

Biological Analysis Report

SE-DIST-2024-03-21-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **SMP - Sebastian (w/ blank)**
Request ID: **RQ-2024-03-04-67**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Andrew Luering

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Certified by: Puja Jasrotia, Environmental Administrator

Date Certified: 07-MAY-2024 09:52

A handwritten signature in black ink, appearing to be 'Puja Jasrotia', written over a horizontal line.

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, Microbiology and Molecular.

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: C 54 1700M WEST OF 1 95 Collection Date/Time: 03/20/2024 09:05

Field ID: G5SE0062 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2476833	SM 10150 B	Chlorophyll-a, Corrected	2.6	I	ug/L	P443387	
		Phaeophytin-a	1.2	I	ug/L	P443387	
		Chlorophyll-a, Uncorrected	3.5		ug/L	P443387	
2476839	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	1.0	UQ	MPN/100 mL	P443201	
2476845	SOP-PCR-1.0	HF183-qPCR**	1.7E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.2	GULL2-qPCR**	1.8E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.3	GFD-qPCR**	360	U	TSC/100 mL	P443121	RPD
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.5	DG3-qPCR**	1.3E+03	U	TSC/100 mL	P443121	

Ref. Method and Comment:
SM 9223 B Quanti-Tray: Precision data is unavailable for E. coli due to the small amount of analyte in the QC sample for the batch.

Sample Location: NORTH PRONG SEBASTIAN NEAR WILDEN RD Collection Date/Time: 03/20/2024 09:55

Field ID: G5SE0147 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2476832	SM 10150 B	Chlorophyll-a, Corrected	13		ug/L	P443387	
		Phaeophytin-a	4.8		ug/L	P443387	
		Chlorophyll-a, Uncorrected	16		ug/L	P443387	
2476838	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	13.5	Q	MPN/100 mL	P443201	
2476844	SOP-PCR-1.0	HF183-qPCR**	2.2E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.2	GULL2-qPCR**	2.4E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.3	GFD-qPCR**	830	I	TSC/100 mL	P443121	RPD
	SOP-PCR-1.4	BacR-qPCR**	2.0E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.5	DG3-qPCR**	1.7E+03	U	TSC/100 mL	P443121	

Ref. Method and Comment:
SM 9223 B Quanti-Tray: Precision data is unavailable for E. coli due to the small amount of analyte in the QC sample for the batch.

Sample Location: SOUTH PRONG SEBASTIAN TRIBUTARY NEAR ROSELAND RD Collection Date/Time: 03/20/2024 10:30

Field ID: G5SE0145 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2476836	SM 10150 B	Chlorophyll-a, Corrected	2.3	I	ug/L	P443455	
		Phaeophytin-a	2.2	I	ug/L	P443455	
		Chlorophyll-a, Uncorrected	3.7		ug/L	P443455	
2476842	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	186.0	Q	MPN/100 mL	P443201	
2476848	SOP-PCR-1.0	HF183-qPCR**	3.3E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.2	GULL2-qPCR**	3.6E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.3	GFD-qPCR**	720	U	TSC/100 mL	P443121	RPD
	SOP-PCR-1.4	BacR-qPCR**	3.0E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.5	DG3-qPCR**	2.6E+03	U	TSC/100 mL	P443121	

Ref. Method and Comment:
SM 10150 B: 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.
SM 9223 B Quanti-Tray: Precision data is unavailable for E. coli due to the small amount of analyte in the QC sample for the batch.

Sample Location: SOUTH PRONG SEBASTIAN NEAR CANOE LAUNCH

Collection Date/Time: 03/20/2024 11:40

Field ID: G5SE0151

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2476835	SM 10150 B	Chlorophyll-a, Corrected	6.3		ug/L	P443387	
		Phaeophytin-a	3.7		ug/L	P443387	
		Chlorophyll-a, Uncorrected	8.8		ug/L	P443387	
2476841	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	836.0	Q	MPN/100 mL	P443201	
2476847	SOP-PCR-1.0	HF183-qPCR**	1.1E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.2	GULL2-qPCR**	1.2E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.3	GFD-qPCR**	1.2E+03		TSC/100 mL	P443121	RPD
	SOP-PCR-1.4	BacR-qPCR**	1.0E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.5	DG3-qPCR**	860	U	TSC/100 mL	P443121	

Ref. Method and Comment:

SM 9223 B Quanti-Tray: Precision data is unavailable for E. coli due to the small amount of analyte in the QC sample for the batch.

