

Biological Analysis Report

NE-DIST-2018-02-02-01

Florida Department of Environmental Protection
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DOH Accreditation E31780

Overflow Analyses Performed By:
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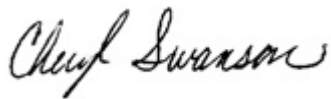
Event Description: **LSJR West2**
Request ID: **RQ-2018-01-29-10**
Customer: **NE-DIST**
Project ID: **SMP**

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Certified by: Cheryl A. Swanson, Program Administrator

Date Certified: 24-JUL-2018 18:22



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 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: Yellow Water Creek at 228 Normandy

Collection Date/Time: 02/01/2018 09:50

Field ID: 20030549

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963991	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.90	I	ug/L	P339641	
		Phaeophytin-a	0.40	U	ug/L	P339641	
		Chlorophyll-a, Uncorrected	1.1	I	ug/L	P339641	
1963997	SM 9223 B	Escherichia Coli-Quanti-Tray	573		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: Yellow Water Creek @ Wells Rd

Collection Date/Time: 02/01/2018 10:30

Field ID: G2NE1160

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963992	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.94	I	ug/L	P339644	
		Phaeophytin-a	0.40	U	ug/L	P339644	
		Chlorophyll-a, Uncorrected	1.2	I	ug/L	P339644	
1963998	SM 9223 B	Escherichia Coli-Quanti-Tray	1260		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: Mcgirts Creek at Old Plank Road

Collection Date/Time: 02/01/2018 11:10

Field ID: 20030346

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963993	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.3	I	ug/L	P339644	
		Phaeophytin-a	0.40	U	ug/L	P339644	
		Chlorophyll-a, Uncorrected	1.4		ug/L	P339644	
1963999	SM 9223 B	Escherichia Coli-Quanti-Tray	266		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: Mcgirts Creek @ Helsema Rd

Collection Date/Time: 02/01/2018 11:55

Field ID: 20030877

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963994	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.6	I	ug/L	P339644	
		Phaeophytin-a	0.40	U	ug/L	P339644	
		Chlorophyll-a, Uncorrected	1.7		ug/L	P339644	
1964000	SM 9223 B	Escherichia Coli-Quanti-Tray	197		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: Wills Br. North Fork at Old middleburg Rd

Collection Date/Time: 02/01/2018 12:45

Field ID: 20030582

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963990	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.6	I	ug/L	P339641	

Field ID: 20030582

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1963990	SM 10200 H (mod.)	Phaeophytin-a	0.40	U	ug/L	P339641	
		Chlorophyll-a, Uncorrected	1.7		ug/L	P339641	
1963996	SM 9223 B	Escherichia Coli-Quanti-Tray	565		MPN/100 mL		
1964002	SOP-PCR-1.0	HF183-qPCR**	79	T	GEU/100 mL	P340257	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

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: Wills Br. at Lane Ave

Collection Date/Time: 02/01/2018 13:15

Field ID: 20030095

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1964001	SM 9223 B	Escherichia Coli-Quanti-Tray	882		MPN/100 mL		
1964003	SOP-PCR-1.0	HF183-qPCR**	400	I	GEU/100 mL	P340257	
	SOP-PCR-4.0	HF183 - Human Source Marker**	Above Threshold				

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)

Batch ID: P339641

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

Reference Method: SM 10200 H (mod.)

Batch ID: P339644

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

Reference Method: SOP-PCR-1.0

Batch ID: P340257

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)

Batch ID: P339641

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	115		P	84 - 116

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P339644

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	111		P	84 - 116

Reference Method: SOP-PCR-1.0
Batch ID: P340257

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	102	95.1	P/P	50 - 175
HF183-qPCR	122	124	P/P	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P340257

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1963137	HF183-qPCR	106		P	50 - 175
1963138	HF183-qPCR	105		P	50 - 175
1963139	HF183-qPCR	74.7		P	50 - 175
1963140	HF183-qPCR	77.6		P	50 - 175
1963378	HF183-qPCR	72.6		P	50 - 175
1963529	HF183-qPCR	65.7		P	50 - 175
1963576	HF183-qPCR	75.4		P	50 - 175
1963834	HF183-qPCR	73.2		P	50 - 175
1964002	HF183-qPCR	58.1		P	50 - 175
1964003	HF183-qPCR	64.8	60.5	P/P	50 - 175
1969471	HF183-qPCR	78.6		P	50 - 175
1969472	HF183-qPCR	82.5		P	50 - 175
1969473	HF183-qPCR	74.1		P	50 - 175
1969474	HF183-qPCR	75.7		P	50 - 175

Quality Assurance Report Precision

Reference Method: SOP-PCR-1.0
Batch ID: P340257

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1964003	HF183-qPCR	6.94	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

Quality Assurance Report Surrogates

Lab Sample ID: 1964002
Field Sample ID: 20030582

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	92.6	P	50 - 300

Lab Sample ID: 1964003
Field Sample ID: 20030095

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	89.2	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	115				
	Chlorophyll-a, Corrected	111				
SOP-PCR-1.0	HF183-qPCR	102 124 122 95.1	106 105 74.7 77.6			6.94

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	1963990, 1963991, 1963992, 1963993, 1963994
SM 9223 B / E82502	Escherichia coli by Colilert Quanti-Tray method by ALS Environmental Overflow Laboratory for Northeast District	1963996, 1963997, 1963998, 1963999, 1964000, 1964001
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	1964002, 1964003
SOP-PCR-4.0 / E31780	Preparation of Samples by Filtration and held for qPCR Analysis	1964002, 1964003

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 10200 H (mod.)	02/02/2018	02/02/2018 13:10	Kim M. Spencer	02/08/2018 14:05	Jennifer Mihalic	1963990, 1963991
	02/02/2018	02/02/2018 13:10	Kim M. Spencer	02/08/2018 14:50	Jennifer Mihalic	1963992, 1963993, 1963994
SM 9223 B	02/01/2018	02/01/2018 15:43		02/02/2018 16:31	ALS Environmental, Jax	1963996, 1963997, 1963998, 1963999, 1964000, 1964001
SOP-PCR-1.0	02/02/2018	02/02/2018 13:00	Puja Jasrotia	02/23/2018 15:33	Sarah Menz	1964002, 1964003
SOP-PCR-4.0	02/02/2018	02/02/2018 13:00	Angela Smith	02/20/2018 10:59	Puja Jasrotia	1964002, 1964003