01/13/20 16:19	1
Toxaphene	0.20	U	2.5	0.20	ug/L		12/30/19 12:55	01/13/20 16:19	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCB Decachlorobiphenyl	*93*		*14 - 130*	*12/30/19 12:55*	*01/13/20 16:19*	*1*
Tetrachloro-m-xylene	*73*		*40 - 130*	*12/30/19 12:55*	*01/13/20 16:19*	*1*

Lab Sample ID: LCS 680-602606/4-A
Matrix: Water
Analysis Batch: 603567

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602606

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Aldrin	0.0500	0.0453		ug/L		91	34 - 130
alpha-BHC	0.0500	0.0497		ug/L		99	48 - 130
beta-BHC	0.0500	0.0519		ug/L		104	29 - 174
4,4'-DDD	0.0500	0.0502		ug/L		100	54 - 135

Method: 8081B - Organochlorine Pesticides (GC) (Continued)

Lab Sample ID: LCS 680-602606/4-A
Matrix: Water
Analysis Batch: 603567

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602606

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
4,4'-DDE	0.0500	0.0474		ug/L		95	47 - 130
4,4'-DDT	0.0500	0.0555		ug/L		111	47 - 134
delta-BHC	0.0500	0.0497		ug/L		99	44 - 142
Dieldrin	0.0500	0.0504		ug/L		101	54 - 130
Endosulfan I	0.0500	0.0417		ug/L		83	40 - 131
Endosulfan II	0.0500	0.0466		ug/L		93	44 - 137
Endosulfan sulfate	0.0500	0.0519		ug/L		104	49 - 139
Endrin	0.0500	0.0522		ug/L		104	59 - 143
Endrin aldehyde	0.0500	0.0566		ug/L		113	45 - 166
gamma-BHC (Lindane)	0.0500	0.0501		ug/L		100	52 - 130
Heptachlor	0.0500	0.0486		ug/L		97	35 - 130
Heptachlor epoxide	0.0500	0.0506		ug/L		101	52 - 130
Methoxychlor	0.0500	0.0562		ug/L		112	52 - 136

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCB Decachlorobiphenyl	*77*		*14 - 130*
Tetrachloro-m-xylene	*81*		*40 - 130*

Lab Sample ID: LCSD 680-602606/5-A
Matrix: Water
Analysis Batch: 603567

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 602606

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Aldrin	0.0500	0.0429		ug/L		86	34 - 130	5	50
alpha-BHC	0.0500	0.0483		ug/L		97	48 - 130	3	30
beta-BHC	0.0500	0.0500		ug/L		100	29 - 174	4	50
4,4'-DDD	0.0500	0.0495		ug/L		99	54 - 135	2	40
4,4'-DDE	0.0500	0.0481		ug/L		96	47 - 130	2	30
4,4'-DDT	0.0500	0.0546		ug/L		109	47 - 134	2	40
delta-BHC	0.0500	0.0492		ug/L		98	44 - 142	1	40
Dieldrin	0.0500	0.0500		ug/L		100	54 - 130	1	40
Endosulfan I	0.0500	0.0417		ug/L		83	40 - 131	0	40
Endosulfan II	0.0500	0.0465		ug/L		93	44 - 137	0	40
Endosulfan sulfate	0.0500	0.0502		ug/L		100	49 - 139	3	30
Endrin	0.0500	0.0442		ug/L		88	59 - 143	17	30
Endrin aldehyde	0.0500	0.0579		ug/L		116	45 - 166	2	50
gamma-BHC (Lindane)	0.0500	0.0490		ug/L		98	52 - 130	2	30
Heptachlor	0.0500	0.0474		ug/L		95	35 - 130	3	30
Heptachlor epoxide	0.0500	0.0497		ug/L		99	52 - 130	2	30
Methoxychlor	0.0500	0.0520		ug/L		104	52 - 136	8	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCB Decachlorobiphenyl	*83*		*14 - 130*
Tetrachloro-m-xylene	*75*		*40 - 130*

QC Sample Results

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Method: 8151A - Herbicides (GC)

Lab Sample ID: MB 680-602605/16-A
Matrix: Water
Analysis Batch: 602793

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 602605

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4-D	0.037	U	0.50	0.037	ug/L		12/30/19 11:24	12/31/19 23:04	1
Dinoseb	0.16	U	1.0	0.16	ug/L		12/30/19 11:24	12/31/19 23:04	1
Pentachlorophenol	0.037	U	0.25	0.037	ug/L		12/30/19 11:24	12/31/19 23:04	1
Silvex (2,4,5-TP)	0.062	U	0.25	0.062	ug/L		12/30/19 11:24	12/31/19 23:04	1
2,4,5-T	0.062	U	0.25	0.062	ug/L		12/30/19 11:24	12/31/19 23:04	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
DCAA	*167*	*J1*	*45 - 130*	*12/30/19 11:24*	*12/31/19 23:04*	*1*

Lab Sample ID: LCS 680-602605/17-A
Matrix: Water
Analysis Batch: 602793

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 602605

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
2,4-D	2.00	1.18		ug/L		59	28 - 130
Dinoseb	2.00	0.296	I	ug/L		15	10 - 130
Pentachlorophenol	0.500	0.230	I	ug/L		46	44 - 130
Silvex (2,4,5-TP)	0.500	0.389		ug/L		78	44 - 130
2,4,5-T	0.500	0.411		ug/L		82	32 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
DCAA	*111*		*45 - 130*

Lab Sample ID: LCSD 680-602605/18-A
Matrix: Water
Analysis Batch: 602793

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 602605

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
2,4-D	2.00	1.54		ug/L		77	28 - 130	27	50
Dinoseb	2.00	0.541	I J3	ug/L		27	10 - 130	59	50
Pentachlorophenol	0.500	0.285		ug/L		57	44 - 130	21	50
Silvex (2,4,5-TP)	0.500	0.414		ug/L		83	44 - 130	6	50
2,4,5-T	0.500	0.451		ug/L		90	32 - 130	9	50

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
DCAA	*97*		*45 - 130*

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography

Lab Sample ID: MB 680-602200/2
Matrix: Water
Analysis Batch: 602200

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

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Chloride	0.20	U	0.50	0.20	mg/L			12/27/19 10:40	1

Method: 300.0-1993 R2.1 - Anions, Ion Chromatography (Continued)

Lab Sample ID: LCS 680-602200/3
Matrix: Water
Analysis Batch: 602200

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride			10.0	9.48		mg/L		95	90 - 110		

Lab Sample ID: LCSD 680-602200/4
Matrix: Water
Analysis Batch: 602200

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
Chloride			10.0	9.49		mg/L		95	90 - 110	0	15

Lab Sample ID: 190-21906-A-1 MS
Matrix: Water
Analysis Batch: 602200

Client Sample ID: Matrix Spike
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Chloride	17		10.0	26.4		mg/L		97	80 - 120		

Lab Sample ID: 190-21906-A-1 MSD
Matrix: Water
Analysis Batch: 602200

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Chloride	17		10.0	26.8		mg/L		102	80 - 120	2	15

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 660-219949/1-A
Matrix: Water
Analysis Batch: 219958

