

Biological Analysis Report

SO-DIST-2018-03-09-01

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

Overflow Analyses Performed By:
Sanders Laboratories
10090 Bavaria Road
Ft. Myers, FL 33913
DOH Accreditation E85457

Event Description: **Sarasota Gators**
Request ID: **RQ-2018-03-05-56**
Customer: **SO-DIST**
Project ID: **SMP**

Send Reports to:
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FLDEP South District Office
2295 Victoria Ave. Suite 364
Fort Myers, FL 33901-3381
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This Report replaces the previous Report Serial Number: 0103683

Report Comment: Corrected qualifier for GFD sample 1973482.

Revision certified by: Puja Jasrotia, Environmental Manager

Date Certified: 25-OCT-2018 14:42



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: Curry(Tidal)@AlbeeFarm

Collection Date/Time: 03/08/2018 10:10

Field ID: G3SD0066

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973479	SM 10200 H (mod.)	Chlorophyll-a, Corrected	13		ug/L	P341708	
		Phaeophytin-a	5.2		ug/L	P341708	
		Chlorophyll-a, Uncorrected	16		ug/L	P341708	

Sample Location: Curry(Tidal)@AlbeeFarm

Collection Date/Time: 03/08/2018 10:10

Field ID: G3SD0066

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973481	SOP-PCR-1.0	HF183-qPCR**	94	U	GEU/100 mL	P342207	
	SOP-PCR-1.2	GULL2-qPCR**	5.6E+03	U	TSC/100 mL	P342207	
	SOP-PCR-1.3	GFD-purified-qPCR**	80	T	TSC/100 mL	P342626	LCS, MS
	SOP-PCR-1.4	BacR-qPCR**	1.0E+03	U	TSC/100 mL	P342207	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Ref. Method and Comment:

SOP-PCR-1.0: No amplification of HF183 marker.

SOP-PCR-1.2: No amplification of GULL2 marker.

SOP-PCR-1.4: No amplification of BACR marker.

Sample Location: Curry(Tidal)@AlbeeFarm

Collection Date/Time: 03/08/2018 10:10

Field ID: G3SD0066

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973485	Enterolert/QT	ENTEROCOCCI-ENTEROLERT	4840	J	MPN/100 mL		

Ref. Method and Comment:

Enterolert/QT: All Quanti-Tray wells were positive. Result may be higher than reported. Lab did not perform 10x marine dilution.

Sample Location: Alligator @ Jacaranda

Collection Date/Time: 03/08/2018 11:10

Field ID: G2SD0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973478	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.2		ug/L	P341708	
		Phaeophytin-a	1.8		ug/L	P341708	
		Chlorophyll-a, Uncorrected	4.4		ug/L	P341708	

Sample Location: Alligator @ Jacaranda

Collection Date/Time: 03/08/2018 11:10

Field ID: G2SD0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973489	SM 9223 Quanti-Tray	Escherichia Coli-Quanti-Tray**	148		MPN/100 mL		

Sample Location: Alligator Tidal @ US 41

Collection Date/Time: 03/08/2018 11:35

Field ID: G2SD0025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973480	SM 10200 H (mod.)	Chlorophyll-a, Corrected	10		ug/L	P341708	
		Phaeophytin-a	1.9		ug/L	P341708	
		Chlorophyll-a, Uncorrected	12		ug/L	P341708	

Sample Location: Alligator Tidal @ US 41

Collection Date/Time: 03/08/2018 11:35

Field ID: G2SD0025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973482	SOP-PCR-1.0	HF183-qPCR**	94	U	GEU/100 mL	P342625	
	SOP-PCR-1.2	GULL2-qPCR**	5.6E+03	U	TSC/100 mL	P342625	LCS
	SOP-PCR-1.3	GFD-purified-qPCR**	110	I	TSC/100 mL	P342626	LCS, MS
	SOP-PCR-1.4	BacR-qPCR**	1.0E+03	U	TSC/100 mL	P342625	LCS, RPD
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Ref. Method and Comment:

SOP-PCR-1.0: No amplification of HF183 marker.

