

Biological Analysis Report

NW-DIST-2022-03-31-01

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

Overflow Analyses Performed By:
University of West Florida
11000 University Parkway
Pensacola, FL 32514
DOH Accreditation E71969

Event Description: **Pensacola Run**
Request ID: **RQ-2022-03-28-31**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
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160 W Government Street
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Certified by: Puja Jasrotia, Environmental Administrator

Date Certified: 17-MAY-2022 10:56



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: Marcus Creek upstream of Marcus Pointe Blvd **Collection Date/Time: 03/30/2022 09:35**

Field ID: G4NW0179

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2315702	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.2	I	ug/L	P411954	
		Phaeophytin-a	0.90	U	ug/L	P411954	
		Chlorophyll-a, Uncorrected	1.2	I	ug/L	P411954	
2315703	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	52		MPN/100 mL		

Sample Location: Ten Mile Creek above Powerlines **Collection Date/Time: 03/30/2022 10:05**

Field ID: G5NW0045

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2315704	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	327		MPN/100 mL		
2315708	SOP-PCR-1.0	HF183-qPCR**	1.7E+03	U	TSC/100 mL	P411813	
	SOP-PCR-1.2	GULL2-qPCR**	1.8E+03	U	TSC/100 mL	P411813	
	SOP-PCR-1.3	GFD-qPCR**	360	U	TSC/100 mL	P411813	
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P411813	
	SOP-PCR-1.5	DG3-qPCR**	1.3E+03	U	TSC/100 mL	P411813	

Sample Location: Ten Mile Creek upstream of Pine Forest Road **Collection Date/Time: 03/30/2022 10:20**

Field ID: G5NW0051

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2315705	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	135		MPN/100 mL		
2315709	SOP-PCR-1.0	HF183-qPCR**	3.3E+03	U	TSC/100 mL	P411813	
	SOP-PCR-1.2	GULL2-qPCR**	3.6E+03	U	TSC/100 mL	P411813	
	SOP-PCR-1.3	GFD-qPCR**	720	U	TSC/100 mL	P411813	
	SOP-PCR-1.4	BacR-qPCR**	3.0E+03	U	TSC/100 mL	P411813	
	SOP-PCR-1.5	DG3-qPCR**	2.6E+03	U	TSC/100 mL	P411813	

Sample Location: Thompson Bayou at Greenbriar Road **Collection Date/Time: 03/30/2022 10:44**

Field ID: G4NW0240

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2315706	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	86		MPN/100 mL		
2315710	SOP-PCR-1.0	HF183-qPCR**	1.7E+03	U	TSC/100 mL	P411813	
	SOP-PCR-1.2	GULL2-qPCR**	1.8E+03	U	TSC/100 mL	P411813	
	SOP-PCR-1.3	GFD-qPCR**	990	I	TSC/100 mL	P411813	
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P411813	
	SOP-PCR-1.5	DG3-qPCR**	1.3E+03	U	TSC/100 mL	P411813	

Sample Location: Thompson Bayou 50m west of Edward Ball Trail (UWF) **Collection Date/Time: 03/30/2022 11:10**

Field ID: G4NW0424

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2315707	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	97		MPN/100 mL		
2315711	SOP-PCR-1.0	HF183-qPCR**	1.7E+03	U	TSC/100 mL	P411813	

Field ID: G4NW0424

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2315711	SOP-PCR-1.2	GULL2-qPCR**	1.8E+03	U	TSC/100 mL	P411813	
	SOP-PCR-1.3	GFD-qPCR**	1.9E+03		TSC/100 mL	P411813	
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P411813	
	SOP-PCR-1.5	DG3-qPCR**	1.3E+03	U	TSC/100 mL	P411813	

Sample Location: Jones Creek upstream of N Navy Blvd

Collection Date/Time: 03/30/2022 13:25

Field ID: G4NW0429

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2315712	SOP-PCR-1.0	HF183-qPCR**	3.3E+03	U	TSC/100 mL	P413512	
	SOP-PCR-1.2	GULL2-qPCR**	3.6E+03	U	TSC/100 mL	P413512	
	SOP-PCR-1.3	GFD-qPCR**	1.2E+03	I	TSC/100 mL	P413512	
	SOP-PCR-1.4	BacR-qPCR**	3.0E+03	U	TSC/100 mL	P413512	
	SOP-PCR-1.5	DG3-qPCR**	2.6E+03	UJ	TSC/100 mL	P411813	SUR

Ref. Method and Comment:

SOP-PCR-1.0: Precision data unavailable for HF183-qPCR component.

SOP-PCR-1.2: Precision data unavailable for Gull2-qPCR component.

SOP-PCR-1.3: Precision data unavailable for GFD-qPCR component.