Client Sample ID: Method Blank
Prep Type: Total Recoverable
Prep Batch: 219949

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Antimony	4.0	U	20	4.0	ug/L		12/27/19 06:54	12/27/19 13:57	1
Iron	0.025	U	0.20	0.025	mg/L		12/27/19 06:54	12/27/19 13:57	1
Arsenic	2.50	I	10	1.9	ug/L		12/27/19 06:54	12/27/19 13:57	1
Sodium	0.12	U	1.0	0.12	mg/L		12/27/19 06:54	12/27/19 13:57	1
Barium	0.92	U	10	0.92	ug/L		12/27/19 06:54	12/27/19 13:57	1
Beryllium	0.50	U	2.0	0.50	ug/L		12/27/19 06:54	12/27/19 13:57	1
Cadmium	0.46	U	4.0	0.46	ug/L		12/27/19 06:54	12/27/19 13:57	1
Chromium	1.1	U	10	1.1	ug/L		12/27/19 06:54	12/27/19 13:57	1
Cobalt	2.0	U	10	2.0	ug/L		12/27/19 06:54	12/27/19 13:57	1
Copper	2.8	U	10	2.8	ug/L		12/27/19 06:54	12/27/19 13:57	1
Lead	2.0	U	10	2.0	ug/L		12/27/19 06:54	12/27/19 13:57	1
Nickel	0.81	U	8.0	0.81	ug/L		12/27/19 06:54	12/27/19 13:57	1
Selenium	5.0	U	20	5.0	ug/L		12/27/19 06:54	12/27/19 13:57	1
Silver	1.5	U	10	1.5	ug/L		12/27/19 06:54	12/27/19 13:57	1
Vanadium	4.4	U	20	4.4	ug/L		12/27/19 06:54	12/27/19 13:57	1
Zinc	14	U	20	14	ug/L		12/27/19 06:54	12/27/19 13:57	1

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: LCS 660-219949/2-A
Matrix: Water
Analysis Batch: 219958

Client Sample ID: Lab Control Sample
Prep Type: Total Recoverable
Prep Batch: 219949

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	1000	1040		ug/L		104	80 - 120
Iron	1.00	1.00		mg/L		100	80 - 120
Arsenic	1000	1000		ug/L		100	80 - 120
Sodium	10.0	9.90		mg/L		99	80 - 120
Barium	1000	1000		ug/L		100	80 - 120
Beryllium	1000	1040		ug/L		104	80 - 120
Cadmium	1000	998		ug/L		100	80 - 120
Chromium	1000	1020		ug/L		102	80 - 120
Cobalt	1000	1030		ug/L		103	80 - 120
Copper	1000	1020		ug/L		102	80 - 120
Lead	1000	1030		ug/L		103	80 - 120
Nickel	1000	1010		ug/L		101	80 - 120
Selenium	1000	988		ug/L		99	80 - 120
Silver	1000	1120		ug/L		112	80 - 120
Vanadium	1000	996		ug/L		100	80 - 120
Zinc	1000	1020		ug/L		102	80 - 120

Lab Sample ID: 660-99522-2 MS
Matrix: Water
Analysis Batch: 219958

Client Sample ID: 2MW-24D
Prep Type: Total Recoverable
Prep Batch: 219949

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Antimony	4.0	U	1000	1060		ug/L		106	75 - 125
Iron	0.051	I	1.00	1.04		mg/L		99	75 - 125
Arsenic	2.7	I V	1000	1030		ug/L		102	75 - 125
Sodium	19		10.0	29.2		mg/L		100	75 - 125
Barium	16		1000	1010		ug/L		100	75 - 125
Beryllium	0.50	U	1000	1070		ug/L		107	75 - 125
Cadmium	0.46	U	1000	1010		ug/L		101	75 - 125
Chromium	1.1	U	1000	1010		ug/L		101	75 - 125
Cobalt	2.0	U	1000	1020		ug/L		102	75 - 125
Copper	2.8	U	1000	1030		ug/L		103	75 - 125
Lead	2.0	U	1000	1020		ug/L		102	75 - 125
Nickel	1.3	I	1000	996		ug/L		99	75 - 125
Selenium	5.0	U	1000	1000		ug/L		100	75 - 125
Silver	1.5	U	1000	1130		ug/L		113	75 - 125
Vanadium	4.4	U	1000	1010		ug/L		101	75 - 125
Zinc	14	U	1000	1030		ug/L		103	75 - 125

Lab Sample ID: 660-99522-2 MSD
Matrix: Water
Analysis Batch: 219958

Client Sample ID: 2MW-24D
Prep Type: Total Recoverable
Prep Batch: 219949

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Antimony	4.0	U	1000	1060		ug/L		106	75 - 125	0	20
Iron	0.051	I	1.00	1.04		mg/L		99	75 - 125	0	20
Arsenic	2.7	I V	1000	1030		ug/L		102	75 - 125	0	20
Sodium	19		10.0	29.4		mg/L		102	75 - 125	1	20
Barium	16		1000	1020		ug/L		101	75 - 125	1	20

Method: 6010D - Metals (ICP) (Continued)

Lab Sample ID: 660-99522-2 MSD — **Client Sample ID: 2MW-24D**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 219958 — **Prep Batch: 219949**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Beryllium	0.50	U	1000	1070		ug/L		107	75 - 125	0	20
Cadmium	0.46	U	1000	1010		ug/L		101	75 - 125	0	20
Chromium	1.1	U	1000	1010		ug/L		101	75 - 125	0	20
Cobalt	2.0	U	1000	1020		ug/L		102	75 - 125	0	20
Copper	2.8	U	1000	1020		ug/L		102	75 - 125	0	20
Lead	2.0	U	1000	1020		ug/L		102	75 - 125	0	20
Nickel	1.3	I	1000	1010		ug/L		100	75 - 125	1	20
Selenium	5.0	U	1000	1000		ug/L		100	75 - 125	0	20
Silver	1.5	U	1000	1140		ug/L		114	75 - 125	1	20
Vanadium	4.4	U	1000	1010		ug/L		101	75 - 125	0	20
Zinc	14	U	1000	1030		ug/L		103	75 - 125	0	20

Method: 6020A - Metals (ICP/MS)

Lab Sample ID: MB 680-603114/1-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 603269 — **Prep Batch: 603114**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Thallium	0.49	U	1.0	0.49	ug/L		01/08/20 09:12	01/08/20 14:26	1

Lab Sample ID: LCS 680-603114/2-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 603269 — **Prep Batch: 603114**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	40.0	39.2		ug/L		98	80 - 120

Lab Sample ID: 660-99574-F-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 603269 — **Prep Batch: 603114**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Thallium	0.49	U	40.0	41.6		ug/L		104	75 - 125

Lab Sample ID: 660-99574-F-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total Recoverable**
Analysis Batch: 603269 — **Prep Batch: 603114**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Thallium	0.49	U	40.0	40.6		ug/L		101	75 - 125	3	20

Method: 7470A - Mercury (CVAA)

Lab Sample ID: MB 680-603183/13-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 603590 — **Prep Batch: 603183**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Mercury	0.080	U	0.20	0.080	ug/L		01/08/20 12:01	01/12/20 18:29	1