Sample Location: SOUTH PRONG SEBASTIAN AT PARK DOCK

Collection Date/Time: 03/20/2024 12:15

Field ID: G5SE0079

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2476834	SM 10150 B	Chlorophyll-a, Corrected	11		ug/L	P443387	
		Phaeophytin-a	1.0	U	ug/L	P443387	
		Chlorophyll-a, Uncorrected	11		ug/L	P443387	
2476840	Enterolert/QT	Enterococci-Quanti-Tray	10.0	Q	MPN/100 mL	P443201	
2476846	SOP-PCR-1.0	HF183-qPCR**	1.1E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.2	GULL2-qPCR**	1.2E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.3	GFD-qPCR**	3.7E+03		TSC/100 mL	P443121	RPD
	SOP-PCR-1.4	BacR-qPCR**	1.0E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.5	DG3-qPCR**	860	U	TSC/100 mL	P443121	

Ref. Method and Comment:

Enterolert/QT: Laboratory duplicate result is 10.0 U for Entero. Precision data is unavailable due to the small amount of analyte in this QC sample.

Sample Location: ELKHAM WATERWAY NEAR PERIWINKLE DR

Collection Date/Time: 03/20/2024 11:00

Field ID: G5SE0142

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2476831	SM 10150 B	Chlorophyll-a, Corrected	12		ug/L	P443387	
		Phaeophytin-a	6.4		ug/L	P443387	
		Chlorophyll-a, Uncorrected	16		ug/L	P443387	
2476837	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	70.3	Q	MPN/100 mL	P443201	
2476843	SOP-PCR-1.0	HF183-qPCR**	1.7E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.2	GULL2-qPCR**	1.8E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.3	GFD-qPCR**	360	UJ	TSC/100 mL	P443121	MS, RPD
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P443121	
	SOP-PCR-1.5	DG3-qPCR**	1.3E+03	U	TSC/100 mL	P443121	

Ref. Method and Comment:

SM 9223 B Quanti-Tray: Precision data is unavailable for E. coli due to the small amount of analyte in the QC sample for the batch.

SOP-PCR-1.3: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report
Method Blank Results

Reference Method: Enterolert/QT
Batch ID: P443201

Component	Result	Code	Units
Enterococci-Quanti-Tray	1.0	U	MPN/100 mL

Reference Method: SM 10150 B
Batch ID: P443387

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.93	U	ug/L
Chlorophyll-a, Uncorrected	0.68	U	ug/L
Phaeophytin-a	1.0	U	ug/L

Reference Method: SM 10150 B
Batch ID: P443455

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.93	U	ug/L
Chlorophyll-a, Uncorrected	0.68	U	ug/L
Phaeophytin-a	1.0	U	ug/L

Reference Method: SM 9223 B Quanti-Tray
Batch ID: P443201

Component	Result	Code	Units
Escherichia Coli-Quanti-Tray	1.0	U	MPN/100 mL

Reference Method: SOP-PCR-1.0
Batch ID: P443121

Component	Result	Code	Units
HF183-qPCR	3.3E+03	U	TSC/100 mL

Reference Method: SOP-PCR-1.2
Batch ID: P443121

Component	Result	Code	Units
GULL2-qPCR	3.6E+03	U	TSC/100 mL

Reference Method: SOP-PCR-1.3
Batch ID: P443121

Component	Result	Code	Units
GFD-qPCR	720	U	TSC/100 mL

Reference Method: SOP-PCR-1.4
Batch ID: P443121

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

Reference Method: SOP-PCR-1.5
Batch ID: P443121

Component	Result	Code	Units
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Quality Assurance Report
Method Blank Results

Reference Method: SOP-PCR-1.5
Batch ID: P443121

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

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 10150 B
Batch ID: P443387

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	106		P	84 - 116

Reference Method: SM 10150 B
Batch ID: P443455

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	105		P	84 - 116

Reference Method: SOP-PCR-1.0
Batch ID: P443121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	76.6	95.0	P/P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P443121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-qPCR	116	108	P/P	50 - 175

Reference Method: SOP-PCR-1.3
Batch ID: P443121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-qPCR	129	142	P/P	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P443121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	86.3	76.6	P/P	50 - 175

Reference Method: SOP-PCR-1.5
Batch ID: P443121

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DG3-qPCR	85.9	68.3	P/P	50 - 175

