

Biological Analysis Report

NE-DIST-2018-10-03-01

Florida Department of Environmental Protection
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Overflow Analyses Performed By:
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Event Description: **LSJR Southside 2**
Request ID: **RQ-2018-10-01-13**
Customer: **NE-DIST**
Project ID: **SMP**

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Date Certified: 16-NOV-2018 16:49



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 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: Cormorant Branch at Julington Creek Road

Collection Date/Time: 10/02/2018 10:10

Field ID: 20030685

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030499	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4.0		ug/L	P353328	
		Phaeophytin-a	1.1	I	ug/L	P353328	
		Chlorophyll-a, Uncorrected	4.7		ug/L	P353328	
2030517	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	441		MPN/100 mL		
2030524	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P353497	LCS
	SOP-PCR-1.2	GULL2-qPCR**	8.4E+03	U	TSC/100 mL	P353497	
	SOP-PCR-1.3	GFD-purified-qPCR**	170	U	TSC/100 mL	P353626	LCS, MS
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P353497	LCS
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

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-1.2: Precision data unavailable for Analysis Batch A87338

Sample Location: Cormorant Branch @ Marbon Rd

Collection Date/Time: 10/02/2018 09:45

Field ID: 20030852

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030523	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	1150		MPN/100 mL		
2030527	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P353540	
	SOP-PCR-1.2	GULL2-qPCR**	8.4E+03	U	TSC/100 mL	P353540	MS
	SOP-PCR-1.3	GFD-purified-qPCR**	170	U	TSC/100 mL	P354126	LCS, MS, RPD
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P353540	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Ref. Method and Comment:

SOP-PCR-1.2: Precision data unavailable for Analysis Batch A87595

SOP-PCR-1.4: Precision data unavailable for Analysis Batch A87551

Sample Location: Oldfield Cr @ Loretto Rd

Collection Date/Time: 10/02/2018 11:10

Field ID: 20030563

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030500	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.6	I	ug/L	P353328	
		Phaeophytin-a	0.60	U	ug/L	P353328	
		Chlorophyll-a, Uncorrected	2.0		ug/L	P353328	
2030518	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	336		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.

Sample Location: Oldfield Cr @ Julington Creek Road

Collection Date/Time: 10/02/2018 10:30

Field ID: 20030684

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030501	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.0		ug/L	P353328	
		Phaeophytin-a	0.60	U	ug/L	P353328	
		Chlorophyll-a, Uncorrected	3.3		ug/L	P353328	

Field ID: 20030684

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030519	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	1380		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.

Sample Location: Deep Bottom Creek at Scott Mill Rd Collection Date/Time: 10/02/2018 09:20

Field ID: 20030595

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030503	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.1	A	ug/L	P353397	
		Phaeophytin-a	1.9	A	ug/L	P353397	
		Chlorophyll-a, Uncorrected	6.5	A	ug/L	P353397	
2030521	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	311		MPN/100 mL		
2030525	SOP-PCR-4.0	HF183 - Human Source Marker**	Below Threshold				

Sample Location: Deep Bottom Creek at I-295 Collection Date/Time: 10/02/2018 09:00

Field ID: 20030596

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030504	SM 10200 H (mod.)	Chlorophyll-a, Corrected	8.7		ug/L	P353397	
		Phaeophytin-a	1.2	I	ug/L	P353397	
		Chlorophyll-a, Uncorrected	9.7		ug/L	P353397	
2030522	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	1350		MPN/100 mL		
2030526	SOP-PCR-1.0	HF183-qPCR**	390	I	GEU/100 mL	P353540	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Sample Location: Oldfield Cr at Tar Kiln Rd. Collection Date/Time: 10/02/2018 10:45

Field ID: G2NE1174

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2030502	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.79	I	ug/L	P353328	
		Phaeophytin-a	0.67	I	ug/L	P353328	
		Chlorophyll-a, Uncorrected	1.2		ug/L	P353328	
2030520	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	331		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.

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)
 Batch ID: P353328

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

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)
Batch ID: P353397

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.62	U	ug/L
Chlorophyll-a, Uncorrected	0.45	U	ug/L
Phaeophytin-a	0.68	U	ug/L

Reference Method: SOP-PCR-1.0
Batch ID: P353497

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

Reference Method: SOP-PCR-1.0
Batch ID: P353540

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

Reference Method: SOP-PCR-1.2
Batch ID: P353497

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

Reference Method: SOP-PCR-1.2
Batch ID: P353540

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

Reference Method: SOP-PCR-1.3
Batch ID: P353626

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

Reference Method: SOP-PCR-1.3
Batch ID: P354126

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

Reference Method: SOP-PCR-1.4
Batch ID: P353497

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

Reference Method: SOP-PCR-1.4
Batch ID: P353540

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: P353328

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	107		P	84 - 116

Reference Method: SM 10200 H (mod.)
Batch ID: P353397

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	90.9		P	84 - 116

Reference Method: SOP-PCR-1.0
Batch ID: P353497

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	108	187	P/F	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P353540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	117	170	P/P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P353497