Method: 7470A - Mercury (CVAA) (Continued)

Lab Sample ID: LCS 680-603183/14-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 603590 — **Prep Batch: 603183**

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury			2.50	2.28		ug/L		91	80 - 120		

Lab Sample ID: 660-99574-E-1-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 603590 — **Prep Batch: 603183**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Mercury	0.080	U	1.00	1.01		ug/L		101	80 - 120		

Lab Sample ID: 660-99574-E-1-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 603590 — **Prep Batch: 603183**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Mercury	0.080	U	1.00	1.04		ug/L		104	80 - 120	3	20

Method: 350.1-1993 R2.0 - Nitrogen, Ammonia

Lab Sample ID: MB 680-602763/12 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 602763

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Ammonia	0.10	U	0.25	0.10	mg/L			12/31/19 13:39	1

Lab Sample ID: LCS 680-602763/11 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 602763

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia			1.00	1.03		mg/L		103	90 - 110		

Lab Sample ID: 660-99483-C-6 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 602763

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits		
Ammonia	0.10	U J3	1.00	0.737	J3	mg/L		74	90 - 110		

Lab Sample ID: 660-99483-C-6 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 602763

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Ammonia	0.10	U J3	1.00	0.755	J3	mg/L		75	90 - 110	2	30

Method: 353.2 - Nitrogen, Nitrate-Nitrite

Lab Sample ID: MB 660-219937/7 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 219937

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Nitrite as N	0.014	U	0.12	0.014	mg/L			12/24/19 13:09	1
Nitrate as N	0.040	U	0.12	0.040	mg/L			12/24/19 13:09	1

Lab Sample ID: DLCK 660-219937/8 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 219937

Analyte	Spike Added	DLCK Result	DLCK Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.0600	0.0779	I	mg/L		130	50 - 150
Nitrite as N	0.0300	0.040	U	mg/L		59	50 - 150

Lab Sample ID: LCS 660-219937/9 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 219937

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.700	0.650		mg/L		93	90 - 110
Nitrite as N	0.350	0.343		mg/L		98	90 - 110

Lab Sample ID: 660-99521-A-3 MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 219937

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Nitrate Nitrite as N	0.89		0.600	1.47		mg/L		97	90 - 110
Nitrite as N	0.035	I J3	0.300	0.382	J3	mg/L		116	90 - 110

Lab Sample ID: 660-99521-A-3 MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 219937

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Nitrate Nitrite as N	0.89		0.600	1.48		mg/L		98	90 - 110	1	30
Nitrite as N	0.035	I J3	0.300	0.382	J3	mg/L		116	90 - 110	0	30

Method: 9012B - Cyanide, Total andor Amenable

Lab Sample ID: MB 680-603214/12-A — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 603321 — **Prep Batch: 603214**

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Cyanide, Total	0.0025	U	0.010	0.0025	mg/L		01/08/20 14:18	01/08/20 18:46	1

Lab Sample ID: LCS 680-603214/13-A — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 603321 — **Prep Batch: 603214**

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0500	0.0523		mg/L		105	85 - 115

Method: 9012B - Cyanide, Total andor Amenable (Continued)

Lab Sample ID: 680-178854-C-2-B MS — **Client Sample ID: Matrix Spike**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 603321 — **Prep Batch: 603214**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Cyanide, Total	0.0056	I	0.0500	0.0560		mg/L		101	85 - 115

Lab Sample ID: 680-178854-C-2-C MSD — **Client Sample ID: Matrix Spike Duplicate**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 603321 — **Prep Batch: 603214**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Cyanide, Total	0.0056	I	0.0500	0.0576		mg/L		104	85 - 115	3	20

Method: 9034 - Sulfide, Acid Soluble and Insoluble (Titrimetric)

Lab Sample ID: MB 680-602662/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 602662

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Sulfide	1.0	U	1.0	1.0	mg/L			12/30/19 15:27	1

Lab Sample ID: LCS 680-602662/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 602662

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Sulfide	10.0	7.51		mg/L		75	75 - 125

Lab Sample ID: LCSD 680-602662/3 — **Client Sample ID: Lab Control Sample Dup**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 602662

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Sulfide	10.0	7.54		mg/L		75	75 - 125	0	30

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

Lab Sample ID: MB 660-219955/1 — **Client Sample ID: Method Blank**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 219955

Analyte	MB Result	MB Qualifier	PQL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Total Dissolved Solids	5.0	U	5.0	5.0	mg/L			12/27/19 08:41	1

Lab Sample ID: LCS 660-219955/2 — **Client Sample ID: Lab Control Sample**
Matrix: Water — **Prep Type: Total/NA**
Analysis Batch: 219955

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Total Dissolved Solids	10000	9680		mg/L		97	80 - 120

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

Lab Sample ID: 660-99493-B-2 DU
Matrix: Water
Analysis Batch: 219955

Client Sample ID: Duplicate
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Total Dissolved Solids	1100			1120		mg/L				2	5.0

QC Association Summary

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

GC/MS VOA

Analysis Batch: 219979

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-1	4MW23	Total/NA	Water	8260B	
660-99522-2	2MW-24D	Total/NA	Water	8260B	
660-99522-3	2MW-25D	Total/NA	Water	8260B	
MB 660-219979/7	Method Blank	Total/NA	Water	8260B	
LCS 660-219979/5	Lab Control Sample	Total/NA	Water	8260B	
660-99522-1 MS	4MW23	Total/NA	Water	8260B	
660-99522-1 MSD	4MW23	Total/NA	Water	8260B	

GC/MS Semi VOA

Prep Batch: 602298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-1	4MW23	Total/NA	Water	3520C	
MB 680-602298/5-A	Method Blank	Total/NA	Water	3520C	
LCS 680-602298/6-A	Lab Control Sample	Total/NA	Water	3520C	
LCS 680-602298/8-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 680-602298/7-A	Lab Control Sample Dup	Total/NA	Water	3520C	
LCSD 680-602298/9-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 602921

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-1	4MW23	Total/NA	Water	8270D	602298
MB 680-602298/5-A	Method Blank	Total/NA	Water	8270D	602298
LCS 680-602298/6-A	Lab Control Sample	Total/NA	Water	8270D	602298
LCS 680-602298/8-A	Lab Control Sample	Total/NA	Water	8270D	602298
LCSD 680-602298/7-A	Lab Control Sample Dup	Total/NA	Water	8270D	602298
LCSD 680-602298/9-A	Lab Control Sample Dup	Total/NA	Water	8270D	602298

GC Semi VOA

Prep Batch: 602605

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-1	4MW23	Total/NA	Water	8151A	
MB 680-602605/16-A	Method Blank	Total/NA	Water	8151A	
LCS 680-602605/17-A	Lab Control Sample	Total/NA	Water	8151A	
LCSD 680-602605/18-A	Lab Control Sample Dup	Total/NA	Water	8151A	

Prep Batch: 602606

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-1	4MW23	Total/NA	Water	3520C	
MB 680-602606/3-A	Method Blank	Total/NA	Water	3520C	
LCS 680-602606/4-A	Lab Control Sample	Total/NA	Water	3520C	
LCSD 680-602606/5-A	Lab Control Sample Dup	Total/NA	Water	3520C	

