

Biological Analysis Report

SW-DIST-2019-08-30-01

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Overflow Analyses Performed By:
Benchmark Environmental, Inc.
1711 12th Street East
Palmetto, FL 34221
DOH Accreditation E84167

Event Description: **Run 10: Longboat and such**
Request ID: **RQ-2019-08-26-06**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
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13051 N. Telecom Parkway
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Certified by: Cheryl A. Swanson, Program Administrator

Date Certified: 01-OCT-2019 15:55



Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Chlorophyll/Grain Size/BOD, Molecular and Overflow.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Wares Creek Fresh@30th Ave West

Collection Date/Time: 08/29/2019 11:00

Field ID: G2SW0109

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116090	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.4		ug/L	P370377	RPD
		Phaeophytin-a	1.3	IV	ug/L	P370377	
		Chlorophyll-a, Uncorrected	3.2	V	ug/L	P370377	RPD
2116097	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P369893	
	SOP-PCR-1.2	GULL2-qPCR**	8.4E+03	U	TSC/100 mL	P369893	MS
	SOP-PCR-1.3	GFD-purified-qPCR**	1.00E+03	J	TSC/100 mL	P370609	MS
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P369893	
	SOP-PCR-1.5	DG3-qPCR**	1.3E+03	U	TSC/100 mL	P369893	
2116101	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	295		MPN/100 mL		

Ref. Method and Comment:

SM 10200 H (mod.): Prec. data unavailable for at least one component due to small amount of analyte in the QC sample. Refer to QA report for available precision data. Result V-qualified due to lab blank failure for Uncorr chl-a and Phaeo-a components.

SOP-PCR-1.3: Quality control failure(s) observed. See QA report for details.

Sample Location: Wares Crk @ 36th Ave

Collection Date/Time: 08/29/2019 11:30

Field ID: G2SW0031

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116091	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.9		ug/L	P370377	RPD
		Phaeophytin-a	1.4	IV	ug/L	P370377	
		Chlorophyll-a, Uncorrected	3.8	V	ug/L	P370377	RPD
2116098	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P369893	
	SOP-PCR-1.2	GULL2-qPCR**	8.4E+03	U	TSC/100 mL	P369893	MS
	SOP-PCR-1.3	GFD-purified-qPCR**	1.52E+04	J	TSC/100 mL	P370609	MS
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P369893	
	SOP-PCR-1.5	DG3-qPCR**	1.3E+03	U	TSC/100 mL	P369893	
2116102	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	231		MPN/100 mL		

Ref. Method and Comment:

SM 10200 H (mod.): Prec. data unavailable for at least one component due to small amount of analyte in the QC sample. Refer to QA report for available precision data. Result V-qualified due to lab blank failure for Uncorr chl-a and Phaeo-a components.

SOP-PCR-1.3: Quality control failure(s) observed. See QA report for details.

Sample Location: Wares Crk @ 9th Ave

Collection Date/Time: 08/29/2019 10:20

Field ID: G2SW0029

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116095	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.1		ug/L	P370377	RPD
		Phaeophytin-a	1.2	IV	ug/L	P370377	
		Chlorophyll-a, Uncorrected	3.0	V	ug/L	P370377	RPD
2116099	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P369893	
	SOP-PCR-1.2	GULL2-qPCR**	8.4E+03	U	TSC/100 mL	P369893	MS
	SOP-PCR-1.3	GFD-purified-qPCR**	1.02E+04	J	TSC/100 mL	P370609	MS
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P369893	
	SOP-PCR-1.5	DG3-qPCR**	1.3E+03	U	TSC/100 mL	P369893	
2116109	Enterolert/QT	Enterococci-Quanti-Tray	1664		MPN/100 mL		

Field ID: G2SW0029

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:

SM 10200 H (mod.): Prec. data unavailable for at least one component due to small amount of analyte in the QC sample. Refer to QA report for available precision data. Result V-qualified due to lab blank failure for Uncorr chl-a and Phaeo-a components.

SOP-PCR-1.3: Quality control failure(s) observed. See QA report for details.

