

Biological Analysis Report

NE-DIST-2019-08-29-02

Florida Department of Environmental Protection
Central Laboratory
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DOH Accreditation E31780

Overflow Analyses Performed By:
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DOH Accreditation E82502

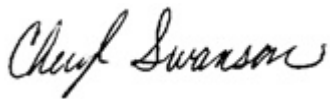
Event Description: **LSJR Downtown**
Request ID: **RQ-2019-08-26-17**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Cheryl A. Swanson, Program Administrator

Date Certified: 01-OCT-2019 15:55



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: MCGIRTS CREEK AT OLD PLANK ROAD

Collection Date/Time: 08/28/2019 09:15

Field ID: 20030346

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2115555	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.1	U	ug/L	P370335	
		Phaeophytin-a	1.2	U	ug/L	P370335	
		Chlorophyll-a, Uncorrected	1.0	I	ug/L	P370335	
2115560	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	1200		MPN/100 mL		

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: TROUT RIVER AT GARDEN ST

Collection Date/Time: 08/28/2019 10:05

Field ID: 20030751

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2115556	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.69	U	ug/L	P370335	
		Phaeophytin-a	0.75	U	ug/L	P370335	
		Chlorophyll-a, Uncorrected	0.50	U	ug/L	P370335	
2115561	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	1200		MPN/100 mL		

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: BLOCKHOUSE 100M ABV IRMA RD.

Collection Date/Time: 08/28/2019 10:40

Field ID: G2NE1159

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2115557	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.1	I	ug/L	P370335	
		Phaeophytin-a	3.7	I	ug/L	P370335	
		Chlorophyll-a, Uncorrected	7.2		ug/L	P370335	
2115564	SOP-PCR-1.0	HF183-qPCR**	280	U	GEU/100 mL	P369832	
	SOP-PCR-1.4	BacR-qPCR**	5.70E+05		TSC/100 mL	P369832	RPD
2116333	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	2419.6	J	MPN/100 mL		

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

SM 9223 B Quanti-Tray: All Quanti-Tray wells were positive. Result may be higher than reported.

Sample Location: BLOCKHOUSE AT BROWARD RD.

Collection Date/Time: 08/28/2019 11:10

Field ID: G2NE1180

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2115554	SM 10200 H (mod.)	Chlorophyll-a, Corrected	13	A	ug/L	P370335	
		Phaeophytin-a	3.2	I	ug/L	P370335	
		Chlorophyll-a, Uncorrected	16	A	ug/L	P370335	
2115559	ASTM D650399	ENTEROCOCCI-ENTEROLERT	12000		MPN/100 mL		
2115563	SOP-PCR-1.0	HF183-qPCR**	160	I	GEU/100 mL	P369832	
	SOP-PCR-1.4	BacR-qPCR**	1.22E+04		TSC/100 mL	P369832	RPD

Ref. Method and Comment:

SM 10200 H (mod.): Laboratory duplicate result is 2.8 I for Phaeophytin-a. Precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: LONG BR AT EVERGREEN AVE.

Collection Date/Time: 08/28/2019 11:45

Field ID: G2NE0735

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2115558	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.0	I	ug/L	P370342	
		Phaeophytin-a	1.4	U	ug/L	P370342	
		Chlorophyll-a, Uncorrected	1.7	I	ug/L	P370342	
2115562	ASTM D650399	ENTEROCOCCI-ENTEROLERT	2900		MPN/100 mL		

Ref. Method and Comment:
 SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)
Batch ID: P370335

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.69	U	ug/L
Chlorophyll-a, Uncorrected	0.50	U	ug/L
Phaeophytin-a	0.75	U	ug/L

Reference Method: SM 10200 H (mod.)
Batch ID: P370342

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: SOP-PCR-1.0
Batch ID: P369832

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

Reference Method: SOP-PCR-1.4
Batch ID: P369832

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P370335

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	85.8		P	84 - 116

Reference Method: SM 10200 H (mod.)
Batch ID: P370342

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	85.8		P	84 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P369832

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	139	167	P/P	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P369832