Analysis Batch: 602793

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-1	4MW23	Total/NA	Water	8151A	602605
MB 680-602605/16-A	Method Blank	Total/NA	Water	8151A	602605
LCS 680-602605/17-A	Lab Control Sample	Total/NA	Water	8151A	602605
LCSD 680-602605/18-A	Lab Control Sample Dup	Total/NA	Water	8151A	602605

QC Association Summary

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

GC Semi VOA

Analysis Batch: 603567

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-1	4MW23	Total/NA	Water	8081B	602606
MB 680-602606/3-A	Method Blank	Total/NA	Water	8081B	602606
LCS 680-602606/4-A	Lab Control Sample	Total/NA	Water	8081B	602606
LCSD 680-602606/5-A	Lab Control Sample Dup	Total/NA	Water	8081B	602606

HPLC/IC

Analysis Batch: 602200

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-2	2MW-24D	Total/NA	Water	300.0-1993 R2.1	
660-99522-3	2MW-25D	Total/NA	Water	300.0-1993 R2.1	
MB 680-602200/2	Method Blank	Total/NA	Water	300.0-1993 R2.1	
LCS 680-602200/3	Lab Control Sample	Total/NA	Water	300.0-1993 R2.1	
LCSD 680-602200/4	Lab Control Sample Dup	Total/NA	Water	300.0-1993 R2.1	
190-21906-A-1 MS	Matrix Spike	Total/NA	Water	300.0-1993 R2.1	
190-21906-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	300.0-1993 R2.1	

Metals

Prep Batch: 219949

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-2	2MW-24D	Total Recoverable	Water	3005A	
660-99522-3	2MW-25D	Total Recoverable	Water	3005A	
MB 660-219949/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 660-219949/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
660-99522-2 MS	2MW-24D	Total Recoverable	Water	3005A	
660-99522-2 MSD	2MW-24D	Total Recoverable	Water	3005A	

Analysis Batch: 219958

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-2	2MW-24D	Total Recoverable	Water	6010D	219949
660-99522-3	2MW-25D	Total Recoverable	Water	6010D	219949
MB 660-219949/1-A	Method Blank	Total Recoverable	Water	6010D	219949
LCS 660-219949/2-A	Lab Control Sample	Total Recoverable	Water	6010D	219949
660-99522-2 MS	2MW-24D	Total Recoverable	Water	6010D	219949
660-99522-2 MSD	2MW-24D	Total Recoverable	Water	6010D	219949

Prep Batch: 603114

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-2	2MW-24D	Total Recoverable	Water	3005A	
660-99522-3	2MW-25D	Total Recoverable	Water	3005A	
MB 680-603114/1-A	Method Blank	Total Recoverable	Water	3005A	
LCS 680-603114/2-A	Lab Control Sample	Total Recoverable	Water	3005A	
660-99574-F-1-B MS	Matrix Spike	Total Recoverable	Water	3005A	
660-99574-F-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	3005A	

Prep Batch: 603183

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-2	2MW-24D	Total/NA	Water	7470A	
660-99522-3	2MW-25D	Total/NA	Water	7470A	
MB 680-603183/13-A	Method Blank	Total/NA	Water	7470A	
LCS 680-603183/14-A	Lab Control Sample	Total/NA	Water	7470A	

Metals (Continued)

Prep Batch: 603183 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99574-E-1-B MS	Matrix Spike	Total/NA	Water	7470A	
660-99574-E-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	

Analysis Batch: 603269

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-2	2MW-24D	Total Recoverable	Water	6020A	603114
660-99522-3	2MW-25D	Total Recoverable	Water	6020A	603114
MB 680-603114/1-A	Method Blank	Total Recoverable	Water	6020A	603114
LCS 680-603114/2-A	Lab Control Sample	Total Recoverable	Water	6020A	603114
660-99574-F-1-B MS	Matrix Spike	Total Recoverable	Water	6020A	603114
660-99574-F-1-C MSD	Matrix Spike Duplicate	Total Recoverable	Water	6020A	603114

Analysis Batch: 603590

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-2	2MW-24D	Total/NA	Water	7470A	603183
660-99522-3	2MW-25D	Total/NA	Water	7470A	603183
MB 680-603183/13-A	Method Blank	Total/NA	Water	7470A	603183
LCS 680-603183/14-A	Lab Control Sample	Total/NA	Water	7470A	603183
660-99574-E-1-B MS	Matrix Spike	Total/NA	Water	7470A	603183
660-99574-E-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	7470A	603183

General Chemistry

Analysis Batch: 219937

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-1	4MW23	Total/NA	Water	353.2	
660-99522-2	2MW-24D	Total/NA	Water	353.2-1993 R2.0	
660-99522-3	2MW-25D	Total/NA	Water	353.2-1993 R2.0	
MB 660-219937/7	Method Blank	Total/NA	Water	353.2	
DLCK 660-219937/8	Lab Control Sample	Total/NA	Water	353.2	
LCS 660-219937/9	Lab Control Sample	Total/NA	Water	353.2	
660-99521-A-3 MS	Matrix Spike	Total/NA	Water	353.2	
660-99521-A-3 MSD	Matrix Spike Duplicate	Total/NA	Water	353.2	

Analysis Batch: 219955

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-2	2MW-24D	Total/NA	Water	SM 2540C	
660-99522-3	2MW-25D	Total/NA	Water	SM 2540C	
MB 660-219955/1	Method Blank	Total/NA	Water	SM 2540C	
LCS 660-219955/2	Lab Control Sample	Total/NA	Water	SM 2540C	
660-99493-B-2 DU	Duplicate	Total/NA	Water	SM 2540C	

Analysis Batch: 602662

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-1	4MW23	Total/NA	Water	9034	
MB 680-602662/1	Method Blank	Total/NA	Water	9034	
LCS 680-602662/2	Lab Control Sample	Total/NA	Water	9034	
LCSD 680-602662/3	Lab Control Sample Dup	Total/NA	Water	9034	

QC Association Summary

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

General Chemistry

Analysis Batch: 602763

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-2	2MW-24D	Total/NA	Water	350.1-1993 R2.0	
660-99522-3	2MW-25D	Total/NA	Water	350.1-1993 R2.0	
MB 680-602763/12	Method Blank	Total/NA	Water	350.1-1993 R2.0	
LCS 680-602763/11	Lab Control Sample	Total/NA	Water	350.1-1993 R2.0	
660-99483-C-6 MS	Matrix Spike	Total/NA	Water	350.1-1993 R2.0	
660-99483-C-6 MSD	Matrix Spike Duplicate	Total/NA	Water	350.1-1993 R2.0	

Prep Batch: 603214

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-1	4MW23	Total/NA	Water	9012B	
MB 680-603214/12-A	Method Blank	Total/NA	Water	9012B	
LCS 680-603214/13-A	Lab Control Sample	Total/NA	Water	9012B	
680-178854-C-2-B MS	Matrix Spike	Total/NA	Water	9012B	
680-178854-C-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	9012B	