Quality Assurance Report
Matrix Spike Accuracy

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P443121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476843	HF183-qPCR	83.3	86.5	P/P	50 - 175
2476844	HF183-qPCR	91.6		P	50 - 175
2476845	HF183-qPCR	99.7		P	50 - 175
2476846	HF183-qPCR	106		P	50 - 175
2476847	HF183-qPCR	98.7		P	50 - 175
2476848	HF183-qPCR	101		P	50 - 175
2477163	HF183-qPCR	82.8		P	50 - 175
2477208	HF183-qPCR	88.1		P	50 - 175
2477648	HF183-qPCR	80.1		P	50 - 175
2477649	HF183-qPCR	81.8		P	50 - 175
2477650	HF183-qPCR	89.8		P	50 - 175
2477837	HF183-qPCR	104		P	50 - 175
2477919	HF183-qPCR	100		P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P443121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476843	GULL2-qPCR	85.3	79.0	P/P	50 - 175
2476844	GULL2-qPCR	85.2		P	50 - 175
2476845	GULL2-qPCR	77.8		P	50 - 175
2476846	GULL2-qPCR	87.6		P	50 - 175
2476847	GULL2-qPCR	64.1		P	50 - 175
2476848	GULL2-qPCR	57.1		P	50 - 175
2477163	GULL2-qPCR	102		P	50 - 175
2477208	GULL2-qPCR	68.4		P	50 - 175
2477837	GULL2-qPCR	95.9		P	50 - 175
2477919	GULL2-qPCR	66.8		P	50 - 175

Reference Method: SOP-PCR-1.3
Batch ID: P443121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476843	GFD-qPCR	184	134	F/P	50 - 175
2476844	GFD-qPCR	143		P	50 - 175
2476845	GFD-qPCR	148		P	50 - 175
2476846	GFD-qPCR	142		P	50 - 175
2476847	GFD-qPCR	141		P	50 - 175
2476848	GFD-qPCR	144		P	50 - 175
2477163	GFD-qPCR	158		P	50 - 175
2477208	GFD-qPCR	128		P	50 - 175
2477837	GFD-qPCR	148		P	50 - 175
2477919	GFD-qPCR	132		P	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P443121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476843	BacR-qPCR	86.7	87.6	P/P	50 - 175
2476844	BacR-qPCR	91.8		P	50 - 175
2476845	BacR-qPCR	79.1		P	50 - 175
2476846	BacR-qPCR	82.4		P	50 - 175

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: SOP-PCR-1.4

Batch ID: P443121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476847	BacR-qPCR	76.7		P	50 - 175
2476848	BacR-qPCR	83.9		P	50 - 175
2477163	BacR-qPCR	83.0		P	50 - 175
2477208	BacR-qPCR	66.4		P	50 - 175
2477648	BacR-qPCR	81.3		P	50 - 175
2477649	BacR-qPCR	91.2		P	50 - 175
2477650	BacR-qPCR	99.3		P	50 - 175
2477837	BacR-qPCR	105		P	50 - 175
2477919	BacR-qPCR	71.7		P	50 - 175

Reference Method: SOP-PCR-1.5

Batch ID: P443121

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2476843	DG3-qPCR	89.2	91.0	P/P	50 - 175
2476844	DG3-qPCR	91.4		P	50 - 175
2476845	DG3-qPCR	93.4		P	50 - 175
2476846	DG3-qPCR	96.9		P	50 - 175
2476847	DG3-qPCR	92.7		P	50 - 175
2476848	DG3-qPCR	103		P	50 - 175
2477163	DG3-qPCR	112		P	50 - 175
2477208	DG3-qPCR	99.6		P	50 - 175
2477837	DG3-qPCR	130		P	50 - 175
2477919	DG3-qPCR	138		P	50 - 175

Quality Assurance Report

Precision

Reference Method: SM 10150 B

Batch ID: P443387

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476669	Chlorophyll-a, Corrected	4.75	Sample	P	0 - 25
2476669	Chlorophyll-a, Uncorrected	4.13	Sample	P	0 - 25
2476669	Phaeophytin-a	0.369	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0

Batch ID: P443121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476843	HF183-qPCR	3.79	Spike	P	0 - 25

Reference Method: SOP-PCR-1.2

Batch ID: P443121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476843	GULL2-qPCR	7.71	Spike	P	0 - 25

Quality Assurance Report

Precision

Reference Method: SOP-PCR-1.3

Batch ID: P443121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476843	GFD-qPCR	31.2	Spike	F	0 - 25

Reference Method: SOP-PCR-1.4

Batch ID: P443121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476843	BacR-qPCR	0.962	Spike	P	0 - 25

Reference Method: SOP-PCR-1.5

Batch ID: P443121

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2476843	DG3-qPCR	1.96	Spike	P	0 - 25

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report

Surrogates

Lab Sample ID: 2476843

Field Sample ID: G5SE0142

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	102	P	50 - 300
SOP-PCR-1.0	SKETA-qPCR	102	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	151	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	160	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	135	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	134	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	108	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	111	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	92.6	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	91.6	P	50 - 300

Lab Sample ID: 2476844

Field Sample ID: G5SE0147

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	101	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	189	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	163	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	131	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	94.0	P	50 - 300

