

Biological Analysis Report

SW-DIST-2019-02-27-01

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

Overflow Analyses Performed By:
Advanced Environmental Laboratories - Tampa
9610 Princess Palm Avenue
Tampa, Florida 33619
DOH Accreditation E84589

Event Description: **SMP - Gap Cr, Nonsense, Braden, Rattlesnake, Cedar**
Request ID: **RQ-2019-02-25-18**
Customer: **SW-DIST**
Project ID: **SMP**

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Certified by: Cheryl A. Swanson, Program Administrator

Date Certified: 10-APR-2019 14:07



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: GAP CREEK AT 37TH ST. EAST

Collection Date/Time: 02/26/2019 11:10

Field ID: G2SW0110

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2065673	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.5		ug/L	P360113	
		Phaeophytin-a	1.8	I	ug/L	P360113	
		Chlorophyll-a, Uncorrected	3.7		ug/L	P360113	
2065677	SOP-PCR-1.0	HF183-qPCR**	94	U	GEU/100 mL	P360512	
	SOP-PCR-1.2	GULL2-qPCR**	5.6E+03	U	TSC/100 mL	P360512	
	SOP-PCR-1.3	GFD-purified-qPCR**	6.98E+03	J	TSC/100 mL	P361482	LCS, MS
	SOP-PCR-1.4	BacR-qPCR**	1.0E+03	U	TSC/100 mL	P360512	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold			P359296	
2065685	EPA 1603	Escherichia coli-Membrane Filter**	590		cfu/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.

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

SOP-PCR-1.4: Precision data unavailable for Analysis Batch A90384

Sample Location: GAP CREEK @ 45TH ST

Collection Date/Time: 02/26/2019 11:35

Field ID: G2SW0030

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2065674	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.5		ug/L	P360113	
		Phaeophytin-a	1.3	I	ug/L	P360113	
		Chlorophyll-a, Uncorrected	3.4		ug/L	P360113	
2065678	SOP-PCR-1.0	HF183-qPCR**	94	U	GEU/100 mL	P360512	
	SOP-PCR-1.2	GULL2-qPCR**	5.6E+03	U	TSC/100 mL	P360512	
	SOP-PCR-1.3	GFD-purified-qPCR**	1.08E+04	J	TSC/100 mL	P361482	LCS, MS
	SOP-PCR-1.4	BacR-qPCR**	1.0E+03	U	TSC/100 mL	P360512	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold			P359296	
2065686	EPA 1603	Escherichia coli-Membrane Filter**	540		cfu/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.

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

SOP-PCR-1.4: Precision data unavailable for Analysis Batch A90384

Sample Location: NONSENSE @ TARA PRESERVE

Collection Date/Time: 02/26/2019 09:45

Field ID: G2SW0015

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2065681	SOP-PCR-1.0	HF183-qPCR**	94	U	GEU/100 mL	P359614	
	SOP-PCR-1.4	BacR-qPCR**	1.0E+03	U	TSC/100 mL	P359614	LCS
2065688	EPA 1603	Escherichia coli-Membrane Filter**	360		cfu/100 mL		

Sample Location: BRADEN RIVER @ CYPRESS BEND PARK

Collection Date/Time: 02/26/2019 10:10

Field ID: G2SW0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2065682	SOP-PCR-1.0	HF183-qPCR**	94	U	GEU/100 mL	P359614	
	SOP-PCR-1.4	BacR-qPCR**	1.0E+03	U	TSC/100 mL	P359614	LCS

Field ID: G2SW0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2065689	EPA 1603	Escherichia coli-Membrane Filter**	252		cfu/100 mL		

Sample Location: RATTLESNAKE SLOUGH @ LINDEN

Collection Date/Time: 02/26/2019 12:30

Field ID: G2SW0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2065683	SOP-PCR-1.0	HF183-qPCR**	230	I	GEU/100 mL	P359614	
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P359614	LCS
2065690	EPA 1603	Escherichia coli-Membrane Filter**	6500		cfu/100 mL		