Analysis Batch: 603321

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
660-99522-1	4MW23	Total/NA	Water	9012B	603214
MB 680-603214/12-A	Method Blank	Total/NA	Water	9012B	603214
LCS 680-603214/13-A	Lab Control Sample	Total/NA	Water	9012B	603214
680-178854-C-2-B MS	Matrix Spike	Total/NA	Water	9012B	603214
680-178854-C-2-C MSD	Matrix Spike Duplicate	Total/NA	Water	9012B	603214

Lab Chronicle

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Client Sample ID: 4MW23

Date Collected: 12/23/19 13:06
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-1
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	8260B		1	5 mL	5 mL	219979	12/28/19 10:52	ECC	TAL TAM
Total/NA	Prep	3520C			991.8 mL	1 mL	602298	12/30/19 16:45	EHS	TAL SAV
Total/NA	Analysis	8270D		1			602921	01/07/20 03:16	T1C	TAL SAV
Total/NA	Prep	3520C			994.7 mL	5 mL	602606	12/30/19 12:55	WRB	TAL SAV
Total/NA	Analysis	8081B		1			603567	01/13/20 18:59	JCK	TAL SAV
Total/NA	Prep	8151A			1024.9 mL	10 mL	602605	12/30/19 11:24	AA	TAL SAV
Total/NA	Analysis	8151A		1			602793	01/01/20 05:57	JCK	TAL SAV
Total/NA	Analysis	353.2		1	10 mL	10 mL	219937	12/24/19 13:22	JLD	TAL TAM
Total/NA	Prep	9012B			6 mL	6 mL	603214	01/08/20 14:18	JER	TAL SAV
Total/NA	Analysis	9012B		1			603321	01/08/20 18:59	JER	TAL SAV
Total/NA	Analysis	9034		1	280 mL	280 mL	602662	12/30/19 15:27	TB	TAL SAV

Client Sample ID: 2MW-24D

Date Collected: 12/23/19 11:39
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-2
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	8260B		1	5 mL	5 mL	219979	12/28/19 11:13	ECC	TAL TAM
Total/NA	Analysis	300.0-1993 R2.1		1	5 mL	5 mL	602200	12/27/19 18:08	CS	TAL SAV
Total Recoverable	Prep	3005A			50 mL	50 mL	219949	12/27/19 06:54	GAF	TAL TAM
Total Recoverable	Analysis	6010D		1			219958	12/27/19 14:08	GAF	TAL TAM
Total Recoverable	Prep	3005A			50 mL	250 mL	603114	01/08/20 09:12	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			603269	01/08/20 14:47	BJB	TAL SAV
Total/NA	Prep	7470A			25 mL	50 mL	603183	01/08/20 12:02	PG	TAL SAV
Total/NA	Analysis	7470A		1			603590	01/12/20 20:17	BWR	TAL SAV
Total/NA	Analysis	350.1-1993 R2.0		1	2 mL	2 mL	602763	12/31/19 14:07	AMH	TAL SAV
Total/NA	Analysis	353.2-1993 R2.0		1	10 mL	10 mL	219937	12/24/19 13:24	JLD	TAL TAM
Total/NA	Analysis	SM 2540C		1	50 mL	200 mL	219955	12/27/19 08:41	SGF	TAL TAM

Client Sample ID: 2MW-25D

Date Collected: 12/23/19 10:56
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-3
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	8260B		1	5 mL	5 mL	219979	12/28/19 11:34	ECC	TAL TAM
Total/NA	Analysis	300.0-1993 R2.1		1	5 mL	5 mL	602200	12/27/19 18:20	CS	TAL SAV
Total Recoverable	Prep	3005A			50 mL	50 mL	219949	12/27/19 06:54	GAF	TAL TAM
Total Recoverable	Analysis	6010D		1			219958	12/27/19 14:19	GAF	TAL TAM
Total Recoverable	Prep	3005A			50 mL	250 mL	603114	01/08/20 09:12	AJR	TAL SAV
Total Recoverable	Analysis	6020A		1			603269	01/08/20 14:50	BJB	TAL SAV
Total/NA	Prep	7470A			50 mL	50 mL	603183	01/08/20 12:02	PG	TAL SAV
Total/NA	Analysis	7470A		1			603590	01/12/20 20:13	BWR	TAL SAV
Total/NA	Analysis	350.1-1993 R2.0		1	2 mL	2 mL	602763	12/31/19 14:07	AMH	TAL SAV
Total/NA	Analysis	353.2-1993 R2.0		1	10 mL	10 mL	219937	12/24/19 13:25	JLD	TAL TAM

Lab Chronicle

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Client Sample ID: 2MW-25D

Date Collected: 12/23/19 10:56
Date Received: 12/24/19 09:05

Lab Sample ID: 660-99522-3

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	SM 2540C		1	50 mL	200 mL	219955	12/27/19 08:41	SGF	TAL TAM

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858

TAL TAM = Eurofins TestAmerica, Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Method Summary

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Method	Method Description	Protocol	Laboratory
8260B	Volatile Organic Compounds (GC/MS)	SW846	TAL TAM
8270D	Semivolatile Organic Compounds (GC/MS)	SW846	TAL SAV
8081B	Organochlorine Pesticides (GC)	SW846	TAL SAV
8151A	Herbicides (GC)	SW846	TAL SAV
300.0-1993 R2.1	Anions, Ion Chromatography	MCAWW	TAL SAV
6010D	Metals (ICP)	SW846	TAL TAM
6020A	Metals (ICP/MS)	SW846	TAL SAV
7470A	Mercury (CVAA)	SW846	TAL SAV
350.1-1993 R2.0	Nitrogen, Ammonia	MCAWW	TAL SAV
353.2	Nitrogen, Nitrate-Nitrite	MCAWW	TAL TAM
353.2-1993 R2.0	Nitrogen, Nitrate-Nitrite	MCAWW	TAL TAM
9012B	Cyanide, Total andor Amenable	SW846	TAL SAV
9034	Sulfide, Acid Soluble and Insoluble (Titrimetric)	SW846	TAL SAV
SM 2540C	Solids, Total Dissolved (TDS)	SM	TAL TAM
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL SAV
3005A	Preparation, Total Recoverable or Dissolved Metals	SW846	TAL TAM
3520C	Liquid-Liquid Extraction (Continuous)	SW846	TAL SAV
5030B	Purge and Trap	SW846	TAL TAM
7470A	Preparation, Mercury	SW846	TAL SAV
8151A	Extraction (Herbicides)	SW846	TAL SAV
9012B	Cyanide, Total and/or Amenable, Distillation	SW846	TAL SAV

Protocol References:

MCAWW = "Methods For Chemical Analysis Of Water And Wastes", EPA-600/4-79-020, March 1983 And Subsequent Revisions.
SM = "Standard Methods For The Examination Of Water And Wastewater"
SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL SAV = Eurofins TestAmerica, Savannah, 5102 LaRoche Avenue, Savannah, GA 31404, TEL (912)354-7858
TAL TAM = Eurofins TestAmerica, Tampa, 6712 Benjamin Road, Suite 100, Tampa, FL 33634, TEL (813)885-7427

Accreditation/Certification Summary

Client: Pasco Co Board of Commissioners
Project/Site: Resource Recovery

Job ID: 660-99522-1

Laboratory: Eurofins TestAmerica, Tampa

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

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E84282	06-30-20

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
353.2-1993 R2.0		Water	Nitrate Nitrite as N

Laboratory: Eurofins TestAmerica, Savannah

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

Authority	Program	Identification Number	Expiration Date
Florida	NELAP	E87052	06-30-20

Pasco County Environmental Laboratory
8864 Government Drive
New Port Richey, FL 34654
(727) 847-8902 Fax: (727) 847-8112

CHAIN OF CUSTODY RECORD

FOR LAB USE ONLY
Temp. of Contents: 8.9 °C
I.R. Gun #: 19 21 25970
Received on Ice, (ROI) ☑ YES ☐ NO

FOR LAB USE ONLY
LOG IN NO.