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-qPCR	131	176	P/P	50 - 300

Reference Method: SOP-PCR-1.2
Batch ID: P353540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-qPCR	102	116	P/P	50 - 300

Reference Method: SOP-PCR-1.3
Batch ID: P353626

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-purified-qPCR	148	13.2	P/F	50 - 175

Reference Method: SOP-PCR-1.3
Batch ID: P354126

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-purified-qPCR	145	32.4	P/F	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P353497

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	126	298	P/F	50 - 175

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SOP-PCR-1.4
 Batch ID: P353540

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	102	156	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
 Batch ID: P353497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2023642	HF183-qPCR	85.1		P	50 - 175
2023643	HF183-qPCR	85.9		P	50 - 175
2023644	HF183-qPCR	106		P	50 - 175
2023645	HF183-qPCR	95.6		P	50 - 175
2026896	HF183-qPCR	68.3		P	50 - 175
2026986	HF183-qPCR	92.9		P	50 - 175
2026987	HF183-qPCR	61.3	54.7	P/P	50 - 175
2026988	HF183-qPCR	78.4		P	50 - 175
2027411	HF183-qPCR	90.0		P	50 - 175
2027445	HF183-qPCR	79.0		P	50 - 175
2030524	HF183-qPCR	94.6		P	50 - 175
2034865	HF183-qPCR	83.6		P	50 - 175

Reference Method: SOP-PCR-1.0
 Batch ID: P353540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030526	HF183-qPCR	104		P	50 - 175
2030527	HF183-qPCR	113		P	50 - 175
2030628	HF183-qPCR	112		P	50 - 175
2030629	HF183-qPCR	108		P	50 - 175
2031964	HF183-qPCR	110		P	50 - 175
2031965	HF183-qPCR	98.7		P	50 - 175
2031970	HF183-qPCR	115		P	50 - 175
2038163	HF183-qPCR	124		P	50 - 175
2038164	HF183-qPCR	117	111	P/P	50 - 175
2038796	HF183-qPCR	91.2		P	50 - 175

Reference Method: SOP-PCR-1.2
 Batch ID: P353497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026896	GULL2-qPCR	77.0		P	50 - 300
2027411	GULL2-qPCR	103		P	50 - 300
2030524	GULL2-qPCR	85.2		P	50 - 300

Reference Method: SOP-PCR-1.2
 Batch ID: P353540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030527	GULL2-qPCR	68.6		P	50 - 300
2030628	GULL2-qPCR	48.9		F	50 - 300

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.2
 Batch ID: P353540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2031964	GULL2-qPCR	66.0		P	50 - 300

Reference Method: SOP-PCR-1.3
 Batch ID: P353626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026896	GFD-purified-qPCR	0.0		F	50 - 175
2027411	GFD-purified-qPCR	114		P	50 - 175
2029548	GFD-purified-qPCR	107		P	50 - 175
2030524	GFD-purified-qPCR	114	134	P/P	50 - 175

Reference Method: SOP-PCR-1.3
 Batch ID: P354126

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030527	GFD-purified-qPCR	123		P	50 - 175
2030628	GFD-purified-qPCR	109		P	50 - 175
2031964	GFD-purified-qPCR	111		P	50 - 175
2032849	GFD-purified-qPCR	141		P	50 - 175
2038796	GFD-purified-qPCR	208	147	F/P	50 - 175

Reference Method: SOP-PCR-1.4
 Batch ID: P353497

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2026896	BacR-qPCR	90.7		P	50 - 175
2026987	BacR-qPCR	83.0	97.8	P/P	50 - 175
2027411	BacR-qPCR	109		P	50 - 175
2030524	BacR-qPCR	108		P	50 - 175

Reference Method: SOP-PCR-1.4
 Batch ID: P353540

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2030527	BacR-qPCR	88.5		P	50 - 175
2030628	BacR-qPCR	74.0		P	50 - 175
2031964	BacR-qPCR	75.3		P	50 - 175
2031970	BacR-qPCR	70.6		P	50 - 175
2036857	BacR-qPCR	82.4		P	50 - 175
2038163	BacR-qPCR	76.9		P	50 - 175
2038796	BacR-qPCR	59.6		P	50 - 175

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
 Batch ID: P353328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030280	Chlorophyll-a, Corrected	1.44	Sample	P	0 - 25

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
Batch ID: P353328

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030280	Chlorophyll-a, Uncorrected	1.00	Sample	P	0 - 25

Reference Method: SM 10200 H (mod.)
Batch ID: P353397

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030503	Chlorophyll-a, Corrected	0.725	Sample	P	0 - 25
2030503	Chlorophyll-a, Uncorrected	0.519	Sample	P	0 - 25
2030503	Phaeophytin-a	6.88	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P353497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026987	HF183-qPCR	11.3	Spike	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P353540