SOP-PCR-1.2: No amplification of GULL2 marker.

SOP-PCR-1.4: No amplification of BACR marker.

Sample Location: Alligator Tidal @ US 41

Collection Date/Time: 03/08/2018 11:35

Field ID: G2SD0025

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973486	Enterolert/QT	ENTEROCOCCI-ENTEROLERT	2420	J	MPN/100 mL		

Ref. Method and Comment:

Enterolert/QT: All Quanti-Tray wells were positive. Result may be higher than reported. Lab did not perform 10x marine dilution.

Sample Location: Woodmere Creek@Heron Rd

Collection Date/Time: 03/08/2018 12:35

Field ID: G2SD0027

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973483	SOP-PCR-1.0	HF183-qPCR**	92	I	GEU/100 mL	P342625	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Sample Location: Woodmere Creek@Heron Rd

Collection Date/Time: 03/08/2018 12:35

Field ID: G2SD0027

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973487	Enterolert/QT	ENTEROCOCCI-ENTEROLERT	1410		MPN/100 mL		

Sample Location: Gottfried@DeerCrkMobile

Collection Date/Time: 03/08/2018 13:10

Field ID: G2SD0028

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973484	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P342672	
	SOP-PCR-1.2	GULL2-qPCR**	3.0E+03	T	TSC/100 mL	P342672	
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P342672	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Ref. Method and Comment:

SOP-PCR-1.0: No amplification of HF183 marker.

SOP-PCR-1.4: No amplification of BACR marker.

Sample Location: Gottfried@DeerCrkMobile

Collection Date/Time: 03/08/2018 13:10

Field ID: G2SD0028

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1973488	Enterolert/QT	ENTEROCOCCI-ENTEROLERT	2420	J	MPN/100 mL		

Field ID: G2SD0028

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
Ref. Method and Comment: Enterolert/QT: All Quanti-Tray wells were positive. Result may be higher than reported. Lab did not perform 10x marine dilution.							

Quality Assurance Report
Method Blank Results

Reference Method: SM 10200 H (mod.)
Batch ID: P341708

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

Reference Method: SOP-PCR-1.0
Batch ID: P342207

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

Reference Method: SOP-PCR-1.0
Batch ID: P342625

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

Reference Method: SOP-PCR-1.0
Batch ID: P342672

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

Reference Method: SOP-PCR-1.2
Batch ID: P342207

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

Reference Method: SOP-PCR-1.2
Batch ID: P342625

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

Reference Method: SOP-PCR-1.2
Batch ID: P342672

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

Reference Method: SOP-PCR-1.3
Batch ID: P342626

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

Quality Assurance Report Method Blank Results

Reference Method: SOP-PCR-1.4
Batch ID: P342207

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

Reference Method: SOP-PCR-1.4
Batch ID: P342625

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

Reference Method: SOP-PCR-1.4
Batch ID: P342672

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P341708

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	97.6		P	84 - 116

Reference Method: SOP-PCR-1.0
Batch ID: P342207

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	153	95.4	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P342625

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	115	53.9	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P342672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	95.6	70.8	P/P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P342207

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-qPCR	88.7	63.0	P/P	50 - 300

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SOP-PCR-1.2
Batch ID: P342625

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-qPCR	88.7	23.9	P/F	50 - 300

Reference Method: SOP-PCR-1.2
Batch ID: P342672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-qPCR	65.3	73.7	P/P	50 - 300
GULL2-qPCR	51.0	89.3	P/P	50 - 300

Reference Method: SOP-PCR-1.3
Batch ID: P342626

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-purified-qPCR	130	14.3	P/F	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P342207

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	101	90.5	P/P	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P342625

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	92.5	32.6	P/F	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P342672

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	65.1	79.0	P/P	50 - 175
BacR-qPCR	69.9	99.2	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P342207