SOP-PCR-1.4: Precision data unavailable for BacR-qPCR component.

SOP-PCR-1.5: Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Jones Creek NW corner of Walmart parking lot

Collection Date/Time: 03/30/2022 13:45

Field ID: G4NW0130

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2315713	SOP-PCR-1.0	HF183-qPCR**	3.3E+03	U	TSC/100 mL	P413512	
	SOP-PCR-1.2	GULL2-qPCR**	3.6E+03	U	TSC/100 mL	P413512	
	SOP-PCR-1.3	GFD-qPCR**	1.3E+03	I	TSC/100 mL	P413512	
	SOP-PCR-1.4	BacR-qPCR**	3.0E+03	U	TSC/100 mL	P413512	
	SOP-PCR-1.5	DG3-qPCR**	2.6E+03	UJ	TSC/100 mL	P411813	SUR

Ref. Method and Comment:

SOP-PCR-1.0: Precision data unavailable for HF183-qPCR component.

SOP-PCR-1.2: Precision data unavailable for Gull2-qPCR component.

SOP-PCR-1.3: Precision data unavailable for GFD-qPCR component.

SOP-PCR-1.4: Precision data unavailable for BacR-qPCR component.

SOP-PCR-1.5: Refer to the Lab Analysis Report for an explanation of QC Codes.

Quality Assurance Report

Method Blank Results

Reference Method: SM 10200 H (mod.)

Batch ID: P411954

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.89	U	ug/L
Chlorophyll-a, Uncorrected	0.65	U	ug/L
Phaeophytin-a	0.98	U	ug/L

Reference Method: SOP-PCR-1.0

Batch ID: P411813

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SOP-PCR-1.0
Batch ID: P411813

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

Reference Method: SOP-PCR-1.0
Batch ID: P413512

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

Reference Method: SOP-PCR-1.2
Batch ID: P411813

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

Reference Method: SOP-PCR-1.2
Batch ID: P413512

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

Reference Method: SOP-PCR-1.3
Batch ID: P411813

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

Reference Method: SOP-PCR-1.3
Batch ID: P413512

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

Reference Method: SOP-PCR-1.4
Batch ID: P411813

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

Reference Method: SOP-PCR-1.4
Batch ID: P413512

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

Reference Method: SOP-PCR-1.5
Batch ID: P411813

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P411954

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	93.5		P	84 - 116

Reference Method: SOP-PCR-1.0
Batch ID: P411813

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	53.4	86.8	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P413512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	104	92.5	P/P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P411813

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

Reference Method: SOP-PCR-1.2
Batch ID: P413512

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

Reference Method: SOP-PCR-1.3
Batch ID: P411813

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-qPCR	97.1	93.5	P/P	50 - 175

Reference Method: SOP-PCR-1.3
Batch ID: P413512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-qPCR	99.1	98.1	P/P	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P411813

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	92.3	53.5	P/P	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P413512

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	107	63.7	P/P	50 - 175

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SOP-PCR-1.5
Batch ID: P411813

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DG3-qPCR	87.2	58.9	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P411813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315708	HF183-qPCR	80.0	74.8	P/P	50 - 175
2315709	HF183-qPCR	77.8		P	50 - 175
2315710	HF183-qPCR	77.3		P	50 - 175
2315711	HF183-qPCR	73.8		P	50 - 175
2316157	HF183-qPCR	73.6		P	50 - 175
2316437	HF183-qPCR	72.9		P	50 - 175
2316469	HF183-qPCR	73.7		P	50 - 175
2316470	HF183-qPCR	84.4		P	50 - 175
2316935	HF183-qPCR	75.2		P	50 - 175
2316936	HF183-qPCR	71.4		P	50 - 175
2316972	HF183-qPCR	78.0		P	50 - 175
2316973	HF183-qPCR	92.4		P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P413512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315712	HF183-qPCR	104		P	50 - 175
2315713	HF183-qPCR	111		P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P411813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315708	GULL2-qPCR	79.0	85.4	P/P	50 - 300
2315709	GULL2-qPCR	89.0		P	50 - 300
2315710	GULL2-qPCR	93.6		P	50 - 300
2315711	GULL2-qPCR	92.9		P	50 - 300
2316157	GULL2-qPCR	72.0		P	50 - 300
2316437	GULL2-qPCR	93.6		P	50 - 300
2316469	GULL2-qPCR	77.8		P	50 - 300
2316470	GULL2-qPCR	88.2		P	50 - 300
2316935	GULL2-qPCR	88.6		P	50 - 300
2316936	GULL2-qPCR	96.7		P	50 - 300
2316973	GULL2-qPCR	80.2		P	50 - 300

Reference Method: SOP-PCR-1.2
Batch ID: P413512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315712	GULL2-qPCR	79.0		P	50 - 300
2315713	GULL2-qPCR	85.4		P	50 - 300