Sample Location: Wares Creek Tidal by Watertower

Collection Date/Time: 08/29/2019 10:50

Field ID: G2SW0108

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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2116096	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.91	I	ug/L	P370377	RPD
		Phaeophytin-a	0.75	U	ug/L	P370377	
		Chlorophyll-a, Uncorrected	1.2	IV	ug/L	P370377	RPD
2116100	SOP-PCR-1.0	HF183-qPCR**	280	I	GEU/100 mL	P369893	
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P369893	
	SOP-PCR-1.5	DG3-qPCR**	3.1E+03	I	TSC/100 mL	P369893	
2116110	Enterolert/QT	Enterococci-Quanti-Tray	1918		MPN/100 mL		

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data. Result V-qualified due to lab blank failure for Uncorr chl-a component.

Sample Location: Longboat Key@Bishops Bayou

Collection Date/Time: 08/29/2019 12:10

Field ID: G3SW0052

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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2116092	SM 10200 H (mod.)	Chlorophyll-a, Corrected	6.1		ug/L	P370377	RPD
		Phaeophytin-a	1.2	IV	ug/L	P370377	
		Chlorophyll-a, Uncorrected	7.1	V	ug/L	P370377	RPD
2116103	Enterolert/QT	Enterococci-Quanti-Tray	10		MPN/100 mL		
2116106	SM 9222 D	Fecal Coliforms-Membrane Filter	4		cfu/100 mL		

Ref. Method and Comment:

SM 10200 H (mod.): Prec. data unavailable for at least one component due to small amount of analyte in the QC sample. Refer to QA report for available precision data. Result V-qualified due to lab blank failure for Uncorr chl-a and Phaeo-a components.

Sample Location: Longboat Key@Bishop Bayou

Collection Date/Time: 08/29/2019 12:15

Field ID: G3SW0052_DUP

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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2116104	Enterolert/QT	Enterococci-Quanti-Tray	41		MPN/100 mL		
2116107	SM 9222 D	Fecal Coliforms-Membrane Filter	5		cfu/100 mL		

Sample Location: Field_Blank

Collection Date/Time: 08/29/2019 12:20

Field ID: FB 08292019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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2116105	Enterolert/QT	Enterococci-Quanti-Tray	10	U	MPN/100 mL		
2116108	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U	cfu/100 mL		

Sample Location: Braden River Below Ward Lake@ramp

Collection Date/Time: 08/29/2019 09:50

Field ID: G2SW0111

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2116111	Enterolert/QT	Enterococci-Quanti-Tray	209		MPN/100 mL		

Quality Assurance Report
Method Blank Results

Reference Method: SM 10200 H (mod.)
Batch ID: P370377

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.69	U	ug/L
Chlorophyll-a, Uncorrected	0.74	I	ug/L
Phaeophytin-a	0.83	I	ug/L

Reference Method: SOP-PCR-1.0
Batch ID: P369893

Component	Result	Code	Units
HF183-qPCR	280	U	GEU/100 mL

Reference Method: SOP-PCR-1.2
Batch ID: P369893

Component	Result	Code	Units
GULL2-qPCR	1.7E+04	U	TSC/100 mL

Reference Method: SOP-PCR-1.3
Batch ID: P370609

Component	Result	Code	Units
GFD-purified-qPCR	340	U	TSC/100 mL

Reference Method: SOP-PCR-1.4
Batch ID: P369893

Component	Result	Code	Units
BacR-qPCR	3.0E+03	U	TSC/100 mL

Reference Method: SOP-PCR-1.5
Batch ID: P369893

Component	Result	Code	Units
DG3-qPCR	2.6E+03	U	TSC/100 mL

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P370377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	90.6		P	84 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P369893

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	143	171	P/P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P369893

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-qPCR	139	149	P/P	50 - 300

Reference Method: SOP-PCR-1.3
Batch ID: P370609

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-purified-qPCR	166	107	P/P	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P369893