Sample Location: CEDAR CREEK @ SADDLEHORN

Collection Date/Time: 02/26/2019 10:50

Field ID: G2SW0018

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2065684	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P359614	
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P359614	LCS
2065691	EPA 1603	Escherichia coli-Membrane Filter**	330		cfu/100 mL		

Sample Location: GAP CREEK @ 45TH ST

Collection Date/Time: 02/26/2019 11:40

Field ID: G2SW0030_DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2065675	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.6		ug/L	P360113	
		Phaeophytin-a	1.6	I	ug/L	P360113	
		Chlorophyll-a, Uncorrected	3.7		ug/L	P360113	
2065679	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P360512	
	SOP-PCR-1.2	GULL2-qPCR**	8.4E+03	U	TSC/100 mL	P360512	
	SOP-PCR-1.3	GFD-purified-qPCR**	1.12E+03	J	TSC/100 mL	P361482	LCS, MS
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P360512	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold			P359296	
2065687	EPA 1603	Escherichia coli-Membrane Filter**	420		cfu/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.

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

SOP-PCR-1.4: Precision data unavailable for Analysis Batch A90384

Sample Location: FIELD

Collection Date/Time: 02/26/2019 12:20

Field ID: FB 02262019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2065676	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.55	U	ug/L	P360113	
		Phaeophytin-a	0.60	U	ug/L	P360113	
		Chlorophyll-a, Uncorrected	0.40	U	ug/L	P360113	

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.

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)
Batch ID: P360113

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.55	U	ug/L
Chlorophyll-a, Uncorrected	0.40	U	ug/L
Phaeophytin-a	0.60	U	ug/L

Reference Method: SOP-PCR-1.0
Batch ID: P359614

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

Reference Method: SOP-PCR-1.0
Batch ID: P360512

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

Reference Method: SOP-PCR-1.2
Batch ID: P360512

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

Reference Method: SOP-PCR-1.3
Batch ID: P361482

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

Reference Method: SOP-PCR-1.4
Batch ID: P359614

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

Reference Method: SOP-PCR-1.4
Batch ID: P360512

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P360113

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	102		P	84 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P359614

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	99.1	144	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P360512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	112	143	P/P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P360512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-qPCR	145	256	P/P	50 - 300

Reference Method: SOP-PCR-1.3
Batch ID: P361482

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-purified-qPCR	174	42.8	P/F	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P359614

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	43.2	90.8	F/P	50 - 175
BacR-qPCR	43.5	95.1	F/P	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P360512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	103	114	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P359614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2058248	HF183-qPCR	87.8		P	50 - 175
2058249	HF183-qPCR	91.8		P	50 - 175
2060595	HF183-qPCR	84.7		P	50 - 175
2060596	HF183-qPCR	74.6		P	50 - 175
2061285	HF183-qPCR	75.4		P	50 - 175
2061793	HF183-qPCR	83.7		P	50 - 175
2062154	HF183-qPCR	87.4		P	50 - 175
2065681	HF183-qPCR	94.8		P	50 - 175
2065682	HF183-qPCR	88.6		P	50 - 175
2065683	HF183-qPCR	98.9		P	50 - 175
2065684	HF183-qPCR	94.1	94.5	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0

Batch ID: P359614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2066123	HF183-qPCR	79.3		P	50 - 175
2066124	HF183-qPCR	83.0		P	50 - 175

Reference Method: SOP-PCR-1.0

Batch ID: P360512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2065677	HF183-qPCR	87.5		P	50 - 175
2065678	HF183-qPCR	90.2		P	50 - 175
2065679	HF183-qPCR	93.5		P	50 - 175
2066131	HF183-qPCR	85.4		P	50 - 175
2066948	HF183-qPCR	95.6		P	50 - 175
2067539	HF183-qPCR	91.3		P	50 - 175
2067540	HF183-qPCR	67.4		P	50 - 175
2070613	HF183-qPCR	97.5	96.7	P/P	50 - 175
2070872	HF183-qPCR	102		P	50 - 175
2071058	HF183-qPCR	106		P	50 - 175
2071543	HF183-qPCR	98.5		P	50 - 175
2071722	HF183-qPCR	99.9		P	50 - 175
2071723	HF183-qPCR	96.1		P	50 - 175