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
BacR-qPCR	96.4	106	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P369832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2115108	HF183-qPCR	103		P	50 - 175
2115210	HF183-qPCR	115		P	50 - 175
2115211	HF183-qPCR	93.6		P	50 - 175
2115354	HF183-qPCR	131		P	50 - 175
2115355	HF183-qPCR	111		P	50 - 175
2115356	HF183-qPCR	115		P	50 - 175
2115357	HF183-qPCR	120	120	P/P	50 - 175
2115358	HF183-qPCR	120		P	50 - 175
2115563	HF183-qPCR	104		P	50 - 175
2115564	HF183-qPCR	102		P	50 - 175
2115732	HF183-qPCR	112		P	50 - 175

Reference Method: SOP-PCR-1.4
Batch ID: P369832

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2115108	BacR-qPCR	50.8		P	50 - 175
2115210	BacR-qPCR	72.0		P	50 - 175
2115211	BacR-qPCR	56.1		P	50 - 175
2115354	BacR-qPCR	87.3		P	50 - 175
2115355	BacR-qPCR	74.0		P	50 - 175
2115356	BacR-qPCR	84.9		P	50 - 175
2115357	BacR-qPCR	104	74.4	P/P	50 - 175
2115358	BacR-qPCR	75.4		P	50 - 175
2115563	BacR-qPCR	54.5		P	50 - 175
2115564	BacR-qPCR	61.9		P	50 - 175
2115732	BacR-qPCR	65.2		P	50 - 175

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
Batch ID: P370335

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

Reference Method: SM 10200 H (mod.)
 Batch ID: P370335

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2115554	Chlorophyll-a, Corrected	12.4	Sample	P	0 - 25
2115554	Chlorophyll-a, Uncorrected	12.4	Sample	P	0 - 25

Reference Method: SM 10200 H (mod.)
 Batch ID: P370342

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2115639	Chlorophyll-a, Corrected	2.12	Sample	P	0 - 25
2115639	Chlorophyll-a, Uncorrected	2.43	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0
 Batch ID: P369832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2115357	HF183-qPCR	0.0939	Spike	P	0 - 25

Reference Method: SOP-PCR-1.4
 Batch ID: P369832

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2115357	BacR-qPCR	33.5	Spike	F	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: 2115563
 Field Sample ID: G2NE1180

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	113	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	81.8	P	50 - 300

Lab Sample ID: 2115564
 Field Sample ID: G2NE1159

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	116	P	50 - 300
SOP-PCR-1.4	SKETA-qPCR	90.7	P	50 - 300

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	Precision
				LCS SMP MS

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision	MS
								SMP	
SM 10200 H (mod.)	Chlorophyll-a, Corrected	85.8						12.4	
	Chlorophyll-a, Corrected	85.8						2.12	
	Chlorophyll-a, Uncorrected							12.4	
	Chlorophyll-a, Uncorrected							2.43	
SOP-PCR-1.0	HF183-qPCR	167	139	115	93.6	131			0.0939
				111					
SOP-PCR-1.4	BacR-qPCR	106	96.4	72.0	56.1	87.3			33.5
				74.0					

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
ASTM D650399 / E82502	Enterococci by Enterolert/QT by ALS in Jacksonville	2115559, 2115562
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2115554, 2115555, 2115556, 2115557, 2115558
SM 9223 B Quanti-Tray / E82502	E. coli by Colilert/QT by ALS in Jacksonville	2115560, 2115561, 2116333
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	2115563, 2115564
SOP-PCR-1.4 / E31780	Detection and quantification of Ruminant specific Bacteroidetes BacR genetic marker with quantitative polymerase chain reaction	2115563, 2115564

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
ASTM D650399	08/28/2019	08/28/2019 14:15		08/29/2019 15:28	ALS Environmental, Jax	2115559, 2115562
SM 10200 H (mod.)	08/29/2019	08/29/2019 14:27	Jessica Fetgatter	09/05/2019 14:09	Peterson Janvier	2115554, 2115555, 2115556, 2115557
	08/29/2019	08/29/2019 14:27	Jessica Fetgatter	09/05/2019 15:41	Peterson Janvier	2115558
SM 9223 B Quanti-Tray	08/28/2019	08/28/2019 14:05		08/29/2019 15:26	ALS Environmental, Jax	2115560, 2115561, 2116333
SOP-PCR-1.0	08/29/2019	08/29/2019 14:20	Mailin Lopez	09/26/2019 14:57	Mailin Lopez	2115563, 2115564
SOP-PCR-1.4	08/29/2019	08/29/2019 14:20	Mailin Lopez	09/27/2019 14:30	Lauren Campbell	2115563, 2115564