1. Client: (Company or Individual): PC ENV Lab
Sampling Address:
City: State Zip Code
Phone: ( )
Fax: ( )

2. Report to: (if different from above): Candra Mulhern
Mailing Address:
City State Zip Code
Phone: ( )
Fax: ( )

3. Client Project Name: RES REC GWM
4. Sampled by: (Print)
5. Sampled by: (Signature)
6. Report Delivery By: ☐ Mail ☐ Fax ☐ P.U.

Water Sample Codes (for Item 11)	Container Codes (for Item 14)
DW - Drinking Water	V - VOA vial
GW - Ground Water	G - Glass
SW - Surface Water	P - Plastic
PW - Processed Water	M - Micro Bag/Cup
WW - Waste Water	O - Other

Preservative Codes (for Item 13)
C - Cool Only
H - Hydrochloric Acid
M - Monochloroacetic Acid
N - Nitric Acid
OH - Sodium Hydroxide
S - Sulfuric Acid
T - Sodium Thiosulfate

Item	Sample ID / Description	9. Sample Date	Sample Time	10. Comp.	Grab	11. Water (Codes)	Leachate	Soil	Sludge	Other	12. No. of Containers	8260B	8270D	8081B	8151A	9034-S	353.2 NO2-N	353.2 NO3-N	APP I	Sample Specific Notes:
	13. Preservatives											C	C	C	C		C	C		
	14. Containers											G	G	G	G		P	P		
1.	4MW23 AC89555	12-23-19	13:06		✓	GW					8	1	1	1	1	1	1	1	*	NO APP I / RESAMPLED
2.	2MW-24D AC89554	12-23-19	11:39		✓	GW					1								1	
3.	2MW-25D AC89553	12-23-19	10:56		✓	GW					1								1	
4.																				* verified
5.																				Ph 12-LR 12-23-19
6.																				
7.																				
8.																				*Sending to
9.																				Test America
10.																				12-24-19

660-99522 Chain of Custody
Loc: 660
99522

17. RELINQUISHED BY	DATE	TIME	18. RECEIVED BY	DATE	TIME
1.	12-23-19	14:45		12-23-19	14:45
2.	12-24-19	0905		12-24-19	0905
3.					
4.					

12/17 PM-09

PC 4/30/19

Prepared in Test America Lot # 0000196189

Prepared in Test America Lot # 0000211719 Bottle

Eurofins TestAmerica, Tampa
6712 Benjamin Road Suite 100
Tampa, FL 33634
Phone: 813-885-7427 Fax: 813-885-7049

Chain of Custody Record

eurofins Environment Testing TestAmerica

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Hornsby, Jess	Carrier Tracking No(s):	COC No: 660-118990.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: jess.hornsby@testamericainc.com	State of Origin: Florida	Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.		Accreditations Required (See note): NELAP - Florida		Job #: 660-99522-1
Address: 5102 LaRoche Avenue, ,	Due Date Requested: 12/31/2019			
City: Savannah	TAT Requested (days):			
State, Zip: GA, 31404				
Phone: 912-354-7858(Tel) 912-352-0165(Fax)	PO #:			
Email:	WO #:			
Project Name: Res Rec GWM	Project #: 66013534			
Site:	SSOW#:			

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, 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)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	8081B/3520C Appendix II Pesticides	8151A/8151A_AP Appendix II Herbicides	8270D/3520C Appendix II SVOCs	9034/ Sulfide	9012B/9012B_Prep Cyanide	6020A/3005A Thallium	300_ORGFM_28D/ Chloride	350.1/ Ammonia	7470A/7470A_Prep Mercury					Total Number of containers	Special Instructions/Note:
			Preservation Code:																		
4MW23 (660-99522-1)	12/23/19	13:06 Eastern		Water			X	X	X	X	X									4	
2MW-24D (660-99522-2)	12/23/19	11:39 Eastern		Water								X	X	X	X					2	
2MW-25D (660-99522-3)	12/23/19	10:56 Eastern		Water								X	X	X	X					2	

Note: Since laboratory accreditations are subject to change, Eurofins TestAmerica places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the 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 complicance to Eurofins TestAmerica.

Possible Hazard Identification *Unconfirmed*	***Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)*** ☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:		Method of Shipment:	
Relinquished by: [signature]	Date/Time: 12-26-19 @ 1700	Company: ETA	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 12-27-19 0800	Company
Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: 1.2/1.3 1.2/1.3		

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: Pasco Co Board of Commissioners

Job Number: 660-99522-1

Login Number: 99522
List Number: 1
Creator: Redding, Charles S

List Source: Eurofins TestAmerica, Tampa

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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.	False	Refer to Job Narrative for details.
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	

Login Sample Receipt Checklist

Client: Pasco Co Board of Commissioners

Job Number: 660-99522-1

Login Number: 99522
List Number: 2
Creator: Laughlin, Paul D

List Source: Eurofins TestAmerica, Savannah
List Creation: 12/27/19 08:38 AM

Question	Answer	Comment
Radioactivity wasn't checked or is </= 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?	N/A	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

DEP Form FD 9000-24: Groundwater Sampling Log

GROUNDWATER SAMPLING DATA SHEET - PASCO COUNTY UTILITIES ENVIRONMENTAL LAB

SITE NAME:	RESOURCE RECOVERY	SITE LOCATION:	Hays Rd.		
WELL NO.		SAMPLE ID:	2MW-24D	SAMPLE DATE:	December 23, 2019

PURGING DATA

WELL DIAMETER(INCHES)	TUBING DIAM (INCHES)	WELL SCREEN INTERVAL DEPTH: ft to ft	TOP Elevation (NGVD)	PUMP TYPE OR BAILER:
2	½"		50.55	BP

WELL VOLUME PURGE: 1 WELL VOL.= (TWD-STATIC DEPTH TO WATER) X WELL CAPACITY

TWD(ft):	44.00	STATIC WATER:	17.35	GALLONS / FOOT:	0.16	1 WELL VOLUME(gals)=	4.26

EQUIPMENT VOLUME PURGE (only fill out if applicable)

INITIAL PUMP OR TUBING DEPTH IN WELL (FEET):	FINAL PUMP OR TUBING DEPTH IN WELL (FEET):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (GALLONS):
		1113	1137	12.00

