

Biological Analysis Report

NE-DIST-2022-11-30-01

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

Event Description: **Pellicer Creek Tribs**
Request ID: **RQ-2022-11-14-25**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Puja Jasrotia, Environmental Administrator

Date Certified: 11-JAN-2023 09:03

A handwritten signature in black ink, appearing to be 'Puja Jasrotia', with a horizontal line underneath it.

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: Pellicer Creek Downstream of RR tracks

Collection Date/Time: 11/29/2022 11:30

Field ID: G5NE0590

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371759	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	148.3	Q	MPN/100 mL	P423033	

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: PRINGLER BR UNNAMED DIRT RD 0.5MI S DAVE BR

Collection Date/Time: 11/29/2022 12:25

Field ID: 27010203

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371743	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P423311	
		Phaeophytin-a	0.90	U	ug/L	P423311	
		Chlorophyll-a, Uncorrected	0.60	U	ug/L	P423311	
2371753	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	83.6	Q	MPN/100 mL	P423033	

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.

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: STEVENS BR @ CR 204

Collection Date/Time: 11/29/2022 12:00

Field ID: 27010062

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371745	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P423311	
		Phaeophytin-a	0.90	U	ug/L	P423311	
		Chlorophyll-a, Uncorrected	0.60	U	ug/L	P423311	
2371755	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	37.4	Q	MPN/100 mL	P423033	

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.

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: Stevens Branch East Branch at CR204

Collection Date/Time: 11/29/2022 11:45

Field ID: G5NE0600

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371757	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	133.3	Q	MPN/100 mL	P423033	
2371766	SOP-PCR-1.0	HF183-purified-qPCR**	370	UJ	TSC/100 mL	P423407	LCS, SUR
	SOP-PCR-1.2	GULL2-purified-qPCR**	400	UJ	TSC/100 mL	P423407	LCS, SUR
	SOP-PCR-1.3	GFD-purified-qPCR**	2.39E+03	J	TSC/100 mL	P423407	LCS, SUR
	SOP-PCR-1.4	BacR-purified-qPCR**	340	UJ	TSC/100 mL	P423407	LCS, SUR
	SOP-PCR-1.5	DG3-purified-qPCR**	290	UJ	TSC/100 mL	P423407	LCS, SUR

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-1.0: Precision data unavailable for HF183-purified-qPCR component. Refer to the Lab Analysis Report for an explanation of QC Codes.

SOP-PCR-1.2: Precision data unavailable for GULL2-purified-qPCR component. Refer to the Lab Analysis Report for an explanation of QC Codes.

SOP-PCR-1.3: Precision data unavailable for GFD-purified-qPCR component. Refer to the Lab Analysis Report for an explanation of QC Codes.

SOP-PCR-1.4: Precision data unavailable for BacR-purified-qPCR component. Refer to the Lab Analysis Report for an explanation of QC Codes.

SOP-PCR-1.5: Precision data unavailable for DG3-purified-qPCR component. Refer to the Lab Analysis Report for an explanation of QC Codes.

Sample Location: Schoolhouse Branch at RR tracks

Collection Date/Time: 11/29/2022 11:05

Field ID: G5NE0599

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371744	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P423311	
		Phaeophytin-a	0.90	U	ug/L	P423311	
		Chlorophyll-a, Uncorrected	0.60	U	ug/L	P423311	
2371754	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	27.5	Q	MPN/100 mL	P423033	
2371765	SOP-PCR-1.0	HF183-qPCR**	1.7E+03	U	TSC/100 mL	P422905	
	SOP-PCR-1.2	GULL2-qPCR**	1.8E+03	U	TSC/100 mL	P422905	
	SOP-PCR-1.3	GFD-qPCR**	550	I	TSC/100 mL	P422905	
	SOP-PCR-1.4	BacR-qPCR**	1.5E+03	U	TSC/100 mL	P422905	
	SOP-PCR-1.5	DG3-qPCR**	1.3E+03	U	TSC/100 mL	P422905	

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.

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: PELLICER CREEK above schoolhouse Br

Collection Date/Time: 11/29/2022 10:50

Field ID: G5NE0598

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371746	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P423311	
		Phaeophytin-a	0.90	U	ug/L	P423311	
		Chlorophyll-a, Uncorrected	0.60	U	ug/L	P423311	
2371756	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	344.8	Q	MPN/100 mL	P423033	

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.

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: PRINGLE APROX. 100M ABV RR TRACKS

Collection Date/Time: 11/29/2022 10:40

Field ID: 27010974

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2371758	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	101.7	Q	MPN/100 mL	P423033	

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.

