

Biological Analysis Report

NE-DIST-2019-07-26-01

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

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

Event Description: **LSJR West Boat**
Request ID: **RQ-2019-07-22-10**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
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Jacksonville, FL 32256
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Certified by: Jacqueline Savage, Environmental Administrator

Date Certified: 23-AUG-2019 09:22

A handwritten signature in black ink that reads "Jackie Savage". The signature is written in a cursive, flowing style.

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: FISHING CRK AT PUBLIC BOAT RAMP OFF SEABOARD AV

Collection Date/Time: 07/25/2019 11:20

Field ID: 20030617

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106290	SM 10200 H (mod.)	Chlorophyll-a, Corrected	39		ug/L	P368469	
		Phaeophytin-a	4.8	I	ug/L	P368469	
		Chlorophyll-a, Uncorrected	43		ug/L	P368469	
2106295	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	318		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: ORTEGA R BR ROOSEVELT BLVD US 17

Collection Date/Time: 07/25/2019 11:55

Field ID: 20030077

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106288	SM 10200 H (mod.)	Chlorophyll-a, Corrected	13		ug/L	P368469	
		Phaeophytin-a	1.5	I	ug/L	P368469	
		Chlorophyll-a, Uncorrected	14		ug/L	P368469	
2106293	ASTM D650399	ENTEROCOCCI-ENTEROLERT	10		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: CEDAR CR BLANDING BLVD BR RT 21

Collection Date/Time: 07/25/2019 10:50

Field ID: 20030083

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106289	SM 10200 H (mod.)	Chlorophyll-a, Corrected	19		ug/L	P368469	
		Phaeophytin-a	6.3		ug/L	P368469	
		Chlorophyll-a, Uncorrected	23		ug/L	P368469	
2106294	ASTM D650399	ENTEROCOCCI-ENTEROLERT	230		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: GOODBYS CR @ SR-13

Collection Date/Time: 07/25/2019 12:40

Field ID: 20030518

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2106287	SM 10200 H (mod.)	Chlorophyll-a, Corrected	16		ug/L	P368469	
		Phaeophytin-a	3.3	I	ug/L	P368469	
		Chlorophyll-a, Uncorrected	19		ug/L	P368469	
2106292	ASTM D650399	ENTEROCOCCI-ENTEROLERT	1100		MPN/100 mL		
2106297	SOP-PCR-1.0	HF183-qPCR**	140	U	GEU/100 mL	P368014	LCS

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

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)
Batch ID: P368469

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: P368014

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: P368469

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	85.3		P	84 - 116

Reference Method: SOP-PCR-1.0
Batch ID: P368014

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
HF183-qPCR	172	239	P/F	50 - 175

Quality Assurance Report Matrix Spike Accuracy

Reference Method: SOP-PCR-1.0
Batch ID: P368014

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2104380	HF183-qPCR	99.9	124	P/P	50 - 175
2104381	HF183-qPCR	98.2		P	50 - 175
2105231	HF183-qPCR	102		P	50 - 175
2105232	HF183-qPCR	111		P	50 - 175
2105233	HF183-qPCR	141		P	50 - 175
2105234	HF183-qPCR	83.4		P	50 - 175
2105235	HF183-qPCR	96.6		P	50 - 175
2105370	HF183-qPCR	115		P	50 - 175
2105634	HF183-qPCR	102		P	50 - 175
2105879	HF183-qPCR	160		P	50 - 175
2106297	HF183-qPCR	142		P	50 - 175
2106893	HF183-qPCR	143		P	50 - 175
2106895	HF183-qPCR	95.1		P	50 - 175

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
Batch ID: P368469

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2106230	Chlorophyll-a, Uncorrected	5.37	Sample	P	0 - 25

Reference Method: SOP-PCR-1.0
Batch ID: P368014

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2104380	HF183-qPCR	21.3	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: 2106297
Field Sample ID: 20030518

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
SOP-PCR-1.0	SKETA-qPCR	120	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	85.3				
	Chlorophyll-a, Uncorrected				5.37	
SOP-PCR-1.0	HF183-qPCR	239 172	142 160 143 141			21.3

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
ASTM D650399 / E82502	Enterococci by Enterolert/QT by ALS in Jacksonville	2106292, 2106293, 2106294
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2106287, 2106288, 2106289, 2106290
SM 9223 B Quanti-Tray / E82502	E. coli by Colilert/QT by ALS in Jacksonville	2106295
SOP-PCR-1.0 / E31780	Detection and quantification of human-specific HF183 Bacteroides genetic marker with quantitative polymerase chain reaction	2106297

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
ASTM D650399	07/25/2019	07/25/2019 14:57		07/26/2019 15:00	ALS Environmental, Jax	2106292, 2106293, 2106294
SM 10200 H (mod.)	07/26/2019	07/26/2019 14:00	Christiana McCrimmon	08/02/2019 10:46	Yuliya Danyuk	2106287, 2106288, 2106289, 2106290
SM 9223 B Quanti-Tray	07/25/2019	07/25/2019 14:47		07/26/2019 14:47	ALS Environmental, Jax	2106295
SOP-PCR-1.0	07/26/2019	07/26/2019 15:15	Angela Smith	08/12/2019 10:13	Mailin Lopez	2106297