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1972376	HF183-qPCR	104		P	50 - 175
1973137	HF183-qPCR	117		P	50 - 175
1973138	HF183-qPCR	108		P	50 - 175
1973139	HF183-qPCR	115		P	50 - 175
1973140	HF183-qPCR	104		P	50 - 175
1973481	HF183-qPCR	96.5		P	50 - 175
1978249	HF183-qPCR	114	118	P/P	50 - 175
1979261	HF183-qPCR	121		P	50 - 175
1979262	HF183-qPCR	113		P	50 - 175
1979263	HF183-qPCR	112		P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0

Batch ID: P342625

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973482	HF183-qPCR	85.4		P	50 - 175
1973483	HF183-qPCR	92.6		P	50 - 175
1974249	HF183-qPCR	90.6		P	50 - 175
1974550	HF183-qPCR	102		P	50 - 175
1974551	HF183-qPCR	86.7		P	50 - 175
1974753	HF183-qPCR	93.3		P	50 - 175
1974758	HF183-qPCR	99.5		P	50 - 175
1974759	HF183-qPCR	87.1		P	50 - 175
1974760	HF183-qPCR	92.8		P	50 - 175
1975532	HF183-qPCR	86.4		P	50 - 175
1975533	HF183-qPCR	90.0		P	50 - 175
1975535	HF183-qPCR	91.4		P	50 - 175
1980249	HF183-qPCR	97.5	95.6	P/P	50 - 175

Reference Method: SOP-PCR-1.0

Batch ID: P342672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1971367	HF183-qPCR	83.9		P	50 - 175
1973484	HF183-qPCR	89.7	92.8	P/P	50 - 175
1974754	HF183-qPCR	92.3		P	50 - 175
1974755	HF183-qPCR	91.0		P	50 - 175
1975217	HF183-qPCR	78.0		P	50 - 175
1981244	HF183-qPCR	115		P	50 - 175
1981705	HF183-qPCR	78.8		P	50 - 175
1981706	HF183-qPCR	83.1		P	50 - 175
1981851	HF183-qPCR	78.1		P	50 - 175
1982097	HF183-qPCR	90.7		P	50 - 175

Reference Method: SOP-PCR-1.2

Batch ID: P342207

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973138	GULL2-qPCR	53.5		P	50 - 300
1973139	GULL2-qPCR	70.7		P	50 - 300
1973140	GULL2-qPCR	66.6		P	50 - 300
1973481	GULL2-qPCR	60.3		P	50 - 300

Reference Method: SOP-PCR-1.2

Batch ID: P342625

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973482	GULL2-qPCR	69.4		P	50 - 300
1974759	GULL2-qPCR	88.6		P	50 - 300
1980249	GULL2-qPCR	88.3	79.8	P/P	50 - 300

Reference Method: SOP-PCR-1.2

Batch ID: P342672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973484	GULL2-qPCR	90.2	91.5	P/P	50 - 300
1974755	GULL2-qPCR	115		P	50 - 300

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.2

Batch ID: P342672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1981244	GULL2-qPCR	64.1		P	50 - 300
1981707	GULL2-qPCR	77.6	83.4	P/P	50 - 300
1981708	GULL2-qPCR	88.5		P	50 - 300

Reference Method: SOP-PCR-1.3

Batch ID: P342626

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973138	GFD-purified-qPCR	124		P	50 - 175
1973139	GFD-purified-qPCR	181		F	50 - 175
1973140	GFD-purified-qPCR	181		F	50 - 175
1973481	GFD-purified-qPCR	136		P	50 - 175
1973482	GFD-purified-qPCR	98.7		P	50 - 175
1974759	GFD-purified-qPCR	66.7		P	50 - 175
1980249	GFD-purified-qPCR	215	183	F/F	50 - 175
1981851	GFD-purified-qPCR	174		P	50 - 175
1983204	GFD-purified-qPCR	243		F	50 - 175
1983223	GFD-purified-qPCR	149		P	50 - 175