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)

Batch ID: P423311

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.82	U	ug/L
Chlorophyll-a, Uncorrected	0.60	U	ug/L
Phaeophytin-a	0.90	U	ug/L

Reference Method: SM 9223 B Quanti-Tray

Batch ID: P423033

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

Quality Assurance Report

Method Blank Results

Reference Method: SOP-PCR-1.0
Batch ID: P422905

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

Reference Method: SOP-PCR-1.0
Batch ID: P423407

Component	Result	Code	Units
HF183-purified-qPCR	550	U	TSC/100 mL

Reference Method: SOP-PCR-1.2
Batch ID: P422905

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

Reference Method: SOP-PCR-1.2
Batch ID: P423407

Component	Result	Code	Units
GULL2-purified-qPCR	600	U	TSC/100 mL

Reference Method: SOP-PCR-1.3
Batch ID: P422905

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

Reference Method: SOP-PCR-1.3
Batch ID: P423407

Component	Result	Code	Units
GFD-purified-qPCR	120	U	TSC/100 mL

Reference Method: SOP-PCR-1.4
Batch ID: P422905

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

Reference Method: SOP-PCR-1.4
Batch ID: P423407

Component	Result	Code	Units
BacR-purified-qPCR	510	U	TSC/100 mL

Reference Method: SOP-PCR-1.5
Batch ID: P422905

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

Quality Assurance Report Method Blank Results

Reference Method: SOP-PCR-1.5
Batch ID: P423407

Component	Result	Code	Units
DG3-purified-qPCR	430	U	TSC/100 mL

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P423311

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	96.6		P	84 - 116

Reference Method: SOP-PCR-1.0
Batch ID: P422905

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	81.2	80.5	P/P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P423407

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-purified-qPCR	111	3.69	P/F	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P422905

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-qPCR	97.8	77.1	P/P	50 - 300

Reference Method: SOP-PCR-1.2
Batch ID: P423407

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GULL2-purified-qPCR	106	2.42	P/F	50 - 300

Reference Method: SOP-PCR-1.3
Batch ID: P422905

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-qPCR	102	83.8	P/P	50 - 175

Reference Method: SOP-PCR-1.3
Batch ID: P423407

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
GFD-purified-qPCR	102	3.05	P/F	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P422905

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SOP-PCR-1.4
Batch ID: P422905

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	108	81.1	P/P	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P423407

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-purified-qPCR	99.9	1.66	P/F	50 - 175

Reference Method: SOP-PCR-1.5
Batch ID: P422905

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DG3-qPCR	104	78.9	P/P	50 - 175

Reference Method: SOP-PCR-1.5
Batch ID: P423407

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
DG3-purified-qPCR	108	1.85	P/F	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P422905

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2371765	HF183-qPCR	94.6	97.2	P/P	50 - 175
2372130	HF183-qPCR	80.5		P	50 - 175
2372322	HF183-qPCR	91.0		P	50 - 175
2372342	HF183-qPCR	88.7		P	50 - 175
2372761	HF183-qPCR	102		P	50 - 175
2373387	HF183-qPCR	98.0		P	50 - 175
2373690	HF183-qPCR	102		P	50 - 175
2373934	HF183-qPCR	92.2		P	50 - 175

Reference Method: SOP-PCR-1.0
Batch ID: P423407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370771	HF183-purified-qPCR	103		P	50 - 175
2370961	HF183-purified-qPCR	103		P	50 - 175
2371766	HF183-purified-qPCR	94.3		P	50 - 175
2372420	HF183-purified-qPCR	98.4		P	50 - 175
2373386	HF183-purified-qPCR	98.7		P	50 - 175

Reference Method: SOP-PCR-1.2
Batch ID: P422905

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2371765	GULL2-qPCR	61.3	58.6	P/P	50 - 300

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.2

Batch ID: P422905

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2373690	GULL2-qPCR	61.1		P	50 - 300
2373934	GULL2-qPCR	94.2		P	50 - 300

Reference Method: SOP-PCR-1.2

Batch ID: P423407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370961	GULL2-purified-qPCR	104		P	50 - 300
2371766	GULL2-purified-qPCR	102		P	50 - 300
2372420	GULL2-purified-qPCR	102		P	50 - 300
2373386	GULL2-purified-qPCR	108		P	50 - 300