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038164	HF183-qPCR	4.98	Spike	P	0 - 25

Reference Method: SOP-PCR-1.3
Batch ID: P353626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2030524	GFD-purified-qPCR	16.0	Spike	P	0 - 25

Reference Method: SOP-PCR-1.3
Batch ID: P354126

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2038796	GFD-purified-qPCR	34.2	Spike	F	0 - 25

Reference Method: SOP-PCR-1.4
Batch ID: P353497

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2026987	BacR-qPCR	16.2	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: 2030524
 Field Sample ID: 20030685

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	129	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	98.7	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	100	P	50 - 300

Lab Sample ID: 2030526
 Field Sample ID: 20030596

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	96.9	P	50 - 300

Lab Sample ID: 2030527
 Field Sample ID: 20030852

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	107	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	111	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	137	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	107							1.44	
	Chlorophyll-a, Corrected	90.9							0.725	
	Chlorophyll-a, Uncorrected								1.00	
	Chlorophyll-a, Uncorrected								0.519	
	Phaeophytin-a								6.88	
SOP-PCR-1.0	HF183-qPCR	187	108		85.1	85.9	106			11.3
	HF183-qPCR				95.6					
SOP-PCR-1.2	GULL2-qPCR	176	131		104	113	112			4.98
	GULL2-qPCR				108					
SOP-PCR-1.3	GFD-purified-qPCR	176	131		103	77.0	85.2			
	GFD-purified-qPCR	116	102		68.6	48.9	66.0			
SOP-PCR-1.4	BacR-qPCR	13.2	148		0.0	114	107			16.0
	BacR-qPCR				114					
SOP-PCR-1.4	BacR-qPCR	32.4	145		208	147	123			34.2
	BacR-qPCR				109					
SOP-PCR-1.4	BacR-qPCR	298	126		83.0	97.8	109			16.2
	BacR-qPCR				90.7					
		156	102		88.5	74.0	75.3			
					70.6					

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2030499, 2030500, 2030501, 2030502, 2030503, 2030504
SM 9223 B Quanti-Tray / E82502	Escherichia coli by Colilert Quanti-Tray method by ALS Environmental Laboratory in Jacksonville	2030517, 2030518, 2030519, 2030520, 2030521, 2030522, 2030523
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	2030524, 2030526, 2030527

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SOP-PCR-1.2 / E31780	Detection and quantification of coastal bird specific <i>Catelliboccus marimammalium</i> Gull2 genetic marker with quantitative polymerase chain reaction	2030524, 2030527
SOP-PCR-1.3 / E31780	Detection and quantification of bird specific <i>Helicobacter</i> GFD genetic marker with quantitative polymerase chain reaction	2030524, 2030527
SOP-PCR-1.4 / E31780	Detection and quantification of Ruminant specific <i>Bacteroidetes</i> BacR genetic marker with quantitative polymerase chain reaction	2030524, 2030527
SOP-PCR-4.0 / E31780	Preparation of Samples by Filtration and held for qPCR Analysis	2030524, 2030525, 2030526, 2030527

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 10200 H (mod.)	10/03/2018	10/03/2018 14:57	Mariam Hanna	10/18/2018 09:35	Peterson Janvier	2030499, 2030500, 2030501, 2030502
	10/03/2018	10/03/2018 14:57	Mariam Hanna	10/18/2018 10:35	Peterson Janvier	2030503, 2030504
SM 9223 B Quanti-Tray	10/02/2018	10/02/2018 16:09		10/03/2018 17:07	ALS Environmental, Jax	2030517, 2030518, 2030519, 2030520, 2030521, 2030522, 2030523
SOP-PCR-1.0	10/03/2018	10/03/2018 13:30	Sarah Menz	10/24/2018 14:19	Mailin Lopez	2030524
	10/03/2018	10/03/2018 13:30	Sarah Menz	11/05/2018 15:31	Mailin Lopez	2030526, 2030527
SOP-PCR-1.2	10/03/2018	10/03/2018 13:30	Sarah Menz	10/26/2018 12:44	Mailin Lopez	2030524
	10/03/2018	10/03/2018 13:30	Sarah Menz	11/07/2018 09:59	Mailin Lopez	2030527
SOP-PCR-1.3	10/03/2018	10/03/2018 13:30	Angela Smith	11/07/2018 15:48	Sarah Menz	2030527
	10/03/2018	10/03/2018 13:30	Mailin Lopez	11/01/2018 09:39	Sarah Menz	2030524
SOP-PCR-1.4	10/03/2018	10/03/2018 13:30	Sarah Menz	10/25/2018 12:56	Mailin Lopez	2030524
	10/03/2018	10/03/2018 13:30	Sarah Menz	11/06/2018 10:40	Mailin Lopez	2030527
SOP-PCR-4.0	10/03/2018	10/03/2018 13:30	Angela Smith	10/23/2018 16:52	Sarah Menz	2030524, 2030525, 2030526, 2030527