Reference Method: SOP-PCR-1.4

Batch ID: P342207

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973138	BacR-qPCR	59.9		P	50 - 175
1973139	BacR-qPCR	90.6		P	50 - 175
1973140	BacR-qPCR	66.2		P	50 - 175
1973481	BacR-qPCR	65.9		P	50 - 175
1978108	BacR-qPCR	65.4		P	50 - 175
1978109	BacR-qPCR	84.1	76.2	P/P	50 - 175

Reference Method: SOP-PCR-1.4

Batch ID: P342625

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973482	BacR-qPCR	80.9		P	50 - 175
1974758	BacR-qPCR	67.1		P	50 - 175
1974759	BacR-qPCR	74.8		P	50 - 175
1975533	BacR-qPCR	87.4		P	50 - 175
1980249	BacR-qPCR	92.5	66.8	P/P	50 - 175

Reference Method: SOP-PCR-1.4

Batch ID: P342672

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1973484	BacR-qPCR	92.4	95.8	P/P	50 - 175
1974755	BacR-qPCR	80.1		P	50 - 175
1975217	BacR-qPCR	87.4		P	50 - 175
1981244	BacR-qPCR	61.5		P	50 - 175
1981851	BacR-qPCR	63.3		P	50 - 175

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
Batch ID: P341708

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973623	Chlorophyll-a, Corrected	9.58	Sample	P	0 - 25
1973623	Chlorophyll-a, Uncorrected	8.60	Sample	P	0 - 25
1973623	Phaeophytin-a	1.16	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P342207

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978249	HF183-qPCR	2.74	Spike	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P342625

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1980249	HF183-qPCR	1.97	Spike	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P342672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973484	HF183-qPCR	3.37	Spike	P	0 - 25

Reference Method: SOP-PCR-1.2
Batch ID: P342207

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1980249	GULL2-qPCR	10.2	Spike	P	0 - 25

Reference Method: SOP-PCR-1.2
Batch ID: P342625

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1980249	GULL2-qPCR	10.2	Spike	P	0 - 25

Reference Method: SOP-PCR-1.2
Batch ID: P342672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973484	GULL2-qPCR	1.37	Spike	P	0 - 25

Reference Method: SOP-PCR-1.3
Batch ID: P342626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: SOP-PCR-1.3
Batch ID: P342626

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1980249	GFD-purified-qPCR	15.7	Spike	P	0 - 25

Reference Method: SOP-PCR-1.4
Batch ID: P342207

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1978109	BacR-qPCR	9.80	Spike	P	0 - 25

Reference Method: SOP-PCR-1.4
Batch ID: P342625

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1980249	BacR-qPCR	32.3	Spike	F	0 - 25

Reference Method: SOP-PCR-1.4
Batch ID: P342672

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1973484	BacR-qPCR	3.62	Spike	P	0 - 25
1981252	BacR-qPCR	16.9	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: 1973481
Field Sample ID: G3SD0066

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	95.4	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	106	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	95.9	P	50 - 300

Lab Sample ID: 1973482
Field Sample ID: G2SD0025

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	101	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	113	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	97.2	P	50 - 300