TIME (24 hr)	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (GPM)	DEPTH TO WATER (FEET)	Ph (S.U.)	TEMP. (C°)	COND. (umhos/cm)	D.O. (mg/L)	TURB. (NTUs)	COLOR (describe)	ODOR (describe)
1113	0.00	0.00	0.00	17.35	7.27	25.13	587	6.95	5.8	clear	none
1121	4.00	4.00	0.50	17.36	7.09	25.03	527	2.09	3.8	clear	none
1129	4.00	8.00	0.50	17.36	7.08	24.95	519	2.12	1.2	clear	none
1137	4.00	12.00	0.50	17.38	7.08	25.57	520	1.68	1.3	clear	none

***WATER LEVEL IS BELOW TOP OF PUMP.

WELL CAPACITY (Gallons Per Foot): **0.75"**=0.02; **1"**=0.04; **1.25"**=0.06; **2"**=0.16; **3"**=0.37; **4"**=0.65; **5"**=1.02; **6"**=1.47; **12"**=5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"**=0.0006; **3/16"**=0.0014; **1/4"**=0.0026; **5/16"**=0.004; **3/8"**=0.006; **1/2"**=0.010; **5/8"**=0.016

SAMPLING DATA

SAMPLED BY/AFFILIATION	GTORREY - Pasco County Environmental Laboratory	SAMPLER SIGNATURE:		SAMPLING INITIATED AT:	1139	SAMPLING ENDED AT:	1142
Pump or tubing depth in well		RATE (ML/MIN.):		TUBING MATERIAL CODE:			PE/T
DECONTAMINATION:	NO	FIELD FILTERED:	NO	FILTER SIZE (UM):		DUPLICATE	NO

SAMPLE CONTAINER SPECIFICATION AND PRESERVATION							INTENDED ANAYSIS and/or METHOD	BOTTLE		EQUIP. CODE:
Sample ID;	# of Conts.	Material Code	Volume	Preservative	mls Added	FINAL PH		DATE	SERIES	
	1	HDPE	1 Liter	Wet Ice	None		SM2540C - TDS	Eurofins Bottle		BP
	1	HDPE	250 mls	Wet Ice	None		Chlorides	Eurofins Bottle		BP
	2	HDPE	250 mls	H2SO4	2.0 1:1	<2	Ammonia/; NO3	Eurofins Bottle		BP
	1	HDPE	250 mls	HNO3	2.5/1:4	<2	App I Metals Fe, Hg, Na	Eurofins Bottle		BP
	3	CG	40 mls	HCl	.25/1:1	<2	App I VOCs	Eurofins Bottle		BP
	3	CG	40 mls	Wet Ice	None		8011-EDB, DBCP	Eurofins Bottle		BP

NGVD:	33.20	LAB SAMPLE ID #:AC89554

MATERIAL CODES: AG=AMBER GLASS; **CG**=CLEAR GLASS; **PE**=POLYETHYLENE; **PP**=POLYPROPYLENE; **S**=SILICONE; **T**=TEFLON; **O**=OTHER

SAMPLING/PURGING **APP**=After Peristalic Pump; **B**=Bailer; **BP**=Bladder Pump; **ESP**=Electric Submersible Pump; **PP**=Peristalic Pump

EQUIPMENT CODES: **RFPP**=Reverse Flow Peristalic Pump; **SM**=Straw Method(Tube Gravity Drain); **VT**=Vacuum Trap; **O**=Other(Specify)

NOTES: 1. The above does not constitute all of the information required by Chapter 62-160, F.A.C.

2. Stabilization Criteria For Range Of Variation Of Last Three Consecutive Readings (See FS 2212, Section 3)

pH: +/- 0.2 units **Temperature**: +/- 0.2 C **Specific Conductance**: +/-5% **Dissolved Oxygen**: all readings </= 20% saturation (see Table FS 2200-2) optionally, +/- 0.2mg/L or +/-10%(whichever is greater) **Turbidity**: all readings <20 NTU; optionally+/- 5NTU or +/- 10% (whichever is greater)

DEP Form FD 9000-24: Groundwater Sampling Log

GROUNDWATER SAMPLING DATA SHEET - PASCO COUNTY UTILITIES ENVIRONMENTAL LAB

SITE NAME:	RESOURCE RECOVERY	SITE LOCATION:	HAYS RD		
WELL NO.		SAMPLE ID:	2MW-25D	SAMPLE DATE:	December 23, 2019

PURGING DATA

WELL DIAMETER(INCHES)	TUBING DIAM (INCHES)	WELL SCREEN INTERVAL DEPTH: ft to ft	TOP Elevation (NGVD)	PUMP TYPE OR BAILER:
2	½"		47.87	BP

WELL VOLUME PURGE: 1 WELL VOL.= (TWD-STATIC DEPTH TO WATER) X WELL CAPACITY

TWD(ft):	32.00	STATIC WATER:	14.59	GALLONS / FOOT:	0.16	1 WELL VOLUME(gals)=	2.78

EQUIPMENT VOLUME PURGE (only fill out if applicable)

INITIAL PUMP OR TUBING DEPTH IN WELL (FEET):	FINAL PUMP OR TUBING DEPTH IN WELL (FEET):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (GALLONS):
		1018	1054	9.00

TIME (24 hr)	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (GPM)	DEPTH TO WATER (FEET)	Ph (S.U.)	TEMP. (C°)	COND. (umhos/cm)	D.O. (mg/L)	TURB. (NTUs)	COLOR (describe)	ODOR (describe)
1018	0.00	0.00	0.00	14.59	6.88	23.54	628	4.3	5.9	cloudy	none
1030	3.00	3.00		14.59	6.99	25.62	664	1.98	12.8	clear	none
1042	3.00	6.00		14.57	7.02	25.93	665	2.06	5.9	clear	none
1054	3.00	9.00		14.58	7.04	26.27	658	2.57	4.9	clear	none

***WATER LEVEL IS BELOW TOP OF PUMP.

WELL CAPACITY (Gallons Per Foot): **0.75"**=0.02; **1"**=0.04; **1.25"**=0.06; **2"**=0.16; **3"**=0.37; **4"**=0.65; **5"**=1.02; **6"**=1.47; **12"**=5.88

TUBING INSIDE DIA. CAPACITY (Gal./Ft.): **1/8"**=0.0006; **3/16"**=0.0014; **1/4"**=0.0026; **5/16"**=0.004; **3/8"**=0.006; **1/2"**=0.010; **5/8"**=0.016

SAMPLING DATA

SAMPLED BY/AFFILIATION	GTORREY - Pasco County Environmental Laboratory	SAMPLER SIGNATURE:	SAMPLING INITIATED AT: 1056	SAMPLING ENDED AT: 1059

Pump or tubing depth in well		RATE (ML/MIN.):		TUBING MATERIAL CODE:	PE/T
DECONTAMINATION:	NO	FIELD FILTERED:	NO	FILTER SIZE (UM):	DUPLICATE NO