Reference Method: SOP-PCR-1.3

Batch ID: P422905

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2371765	GFD-qPCR	128	125	P/P	50 - 175
2372322	GFD-qPCR	104		P	50 - 175
2372761	GFD-qPCR	119		P	50 - 175
2373387	GFD-qPCR	111		P	50 - 175
2373690	GFD-qPCR	111		P	50 - 175
2373934	GFD-qPCR	94.3		P	50 - 175

Reference Method: SOP-PCR-1.3

Batch ID: P423407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370961	GFD-purified-qPCR	104		P	50 - 175
2371766	GFD-purified-qPCR	96.7		P	50 - 175
2372420	GFD-purified-qPCR	98.3		P	50 - 175
2373386	GFD-purified-qPCR	100		P	50 - 175

Reference Method: SOP-PCR-1.4

Batch ID: P422905

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2371765	BacR-qPCR	94.2	95.2	P/P	50 - 175
2372130	BacR-qPCR	75.4		P	50 - 175
2372322	BacR-qPCR	74.2		P	50 - 175
2372342	BacR-qPCR	92.5		P	50 - 175
2372761	BacR-qPCR	80.3		P	50 - 175
2373387	BacR-qPCR	78.8		P	50 - 175
2373690	BacR-qPCR	77.1		P	50 - 175
2373934	BacR-qPCR	92.9		P	50 - 175

Reference Method: SOP-PCR-1.4

Batch ID: P423407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370771	BacR-purified-qPCR	105		P	50 - 175
2370961	BacR-purified-qPCR	102		P	50 - 175
2371766	BacR-purified-qPCR	94.5		P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.4

Batch ID: P423407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2372420	BacR-purified-qPCR	88.3		P	50 - 175
2373386	BacR-purified-qPCR	87.5		P	50 - 175

Reference Method: SOP-PCR-1.5

Batch ID: P422905

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2371765	DG3-qPCR	95.7	94.1	P/P	50 - 175
2372130	DG3-qPCR	82.0		P	50 - 175
2372322	DG3-qPCR	84.0		P	50 - 175
2372342	DG3-qPCR	96.9		P	50 - 175
2372761	DG3-qPCR	78.7		P	50 - 175
2373387	DG3-qPCR	83.5		P	50 - 175
2373690	DG3-qPCR	91.1		P	50 - 175
2373934	DG3-qPCR	95.4		P	50 - 175

Reference Method: SOP-PCR-1.5

Batch ID: P423407

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2370771	DG3-purified-qPCR	101		P	50 - 175
2370961	DG3-purified-qPCR	107		P	50 - 175
2371766	DG3-purified-qPCR	105		P	50 - 175
2372420	DG3-purified-qPCR	108		P	50 - 175
2373386	DG3-purified-qPCR	109		P	50 - 175

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)

Batch ID: P423311

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371802	Chlorophyll-a, Corrected	4.33	Sample	P	0 - 25
2371802	Chlorophyll-a, Uncorrected	4.51	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0

Batch ID: P422905

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371765	HF183-qPCR	2.65	Spike	P	0 - 25

Reference Method: SOP-PCR-1.2

Batch ID: P422905

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371765	GULL2-qPCR	4.38	Spike	P	0 - 25

Quality Assurance Report Precision

Reference Method: SOP-PCR-1.3
Batch ID: P422905

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371765	GFD-qPCR	2.51	Spike	P	0 - 25

Reference Method: SOP-PCR-1.4
Batch ID: P422905

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371765	BacR-qPCR	0.982	Spike	P	0 - 25

Reference Method: SOP-PCR-1.5
Batch ID: P422905

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2371765	DG3-qPCR	1.65	Spike	P	0 - 25

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

Quality Assurance Report Surrogates

Lab Sample ID: 2371765
Field Sample ID: G5NE0599

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	74.1	P	50 - 300
SOP-PCR-1.0	SKETA-qPCR	71.7	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	69.8	P	50 - 300
SOP-PCR-1.2	SKETA-qPCR	84.1	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	115	P	50 - 300
SOP-PCR-1.3	SKETA-qPCR	119	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	110	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	111	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	75.6	P	50 - 300
SOP-PCR-1.5	SKETA-qPCR	77.8	P	50 - 300