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.3

Batch ID: P411813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315708	GFD-qPCR	89.1	88.3	P/P	50 - 175
2315709	GFD-qPCR	85.3		P	50 - 175
2315710	GFD-qPCR	88.6		P	50 - 175
2315711	GFD-qPCR	87.4		P	50 - 175
2316157	GFD-qPCR	84.4		P	50 - 175
2316437	GFD-qPCR	92.6		P	50 - 175
2316469	GFD-qPCR	85.8		P	50 - 175
2316470	GFD-qPCR	87.7		P	50 - 175
2316935	GFD-qPCR	95.6		P	50 - 175
2316936	GFD-qPCR	87.0		P	50 - 175
2316973	GFD-qPCR	92.2		P	50 - 175

Reference Method: SOP-PCR-1.3

Batch ID: P413512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315712	GFD-qPCR	114		P	50 - 175
2315713	GFD-qPCR	106		P	50 - 175

Reference Method: SOP-PCR-1.4

Batch ID: P411813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315708	BacR-qPCR	70.0	71.3	P/P	50 - 175
2315709	BacR-qPCR	70.9		P	50 - 175
2315710	BacR-qPCR	77.7		P	50 - 175
2315711	BacR-qPCR	79.1		P	50 - 175
2316157	BacR-qPCR	50.2		P	50 - 175
2316437	BacR-qPCR	83.3		P	50 - 175
2316469	BacR-qPCR	57.2		P	50 - 175
2316470	BacR-qPCR	67.8		P	50 - 175
2316935	BacR-qPCR	56.5		P	50 - 175
2316936	BacR-qPCR	82.9		P	50 - 175
2316972	BacR-qPCR	75.0		P	50 - 175
2316973	BacR-qPCR	72.4		P	50 - 175

Reference Method: SOP-PCR-1.4

Batch ID: P413512

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315712	BacR-qPCR	53.9		P	50 - 175
2315713	BacR-qPCR	52.1		P	50 - 175

Reference Method: SOP-PCR-1.5

Batch ID: P411813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315708	DG3-qPCR	79.6	82.9	P/P	50 - 175
2315709	DG3-qPCR	79.4		P	50 - 175
2315710	DG3-qPCR	76.3		P	50 - 175
2315711	DG3-qPCR	75.1		P	50 - 175
2315712	DG3-qPCR	64.5		P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.5
 Batch ID: P411813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2315713	DG3-qPCR	72.8		P	50 - 175
2316157	DG3-qPCR	77.0		P	50 - 175
2316437	DG3-qPCR	78.9		P	50 - 175
2316469	DG3-qPCR	75.3		P	50 - 175
2316470	DG3-qPCR	81.6		P	50 - 175
2316935	DG3-qPCR	84.4		P	50 - 175
2316936	DG3-qPCR	83.4		P	50 - 175
2316972	DG3-qPCR	86.6		P	50 - 175

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
 Batch ID: P411954

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315651	Chlorophyll-a, Corrected	5.67	Sample	P	0 - 25
2315651	Chlorophyll-a, Uncorrected	5.93	Sample	P	0 - 25
2315651	Phaeophytin-a	7.45	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0
 Batch ID: P411813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315708	HF183-qPCR	6.84	Spike	P	0 - 25

Reference Method: SOP-PCR-1.2
 Batch ID: P411813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315708	GULL2-qPCR	7.80	Spike	P	0 - 25

Reference Method: SOP-PCR-1.3
 Batch ID: P411813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315708	GFD-qPCR	0.933	Spike	P	0 - 25

Reference Method: SOP-PCR-1.4
 Batch ID: P411813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315708	BacR-qPCR	1.86	Spike	P	0 - 25

Quality Assurance Report Precision

Reference Method: SOP-PCR-1.5
Batch ID: P411813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2315708	DG3-qPCR	4.13	Spike	P	0 - 25

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

Quality Assurance Report Surrogates

Lab Sample ID: 2315708
Field Sample ID: G5NW0045

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	89.1	P	50 - 300
SOP-PCR-1.0	SKETA-qPCR	102	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	96.4	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	96.4	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	94.9	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	95.3	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	91.5	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	82.0	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	81.4	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	84.2	P	50 - 300

Lab Sample ID: 2315709
Field Sample ID: G5NW0051

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	103	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	99.8	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	99.9	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	96.7	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	87.6	P	50 - 300

Lab Sample ID: 2315710
Field Sample ID: G4NW0240

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	111	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	92.9	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	91.1	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	114	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	95.2	P	50 - 300

Lab Sample ID: 2315711
Field Sample ID: G4NW0424

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	101	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	95.5	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	94.8	P	50 - 300