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	90.1	83.3	P/P	50 - 175

Reference Method: SOP-PCR-1.5
Batch ID: P369893

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DG3-qPCR	92.2	84.8	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P369893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2107028	HF183-qPCR	109		P	50 - 175
2115044	HF183-qPCR	132		P	50 - 175
2115733	HF183-qPCR	118		P	50 - 175
2115734	HF183-qPCR	135		P	50 - 175
2115735	HF183-qPCR	118		P	50 - 175
2115736	HF183-qPCR	129	118	P/P	50 - 175
2115970	HF183-qPCR	116		P	50 - 175
2116025	HF183-qPCR	113		P	50 - 175
2116097	HF183-qPCR	131		P	50 - 175
2116098	HF183-qPCR	124		P	50 - 175
2116099	HF183-qPCR	129		P	50 - 175
2116100	HF183-qPCR	124		P	50 - 175
2116129	HF183-qPCR	119		P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P369893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.2

Batch ID: P369893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2115044	GULL2-qPCR	121		P	50 - 300
2115733	GULL2-qPCR	50.5		P	50 - 300
2115734	GULL2-qPCR	264		P	50 - 300
2115735	GULL2-qPCR	111		P	50 - 300
2115736	GULL2-qPCR	118	121	P/P	50 - 300
2115970	GULL2-qPCR	37.9		F	50 - 300
2116097	GULL2-qPCR	125		P	50 - 300
2116098	GULL2-qPCR	101		P	50 - 300
2116099	GULL2-qPCR	138		P	50 - 300

Reference Method: SOP-PCR-1.3

Batch ID: P370609

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2112421	GFD-purified-qPCR	545	505	F/F	50 - 175
2113066	GFD-purified-qPCR	475		F	50 - 175
2114584	GFD-purified-qPCR	459		F	50 - 175
2114849	GFD-purified-qPCR	519		F	50 - 175
2116097	GFD-purified-qPCR	559		F	50 - 175
2116098	GFD-purified-qPCR	444		F	50 - 175
2116099	GFD-purified-qPCR	423		F	50 - 175

Reference Method: SOP-PCR-1.4

Batch ID: P369893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2107028	BacR-qPCR	63.2		P	50 - 175
2115733	BacR-qPCR	54.9		P	50 - 175
2115734	BacR-qPCR	67.7		P	50 - 175
2115735	BacR-qPCR	60.1		P	50 - 175
2115736	BacR-qPCR	67.2	76.2	P/P	50 - 175
2115970	BacR-qPCR	55.2		P	50 - 175
2116097	BacR-qPCR	86.9		P	50 - 175
2116098	BacR-qPCR	81.4		P	50 - 175
2116099	BacR-qPCR	86.7		P	50 - 175
2116100	BacR-qPCR	85.1		P	50 - 175
2116129	BacR-qPCR	65.0		P	50 - 175

Reference Method: SOP-PCR-1.5

Batch ID: P369893

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2115044	DG3-qPCR	86.6		P	50 - 175
2115970	DG3-qPCR	114		P	50 - 175
2116097	DG3-qPCR	89.9		P	50 - 175
2116098	DG3-qPCR	84.4		P	50 - 175
2116099	DG3-qPCR	86.5		P	50 - 175
2116100	DG3-qPCR	88.4		P	50 - 175

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
Batch ID: P370377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2116045	Chlorophyll-a, Corrected	25.3	Sample	F	0 - 25
2116045	Chlorophyll-a, Uncorrected	26.0	Sample	F	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P369893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2115736	HF183-qPCR	8.63	Spike	P	0 - 25

Reference Method: SOP-PCR-1.2
Batch ID: P369893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2115736	GULL2-qPCR	2.78	Spike	P	0 - 25

Reference Method: SOP-PCR-1.3
Batch ID: P370609

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112421	GFD-purified-qPCR	7.27	Spike	P	0 - 25

Reference Method: SOP-PCR-1.4
Batch ID: P369893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2115736	BacR-qPCR	12.6	Spike	P	0 - 25

Reference Method: SOP-PCR-1.5
Batch ID: P369893

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2112421	DG3-qPCR	1.99	Spike	P	0 - 25

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 2116097
Field Sample ID: G2SW0109

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	116	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	107	P	50 - 300

Quality Assurance Report Surrogates

Lab Sample ID: 2116097
Field Sample ID: G2SW0109

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.4	SKETA-qPCR	125	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	105	P	50 - 300