Lab Sample ID: 2371766
Field Sample ID: G5NE0600

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	2.80	F	50 - 300
SOP-PCR-1.2	SKETA-qPCR	3.25	F	30 - 300
SOP-PCR-1.3	SKETA-qPCR	2.99	F	30 - 300
SOP-PCR-1.4	SKETA-qPCR	3.11	F	30 - 300
SOP-PCR-1.5	SKETA-qPCR	3.18	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	96.6						4.33	
	Chlorophyll-a, Uncorrected							4.51	
SOP-PCR-1.0	HF183-purified-qPCR	3.69	111	103	103	94.3			
				98.4					
	HF183-qPCR	80.5	81.2	94.6	97.2	80.5			2.65
				91.0					
SOP-PCR-1.2	GULL2-purified-qPCR	2.42	106	104	102	102			
				108					
	GULL2-qPCR	77.1	97.8	61.3	58.6	61.1			4.38
				94.2					
SOP-PCR-1.3	GFD-purified-qPCR	3.05	102	104	96.7	98.3			
				100					
	GFD-qPCR	83.8	102	128	125	104			2.51
				119					
SOP-PCR-1.4	BacR-purified-qPCR	1.66	99.9	105	102	94.5			
				88.3					
	BacR-qPCR	81.1	108	94.2	95.2	75.4			0.982
				74.2					
SOP-PCR-1.5	DG3-purified-qPCR	1.85	108	101	107	105			
				108					
	DG3-qPCR	78.9	104	95.7	94.1	82.0			1.65
				84.0					

Reference Method Descriptions

Method	Description	Associated Samples
SM 10200 H (mod.)	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2371743, 2371744, 2371745, 2371746
SM 9223 B Quanti-Tray	Escherichia coli by Colilert 18 Quanti-Tray method - non-chlorinated water systems	2371753, 2371754, 2371755, 2371756, 2371757, 2371758, 2371759
SOP-PCR-1.0	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	2371765
SOP-PCR-1.0	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	2371766
SOP-PCR-1.2	Detection and quantification of coastal bird specific Catellicoccus marimammalium Gull2 genetic marker with quantitative polymerase chain reaction	2371765
SOP-PCR-1.2	Detection and quantification of coastal bird specific Catellicoccus marimammalium Gull2 genetic marker with quantitative polymerase chain reaction	2371766
SOP-PCR-1.3	Detection and quantification of bird specific Helicobacter GFD genetic marker with quantitative polymerase chain reaction	2371766
SOP-PCR-1.3	Detection and quantification of bird specific Helicobacter GFD genetic marker with quantitative polymerase chain reaction	2371765
SOP-PCR-1.4	Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction	2371765
SOP-PCR-1.4	Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction	2371766
SOP-PCR-1.5	Detection and quantification of canine-specific DG3 Bacteroides genetic marker with quantitative polymerase chain reaction	2371765
SOP-PCR-1.5	Detection and quantification of canine-specific DG3 Bacteroides genetic marker with quantitative polymerase chain reaction	2371766

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 10200 H (mod.)	11/30/2022	11/30/2022 14:06	Aidan Cronin	12/07/2022 15:24	Megan Higbee	2371743, 2371744, 2371745, 2371746
SM 9223 B Quanti-Tray	11/30/2022	11/30/2022 16:28	Tynan A Branch	12/01/2022 11:45	Callie Williams	2371753, 2371754, 2371755, 2371756, 2371757, 2371758, 2371759
SOP-PCR-1.0	11/30/2022	11/30/2022 13:30	Claudia Castro	12/12/2022 09:15	DeAsia Armster	2371765
	11/30/2022	11/30/2022 13:30	DeAsia Armster	12/14/2022 14:19	Roberta Tatti	2371766
SOP-PCR-1.2	11/30/2022	11/30/2022 13:30	Claudia Castro	12/13/2022 14:20	DeAsia Armster	2371765
	11/30/2022	11/30/2022 13:30	DeAsia Armster	12/16/2022 14:53	DeAsia Armster	2371766
SOP-PCR-1.3	11/30/2022	11/30/2022 13:30	Claudia Castro	12/14/2022 09:03	Roberta Tatti	2371765
	11/30/2022	11/30/2022 13:30	DeAsia Armster	12/16/2022 10:56	Roberta Tatti	2371766
SOP-PCR-1.4	11/30/2022	11/30/2022 13:30	Claudia Castro	12/13/2022 09:17	Roberta Tatti	2371765
	11/30/2022	11/30/2022 13:30	DeAsia Armster	12/15/2022 08:44	DeAsia Armster	2371766
SOP-PCR-1.5	11/30/2022	11/30/2022 13:30	Claudia Castro	12/13/2022 11:53	DeAsia Armster	2371765
	11/30/2022	11/30/2022 13:30	DeAsia Armster	12/15/2022 12:12	Roberta Tatti	2371766