Quality Assurance Report Surrogates

Lab Sample ID: 2315711
 Field Sample ID: G4NW0424

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.4	SKETA-qPCR	89.1	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	84.8	P	50 - 300

Lab Sample ID: 2315712
 Field Sample ID: G4NW0429

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	74.7	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	193	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	86.8	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	70.4	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	41.3	F	50 - 300

Lab Sample ID: 2315713
 Field Sample ID: G4NW0130

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	77.5	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	193	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	88.9	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	73.0	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	34.1	F	50 - 300

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision	
								SMP	MS
SM 10200 H (mod.)	Chlorophyll-a, Corrected	93.5						5.67	
	Chlorophyll-a, Uncorrected							5.93	
	Phaeophytin-a							7.45	
SOP-PCR-1.0	HF183-qPCR	86.8	53.4	80.0	74.8	77.8			6.84
				77.3					
	HF183-qPCR	92.5	104	104	111				
SOP-PCR-1.2	GULL2-qPCR	102	102	79.0	85.4	89.0			7.80
				93.6					
	GULL2-qPCR	102	102	79.0	85.4				
SOP-PCR-1.3	GFD-qPCR	93.5	97.1	89.1	88.3	85.3			0.933
				88.6					
	GFD-qPCR	98.1	99.1	114	106				
SOP-PCR-1.4	BacR-qPCR	53.5	92.3	70.0	71.3	70.9			1.86
				77.7					
	BacR-qPCR	63.7	107	53.9	52.1				
SOP-PCR-1.5	DG3-qPCR	58.9	87.2	79.6	82.9	79.4			4.13
				76.3					

Reference Method Descriptions

Method	Description	Associated Samples
SM 10200 H (mod.)	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2315702

Reference Method Descriptions

Method	Description	Associated Samples
SM 9223 B Quanti-Tray	E. coli by Colilert-18/QT by UWF in Pensacola	2315703, 2315704, 2315705, 2315706, 2315707
SOP-PCR-1.0	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	2315708, 2315709, 2315710, 2315711, 2315712, 2315713
SOP-PCR-1.2	Detection and quantification of coastal bird specific Catellicoccus marimammalium Gull2 genetic marker with quantitative polymerase chain reaction	2315708, 2315709, 2315710, 2315711, 2315712, 2315713
SOP-PCR-1.3	Detection and quantification of bird specific Helicobacter GFD genetic marker with quantitative polymerase chain reaction	2315708, 2315709, 2315710, 2315711, 2315712, 2315713
SOP-PCR-1.4	Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction	2315708, 2315709, 2315710, 2315711, 2315712, 2315713
SOP-PCR-1.5	Detection and quantification of canine-specific DG3 Bacteroides genetic marker with quantitative polymerase chain reaction	2315708, 2315709, 2315710, 2315711, 2315712, 2315713

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 10200 H (mod.)	03/31/2022	03/31/2022 15:09	Joel Wharton	04/04/2022 09:30	Jillian G Hanley	2315702
SM 9223 B Quanti-Tray	03/30/2022	03/30/2022 14:00		03/31/2022 11:08	UWF Lab	2315703, 2315704, 2315705, 2315706, 2315707
SOP-PCR-1.0	03/31/2022	03/31/2022 14:30	Jennifer Mihalic	05/06/2022 12:48	Roberta Tatti	2315712, 2315713
	03/31/2022	03/31/2022 14:30	Roberta Tatti	04/28/2022 10:08	DeAsia Armster	2315708, 2315709, 2315710, 2315711
SOP-PCR-1.2	03/31/2022	03/31/2022 14:30	Jennifer Mihalic	05/02/2022 10:42	Roberta Tatti	2315712, 2315713
	03/31/2022	03/31/2022 14:30	Roberta Tatti	05/02/2022 10:42	Roberta Tatti	2315708, 2315709, 2315710, 2315711
SOP-PCR-1.3	03/31/2022	03/31/2022 14:30	Jennifer Mihalic	05/10/2022 11:06	Roberta Tatti	2315712, 2315713
	03/31/2022	03/31/2022 14:30	Roberta Tatti	05/02/2022 16:27	Roberta Tatti	2315708, 2315709, 2315710, 2315711
SOP-PCR-1.4	03/31/2022	03/31/2022 14:30	Jennifer Mihalic	05/06/2022 12:48	Roberta Tatti	2315712, 2315713
	03/31/2022	03/31/2022 14:30	Roberta Tatti	04/29/2022 13:19	DeAsia Armster	2315708, 2315709, 2315710, 2315711
SOP-PCR-1.5	03/31/2022	03/31/2022 14:30	Roberta Tatti	05/02/2022 09:05	DeAsia Armster	2315708, 2315709, 2315710, 2315711, 2315712, 2315713