

Biological Analysis Report

NE-DIST-2019-01-23-01

Florida Department of Environmental Protection
Central Laboratory
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DOH Accreditation E31780

Overflow Analyses Performed By:
ALS Environmental - Jacksonville
9143 Philips Highway, Suite 200
Jacksonville, FL 32256
DOH Accreditation E82502

Event Description: **LSJR Southside**
Request ID: **RQ-2019-01-14-26**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Cheryl A. Swanson, Program Administrator

Date Certified: 19-FEB-2019 16:10



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: MILLER CR @ SCHUMACHER

Collection Date/Time: 01/22/2019 08:30

Field ID: 20030794

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2055944	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.55	U	ug/L	P358048	
		Phaeophytin-a	0.60	U	ug/L	P358048	
		Chlorophyll-a, Uncorrected	0.40	U	ug/L	P358048	
2055950	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	6490		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: MIRAMAR AT SAN JOSE

Collection Date/Time: 01/22/2019 08:55

Field ID: G2NE1164

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2055940	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.93	I	ug/L	P358048	
		Phaeophytin-a	0.60	U	ug/L	P358048	
		Chlorophyll-a, Uncorrected	1.0	I	ug/L	P358048	
2055946	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	495		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: BIG POTTSBURG CR BOWDEN RD

Collection Date/Time: 01/22/2019 09:25

Field ID: 20030068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2055939	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.7		ug/L	P358048	
		Phaeophytin-a	0.60	U	ug/L	P358048	
		Chlorophyll-a, Uncorrected	2.0		ug/L	P358048	
2055945	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	318		MPN/100 mL		
2055951	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P357602	

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: OLDFIELD CR @ JULINGTON CREEK ROAD

Collection Date/Time: 01/22/2019 10:05

Field ID: 20030684

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2055941	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.4	I	ug/L	P358048	
		Phaeophytin-a	0.60	U	ug/L	P358048	
		Chlorophyll-a, Uncorrected	1.6		ug/L	P358048	
2055947	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	620		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: CORMORANT BRANCH @ MARBON RD

Collection Date/Time: 01/22/2019 10:25

Field ID: 20030852

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Field ID: 20030852

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2055942	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.8	A	ug/L	P358048	
		Phaeophytin-a	0.67	U	ug/L	P358048	
		Chlorophyll-a, Uncorrected	3.9	A	ug/L	P358048	
2055948	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	754		MPN/100 mL		

Ref. Method and Comment:

SM 10200 H (mod.): Laboratory duplicate result is 0.67 U for Phaeophytin-a. Precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: DEEP BOTTOM CREEK AT SCOTT MILL RD

Collection Date/Time: 01/22/2019 10:45

Field ID: 20030595

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2055943	SM 10200 H (mod.)	Chlorophyll-a, Corrected	17		ug/L	P358048	
		Phaeophytin-a	1.7	I	ug/L	P358048	
		Chlorophyll-a, Uncorrected	18		ug/L	P358048	
2055949	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	712		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: P358048

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.55	U	ug/L
Chlorophyll-a, Uncorrected	0.40	U	ug/L
Phaeophytin-a	0.60	U	ug/L

Reference Method: SOP-PCR-1.0

Batch ID: P357602

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)

Batch ID: P358048

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	110		P	84 - 116

Reference Method: SOP-PCR-1.0

Batch ID: P357602

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	121	149	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P357602

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2047013	HF183-qPCR	88.4		P	50 - 175
2049763	HF183-qPCR	98.8		P	50 - 175
2055951	HF183-qPCR	98.8		P	50 - 175
2056897	HF183-qPCR	89.0		P	50 - 175
2056898	HF183-qPCR	83.9		P	50 - 175
2056899	HF183-qPCR	107		P	50 - 175
2057759	HF183-qPCR	97.0	96.6	P/P	50 - 175
2057761	HF183-qPCR	85.1		P	50 - 175
2057762	HF183-qPCR	84.8		P	50 - 175
2058102	HF183-qPCR	95.4		P	50 - 175
2058250	HF183-qPCR	100		P	50 - 175

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
Batch ID: P358048

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2055942	Chlorophyll-a, Corrected	0.289	Sample	P	0 - 25
2055942	Chlorophyll-a, Uncorrected	1.60	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P357602

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2057759	HF183-qPCR	0.494	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: 2055951
Field Sample ID: 20030068

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	97.6	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	110			0.289	
	Chlorophyll-a, Uncorrected				1.60	

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery			LCS	Precision SMP	MS
SOP-PCR-1.0	HF183-qPCR	149	121	88.4	98.8	98.8			0.494
				89.0					

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2055939, 2055940, 2055941, 2055942, 2055943, 2055944
SM 9223 B Quanti-Tray / E82502	Escherichia coli by Colilert Quanti-Tray method by ALS Environmental Laboratory in Jacksonville	2055945, 2055946, 2055947, 2055948, 2055949, 2055950
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	2055951

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 10200 H (mod.)	01/23/2019	01/23/2019 13:20	Edwin Gonzalez-Soto	01/29/2019 16:40	Jennifer Mihalic	2055939, 2055940, 2055941, 2055942, 2055943, 2055944
SM 9223 B Quanti-Tray	01/22/2019	01/22/2019 13:49		01/23/2019 15:22	ALS Environmental, Jax	2055945, 2055946, 2055947, 2055948, 2055949, 2055950
SOP-PCR-1.0	01/23/2019	01/23/2019 13:30	Sarah Menz	02/05/2019 14:56	Mailin Lopez	2055951