Quality Assurance Report

Surrogates

Lab Sample ID: 2476845

Field Sample ID: G5SE0062

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	88.5	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	156	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	141	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	110	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	87.2	P	50 - 300

Lab Sample ID: 2476846

Field Sample ID: G5SE0079

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	104	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	158	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	143	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	113	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	102	P	50 - 300

Lab Sample ID: 2476847

Field Sample ID: G5SE0151

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	76.9	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	149	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	129	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	101	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	77.3	P	50 - 300

Lab Sample ID: 2476848

Field Sample ID: G5SE0145

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	85.9	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	156	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	137	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	99.1	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	79.8	P	50 - 300

Quality Assurance Report

Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision	
							LCS	MS
SM 10150 B	Chlorophyll-a, Corrected	106					4.75	
	Chlorophyll-a, Corrected	105						
	Chlorophyll-a, Uncorrected						4.13	
	Phaeophytin-a						0.369	
SOP-PCR-1.0	HF183-qPCR	95.0	76.6	83.3	86.5	91.6		3.79
SOP-PCR-1.2	GULL2-qPCR	108	116	85.3	79.0	85.2		7.71
							77.8	
SOP-PCR-1.3	GFD-qPCR	142	129	184	134	143		31.2
				148				

Quality Assurance Report

Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			Precision	MS
							SMP	
SOP-PCR-1.4	BacR-qPCR	86.3	76.6	86.7	87.6	91.8		0.962
SOP-PCR-1.5	DG3-qPCR	68.3	85.9	89.2	91.0	91.4		1.96
				79.1				
				93.4				

Reference Method Descriptions

Method	Description	Associated Samples
Enterolert/QT	Enterococci by Enterolert Quanti-Tray method - non-chlorinated water systems	2476840
SM 10150 B	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2476831, 2476832, 2476833, 2476834, 2476835, 2476836
SM 9223 B Quanti-Tray	Escherichia coli by Colilert 18 Quanti-Tray method - non-chlorinated water systems	2476837, 2476838, 2476839, 2476841, 2476842
SOP-PCR-1.0	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	2476843, 2476844, 2476845, 2476846, 2476847, 2476848
SOP-PCR-1.2	Detection and quantification of coastal bird specific Catellicoccus marimammalium Gull2 genetic marker with quantitative polymerase chain reaction	2476843, 2476844, 2476845, 2476846, 2476847, 2476848
SOP-PCR-1.3	Detection and quantification of bird specific Helicobacter GFD genetic marker with quantitative polymerase chain reaction	2476843, 2476844, 2476845, 2476846, 2476847, 2476848
SOP-PCR-1.4	Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction	2476843, 2476844, 2476845, 2476846, 2476847, 2476848
SOP-PCR-1.5	Detection and quantification of canine-specific DG3 Bacteroides genetic marker with quantitative polymerase chain reaction	2476843, 2476844, 2476845, 2476846, 2476847, 2476848

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
Enterolert/QT SM 10150 B	03/21/2024	03/21/2024 11:10	Keanu Thijm	03/22/2024 13:06	Keanu Thijm	2476840
	03/21/2024	03/21/2024 14:03	Julianna Belitz	03/25/2024 09:25	Megan Higbee	2476831, 2476832, 2476833, 2476834, 2476835
SM 9223 B Quanti-Tray	03/21/2024	03/21/2024 14:03	Julianna Belitz	03/26/2024 14:42	Megan Higbee	2476836
	03/21/2024	03/21/2024 14:38	Keanu Thijm	03/22/2024 09:46	Keanu Thijm	2476837, 2476838, 2476839, 2476841, 2476842
SOP-PCR-1.0	03/21/2024	03/21/2024 13:00	Jennifer Mihalic	04/10/2024 09:27	Roberta Tatti	2476843, 2476844, 2476845, 2476846, 2476847, 2476848
SOP-PCR-1.2	03/21/2024	03/21/2024 13:00	Jennifer Mihalic	04/16/2024 20:19	Madeline Gruver	2476843, 2476844, 2476845, 2476846, 2476847, 2476848
SOP-PCR-1.3	03/21/2024	03/21/2024 13:00	Jennifer Mihalic	04/16/2024 18:04	Madeline Gruver	2476843, 2476844, 2476845, 2476846, 2476847, 2476848
SOP-PCR-1.4	03/21/2024	03/21/2024 13:00	Jennifer Mihalic	04/11/2024 14:37	Roberta Tatti	2476843, 2476844, 2476845, 2476846, 2476847, 2476848
SOP-PCR-1.5	03/21/2024	03/21/2024 13:00	Jennifer Mihalic	04/12/2024 09:02	Roberta Tatti	2476843, 2476844, 2476845, 2476846, 2476847, 2476848