Reference Method: SOP-PCR-1.2

Batch ID: P360512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2065677	GULL2-qPCR	72.4		P	50 - 300
2065678	GULL2-qPCR	87.3		P	50 - 300
2065679	GULL2-qPCR	89.2		P	50 - 300
2066131	GULL2-qPCR	95.6		P	50 - 300
2067539	GULL2-qPCR	94.8		P	50 - 300
2070613	GULL2-qPCR	108	118	P/P	50 - 300

Reference Method: SOP-PCR-1.3

Batch ID: P361482

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2065677	GFD-purified-qPCR	446		F	50 - 175
2065678	GFD-purified-qPCR	423		F	50 - 175
2065679	GFD-purified-qPCR	479		F	50 - 175
2066131	GFD-purified-qPCR	503		F	50 - 175
2067539	GFD-purified-qPCR	453		F	50 - 175
2074409	GFD-purified-qPCR	642	611	F/F	50 - 175
2074410	GFD-purified-qPCR	613		F	50 - 175
2074642	GFD-purified-qPCR	595		F	50 - 175
2074778	GFD-purified-qPCR	610		F	50 - 175
2074779	GFD-purified-qPCR	485		F	50 - 175
2075908	GFD-purified-qPCR	590		F	50 - 175

Reference Method: SOP-PCR-1.4

Batch ID: P359614

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-1.4

Batch ID: P359614

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2058248	BacR-qPCR	81.5		P	50 - 175
2058249	BacR-qPCR	82.6		P	50 - 175
2060595	BacR-qPCR	71.7		P	50 - 175
2060596	BacR-qPCR	73.4		P	50 - 175
2061285	BacR-qPCR	67.2		P	50 - 175
2061793	BacR-qPCR	70.9		P	50 - 175
2062154	BacR-qPCR	77.7		P	50 - 175
2065681	BacR-qPCR	84.9		P	50 - 175
2065682	BacR-qPCR	77.6		P	50 - 175
2065683	BacR-qPCR	83.0		P	50 - 175
2065684	BacR-qPCR	90.6	92.7	P/P	50 - 175
2066123	BacR-qPCR	68.3		P	50 - 175
2066124	BacR-qPCR	78.1		P	50 - 175

Reference Method: SOP-PCR-1.4

Batch ID: P360512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2065677	BacR-qPCR	73.9		P	50 - 175
2065678	BacR-qPCR	73.9		P	50 - 175
2065679	BacR-qPCR	88.8		P	50 - 175
2066131	BacR-qPCR	75.7		P	50 - 175
2067539	BacR-qPCR	73.5		P	50 - 175
2071544	BacR-qPCR	72.8		P	50 - 175

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)

Batch ID: P360113

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2065558	Chlorophyll-a, Corrected	2.21	Sample	P	0 - 25
2065558	Chlorophyll-a, Uncorrected	1.46	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0

Batch ID: P359614

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2065684	HF183-qPCR	0.427	Spike	P	0 - 25

Reference Method: SOP-PCR-1.0

Batch ID: P360512

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070613	HF183-qPCR	0.766	Spike	P	0 - 25

Quality Assurance Report Precision

Reference Method: SOP-PCR-1.2
Batch ID: P360512

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2070613	GULL2-qPCR	9.65	Spike	P	0 - 25

Reference Method: SOP-PCR-1.3
Batch ID: P361482

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2074409	GFD-purified-qPCR	4.94	Spike	P	0 - 25

Reference Method: SOP-PCR-1.4
Batch ID: P359614

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2065684	BacR-qPCR	2.33	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: 2065677
Field Sample ID: G2SW0110

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	87.1	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	74.9	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	107	P	50 - 300

Lab Sample ID: 2065678
Field Sample ID: G2SW0030

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	93.5	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	87.8	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	118	P	50 - 300