SAMPLE CONTAINER SPECIFICATION AND PRESERVATION							INTENDED ANAYSIS and/or METHOD	BOTTLE		EQUIP. CODE:
Sample ID;	# of Conts.	Material Code	Volume	Preservative	mls Added	FINAL PH		DATE	SERIES	
	1	HDPE	1 Liter	Wet Ice	None		SM2540C - TDS	Eurofins Bottle		BP
	1	HDPE	250 mls	Wet Ice	None		Chlorides	Eurofins Bottle		BP
	2	HDPE	250 mls	H2SO4	2.0 1:1	<2	Ammonia/; NO3	Eurofins Bottle		BP
	1	HDPE	250 mls	HNO3	2.5/1:4	<2	App I Metals Fe, Hg, Na	Eurofins Bottle		BP
	3	CG	40 mls	HCl	.25/1:1	<2	App I VOCs	Eurofins Bottle		BP
	3	CG	40 mls	Wet Ice	None		8011-EDB, DBCP	Eurofins Bottle		BP

NGVD:	33.28	LAB SAMPLE ID #:89553

MATERIAL CODES: AG=AMBER GLASS; **CG**=CLEAR GLASS; **PE**=POLYETHYLENE; **PP**=POLYPROPYLENE; **S**=SILICONE; **T**=TEFLON; **O**=OTHER

SAMPLING/PURGING **APP**=After Peristalic Pump; **B**=Bailer; **BP**=Bladder Pump; **ESP**=Electric Submersible Pump; **PP**=Peristalic Pump

EQUIPMENT CODES: **RFPP**=Reverse Flow Peristalic Pump; **SM**=Straw Method(Tube Gravity Drain); **VT**=Vacuum Trap; **O**=Other(Specify)

NOTES: 1. The above does not constitute all of the information required by Chapter 62-160, F.A.C.

2. Stabilization Criteria For Range Of Variation Of Last Three Consecutive Readings (See FS 2212, Section 3)

pH: +/- 0.2 units **Temperature**: +/- 0.2 C **Specific Conductance**: +/-5% **Dissolved Oxygen**: all readings <= 20% saturation (see Table FS 2200-2) optionally, +/- 0.2mg/L or +/-10%(whichever is greater) **Turbidity**: all readings <20 NTU; optionally+/- 5NTU or +/- 10% (whichever is greater)

DEP Form FD 9000-24: Groundwater Sampling Log

GROUNDWATER SAMPLING DATA SHEET - PASCO COUNTY UTILITIES ENVIRONMENTAL LAB

SITE NAME:	RESOURCE RECOVERY	SITE LOCATION:	Hays Rd.		
WELL NO		SAMPLE ID:	4MW-23	SAMPLE DATE:	December 23, 2019

PURGING DATA

WELL DIAMETER(INCHES)	TUBING DIAM (INCHES)	WELL SCREEN INTERVAL DEPTH: ft to ft	TOP Elevation (NAVD)	PUMP TYPE OR BAILER:
2"	½"	38' 53'	54.69	BP

WELL VOLUME PURGE: 1 WELL VOL.= (TWD-STATIC DEPTH TO WATER) X WELL CAPACITY

TWD(ft):	53.00	STATIC WATER	23.23	GALLONS/ FOOT	0.16	1 WELL VOLUME(gals)=	4.76

EQUIPMENT VOLUME PURGE (only fill out if applicable)

INITIAL PUMP OR TUBING DEPTH IN WELL (FEET):	FINAL PUMP OR TUBING DEPTH IN WELL (FEET):	PURGING INITIATED AT:	PURGING ENDED AT:	TOTAL VOLUME PURGED (GALLONS):
		1244	1304	10.00

TIME (24 hr)	VOLUME PURGED (gallons)	CUMUL. VOLUME PURGED (gallons)	PURGE RATE (GPM)	DEPTH TO WATER (FEET)	Ph (S.U.)	TEMP. (C°)	COND. (umhos/cm)	D.O. (mg/L)	TURB. (NTUs)	COLOR (describe)	ODOR (describe)
1244	0.00	0.00	0.00	23.23	7.48	23.78	459	3.55	4.1	clear	npone
1254	5.00	5.00	0.50	23.23	7.22	23.77	523	1.39	99.7	cloudy	none
1304	5.00	10.00	0.50	23.31	7.18	23.87	534	1.67	15.4	cloudy	none

WELL CAPACITY (Gallons Per Foot): 0.75"=0.02; 1"=0.04; 1.25"=0.06; 2"=0.16; 3"=0.37; 4"=0.65; 5"=1.02; 6"=1.47; 12"=5.88 TUBING

SAMPLING DATA

SAMPLED BY/AFFILIATION:	GTORREY - Pasco County Environmental Laboratory	SAMPLER SIGNATURE:	SAMPLING INITIATED AT:	1306	SAMPLING ENDED AT: 1309
Pump or tubing depth in well		RATE (ML/MIN.)		TUBING MATERIAL CODE:	PE/T
FIELD DECONTAMINATION:	NO	FIELD FILTERED:	NO	FILTER SIZE (UM):	DUPLICATE: NO

SAMPLE CONTAINER SPECIFICATION AND PRESERVATION							INTENDED ANAYSIS and/or METHOD	BOTTLE		EQUIP. CODE:
Sample ID:	# of Conts.	Material Code	Volume	Preservative	mls Added	FINAL PH		DATE	SERIES	
	1	HDPE	1 Liter	Wet Ice	None		SM2540C - TDS	Eurofins Bottle		BP
	1	HDPE	250 mls	Wet Ice	None		Chlorides	Eurofins Bottle		BP
	2	HDPE	250 mls	H2SO4	2.0 1:1	<2	Ammonia/; NO3	Eurofins Bottle		BP
	1	HDPE	250 mls	HNO3	2.5/1:4	<2	App I Metals Fe, Hg, Na	Eurofins Bottle		BP
	3	CG	40 mls	HCl	.25/1:1	<2	App I VOCs	Eurofins Bottle		BP
	3	CG	40 mls	Wet Ice	None		8011-EDB, DBCP	Eurofins Bottle		BP
NGVD:	31.46	LAB SAMPLE ID #: AC89555								

MATERIAL CODES: AG=AMBER GLASS; CG=CLEAR GLASS; PE=POLYETHYLENE; PP=POLYPROPYLENE; S=SILICONE; T=TEFLON; O=OTHER

SAMPLING/PURGING EQUIPMENT CODES: APP=After Peristalic Pump; B=Bailer; BP=Bladder Pump; ESP=Electric Submersible Pump; PP=Peristalic Pump RFPP=Reverse Flow Peristalic Pump; SM=Straw Method(Tube Gravity Drain); VT=Vacuum Trap; O=Other(Specify)

NOTES: 1. The above does not constitute all of the information required by Chapter 62-160, F.A.C. 2.
Stabilization Criteria For Range Of Variation Of Last Three Consecutive Readings (See FS 2212, Section 3) pH: +/- 0.2 units Temperature: +/- 0.2 C Specific Conductance: +/-5% Dissolved Oxygen: all readings <= 20% saturation (see Table FS 2200-2) optionally, +/-0.2mg/L or +/- 10%(whichever is greater) Turbidity: all readings <20 NTU; optionally+/- 5NTU or +/- 10% (whichever is greater)