Lab Sample ID: 1973483
Field Sample ID: G2SD0027

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

Lab Sample ID: 1973483
Field Sample ID: G2SD0027

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	108	P	50 - 300

Lab Sample ID: 1973484
Field Sample ID: G2SD0028

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	103	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	98.6	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	99.9	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	97.6						9.58	
	Chlorophyll-a, Uncorrected							8.60	
	Phaeophytin-a							1.16	
SOP-PCR-1.0	HF183-qPCR	95.4	153	117	108	115			2.74
				104					
	HF183-qPCR	53.9	115	97.5	95.6	99.5			1.97
SOP-PCR-1.2	HF183-qPCR	70.8	95.6	89.7	92.8	92.3			3.37
				91.0					
	GULL2-qPCR	63.0	88.7	53.5	70.7	66.6			10.2
SOP-PCR-1.2	GULL2-qPCR	23.9	88.7	88.3	79.8	88.6			10.2
				69.4					
	GULL2-qPCR	65.3	89.3	51.0	90.2	91.5	115		1.37
SOP-PCR-1.3	GFD-purified-qPCR	14.3	130	215	183	174			15.7
				124					
	BacR-qPCR	90.5	101	59.9	90.6	66.2			9.80
SOP-PCR-1.4	BacR-qPCR	32.6	92.5	92.5	66.8	67.1			32.3
				74.8					
	BacR-qPCR	65.1	99.2	69.9	61.5	92.4	95.8		16.9
		79.0		80.1					3.62

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
Enterolert/QT / E85457	Enterococci by MPN method by Sanders Laboratories Overflow Laboratory for SD	1973485, 1973486, 1973487, 1973488
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	1973478, 1973479, 1973480
SM 9223 Quanti-Tray / E85457	Escherichia coli by Colilert 18 Quanti-Tray method by Sanders Laboratories for South District	1973489
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	1973481, 1973482, 1973483, 1973484
SOP-PCR-1.2 / E31780	Detection and quantification of coastal bird specific Catellicoccus marimammalium Gull2 genetic marker with quantitative polymerase chain reaction	1973481, 1973482, 1973484
SOP-PCR-1.3 / E31780	Detection and quantification of bird specific Helicobacter GFD genetic marker with quantitative polymerase chain reaction	1973481, 1973482

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SOP-PCR-1.4 / E31780	Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction	1973481, 1973482, 1973484
SOP-PCR-4.0 / E31780	Preparation of Samples by Filtration and held for qPCR Analysis	1973481, 1973482, 1973483, 1973484

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
Enterolert/QT	03/08/2018	03/08/2018 15:50		03/09/2018 16:00	Sanders-Fort Myers	1973485, 1973486, 1973487, 1973488
SM 10200 H (mod.)	03/09/2018	03/09/2018 13:58	Mariam Hanna	03/15/2018 12:45	Kim M. Spencer	1973478, 1973479, 1973480
SM 9223 Quanti-Tray	03/08/2018	03/08/2018 15:15		03/09/2018 09:51	Sanders-Fort Myers	1973489
SOP-PCR-1.0	03/09/2018	03/09/2018 12:30	Angela Smith	04/05/2018 10:03	Mailin Lopez	1973482, 1973483
	03/09/2018	03/09/2018 12:30	Puja Jasrotia	04/05/2018 11:41	Mailin Lopez	1973481
	03/09/2018	03/09/2018 12:30	Puja Jasrotia	04/09/2018 15:43	Mailin Lopez	1973484
SOP-PCR-1.2	03/09/2018	03/09/2018 12:30	Angela Smith	04/09/2018 12:39	Sarah Menz	1973482
	03/09/2018	03/09/2018 12:30	Puja Jasrotia	04/09/2018 12:39	Sarah Menz	1973481
	03/09/2018	03/09/2018 12:30	Puja Jasrotia	04/19/2018 09:33	Sarah Menz	1973484
SOP-PCR-1.3	03/09/2018	03/09/2018 12:30	Angela Smith	04/13/2018 12:53	Sarah Menz	1973481, 1973482
SOP-PCR-1.4	03/09/2018	03/09/2018 12:30	Angela Smith	04/06/2018 10:36	Sarah Menz	1973482
	03/09/2018	03/09/2018 12:30	Puja Jasrotia	04/06/2018 10:21	Sarah Menz	1973481
	03/09/2018	03/09/2018 12:30	Puja Jasrotia	04/18/2018 11:33	Sarah Menz	1973484
SOP-PCR-4.0	03/09/2018	03/09/2018 12:30	Angela Smith	04/03/2018 14:29	Puja Jasrotia	1973481, 1973482
	03/09/2018	03/09/2018 12:30	Sarah Menz	04/03/2018 14:29	Puja Jasrotia	1973483, 1973484