Lab Sample ID: 2065679
Field Sample ID: G2SW0030_DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	99.7	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	96.2	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	134	P	50 - 300

Lab Sample ID: 2065681
Field Sample ID: G2SW0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
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Quality Assurance Report Surrogates

Lab Sample ID: 2065681
Field Sample ID: G2SW0015

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	106	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	128	P	50 - 300

Lab Sample ID: 2065682
Field Sample ID: G2SW0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	93.6	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	113	P	50 - 300

Lab Sample ID: 2065683
Field Sample ID: G2SW0017

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	103	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	131	P	50 - 300

Lab Sample ID: 2065684
Field Sample ID: G2SW0018

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	109	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	132	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	102						2.21	
	Chlorophyll-a, Uncorrected							1.46	
SOP-PCR-1.0	HF183-qPCR	144	99.1	94.8	88.6	98.9			0.427
	HF183-qPCR	143	112	97.5	96.7	87.5			0.766
SOP-PCR-1.2	GULL2-qPCR	256	145	108	118	72.4			9.65
SOP-PCR-1.3	GFD-purified-qPCR	42.8	174	642	611	613			4.94
SOP-PCR-1.4	BacR-qPCR	43.2	95.1	43.5	81.5	82.6	77.7		2.33
	BacR-qPCR	90.8			71.7				
	BacR-qPCR	114	103	73.9	73.9	88.8			
					72.8				

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 1603 / E84589	Escherichia coli by membrane filter Advanced Environmental Laboratory in Tampa	2065685, 2065686, 2065687, 2065688, 2065689, 2065690, 2065691
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2065673, 2065674, 2065675, 2065676

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	2065677, 2065678, 2065679, 2065681, 2065682, 2065683, 2065684
SOP-PCR-1.2 / E31780	Detection and quantification of coastal bird specific Catellicoccus marimammalium Gull2 genetic marker with quantitative polymerase chain reaction	2065677, 2065678, 2065679
SOP-PCR-1.3 / E31780	Detection and quantification of bird specific Helicobacter GFD genetic marker with quantitative polymerase chain reaction	2065677, 2065678, 2065679
SOP-PCR-1.4 / E31780	Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction	2065677, 2065678, 2065679, 2065681, 2065682, 2065683, 2065684
SOP-PCR-4.0 / E31780	Preparation of Samples by Filtration and held for qPCR Analysis	2065677, 2065678, 2065679

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 1603	02/26/2019	02/26/2019 16:26		02/27/2019 15:58	AEL - Tampa	2065685, 2065686, 2065687, 2065688, 2065689, 2065690, 2065691
SM 10200 H (mod.)	02/27/2019	02/27/2019 12:10	Jennifer Mihalic	03/06/2019 10:05	Peterson Janvier	2065673, 2065674, 2065675, 2065676
SOP-PCR-1.0	02/27/2019	02/27/2019 15:00	Angela Smith	03/07/2019 08:59	Mailin Lopez	2065681, 2065682, 2065683, 2065684
	02/27/2019	02/27/2019 15:00	Angela Smith	03/28/2019 08:40	Mailin Lopez	2065677, 2065678, 2065679
SOP-PCR-1.2	02/27/2019	02/27/2019 15:00	Angela Smith	04/03/2019 14:42	Mailin Lopez	2065677, 2065678, 2065679
SOP-PCR-1.3	02/27/2019	02/27/2019 15:00	Angela Smith	04/08/2019 09:09	Sarah Menz	2065677, 2065678, 2065679
SOP-PCR-1.4	02/27/2019	02/27/2019 15:00	Angela Smith	03/12/2019 11:01	Mailin Lopez	2065681, 2065682, 2065683, 2065684
	02/27/2019	02/27/2019 15:00	Angela Smith	04/02/2019 12:07	Mailin Lopez	2065677, 2065678, 2065679
SOP-PCR-4.0	02/27/2019	02/27/2019 15:00	Angela Smith	03/26/2019 08:12	Sarah Menz	2065677, 2065678, 2065679