Lab Sample ID: 2116098
Field Sample ID: G2SW0031

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	112	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	102	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	124	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	101	P	50 - 300

Lab Sample ID: 2116099
Field Sample ID: G2SW0029

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	116	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	107	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	126	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	108	P	50 - 300

Lab Sample ID: 2116100
Field Sample ID: G2SW0108

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	120	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	127	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	105	P	50 - 300

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
SM 10200 H (mod.)	Chlorophyll-a, Corrected	90.6						25.3	
	Chlorophyll-a, Uncorrected							26.0	
SOP-PCR-1.0	HF183-qPCR	171	143	118	135	118			8.63
				129					
SOP-PCR-1.2	GULL2-qPCR	149	139	50.5	264	111			2.78
				118					
SOP-PCR-1.3	GFD-purified-qPCR	107	166	545	505	475			7.27
				559					
SOP-PCR-1.4	BacR-qPCR	83.3	90.1	54.9	67.7	60.1			12.6
				67.2					
SOP-PCR-1.5	DG3-qPCR	84.8	92.2	114	89.9	84.4			1.99
				86.5					

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
Enterolert/QT / E84167	Enterococci by Enterolert/QT by BEA in Palmetto	2116103, 2116104, 2116105, 2116109, 2116110, 2116111

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2116090, 2116091, 2116092, 2116095, 2116096
SM 9222 D / E84167	Fecal coliforms by MF by BEA in Palmetto	2116106, 2116107, 2116108
SM 9223 B Quanti-Tray / E84167	E. coli by Colilert/QT by BEA in Palmetto	2116101, 2116102
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	2116097, 2116098, 2116099, 2116100
SOP-PCR-1.2 / E31780	Detection and quantification of coastal bird specific Catellicoccus marimammalium Gull2 genetic marker with quantitative polymerase chain reaction	2116097, 2116098, 2116099
SOP-PCR-1.3 / E31780	Detection and quantification of bird specific Helicobacter GFD genetic marker with quantitative polymerase chain reaction	2116097, 2116098, 2116099
SOP-PCR-1.4 / E31780	Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction	2116097, 2116098, 2116099, 2116100
SOP-PCR-1.5 / E31780	Detection and quantification of canine-specific DG3 Bacteroides genetic marker with quantitative polymerase chain reaction	2116097, 2116098, 2116099, 2116100

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
Enterolert/QT	08/29/2019	08/29/2019 14:22	Peterson Janvier	08/30/2019 14:41	Benchmark EnviroAnalytical - Palmetto	2116103, 2116104, 2116105, 2116109, 2116110, 2116111
SM 10200 H (mod.)	08/30/2019	08/30/2019 14:40		09/09/2019 10:19	Peterson Janvier	2116090, 2116091, 2116092, 2116095, 2116096
SM 9222 D	08/29/2019	08/29/2019 14:19		08/30/2019 13:04	Benchmark EnviroAnalytical - Palmetto	2116106, 2116107, 2116108
SM 9223 B Quanti-Tray	08/29/2019	08/29/2019 14:12		08/30/2019 14:23	Benchmark EnviroAnalytical - Palmetto	2116101, 2116102
SOP-PCR-1.0	08/30/2019	08/30/2019 12:45	Angela Smith	09/12/2019 10:16	Mailin Lopez	2116097, 2116098, 2116099, 2116100
SOP-PCR-1.2	08/30/2019	08/30/2019 12:45	Angela Smith	09/16/2019 12:08	Mailin Lopez	2116097, 2116098, 2116099
SOP-PCR-1.3	08/30/2019	08/30/2019 12:45	Mailin Lopez	09/23/2019 09:32	Mailin Lopez	2116097, 2116098, 2116099
SOP-PCR-1.4	08/30/2019	08/30/2019 12:45	Angela Smith	09/13/2019 14:57	Mailin Lopez	2116097, 2116098, 2116099, 2116100
SOP-PCR-1.5	08/30/2019	08/30/2019 12:45	Angela Smith	09/13/2019 15:43	Mailin Lopez	2116097, 2116098, 2116099, 2116100