

Biological Analysis Report

NW-DIST-2020-01-29-01

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

Overflow Analyses Performed By:
University of West Florida
11000 University Parkway
Pensacola, FL 32514
DOH Accreditation E71969

Event Description: **Pace Run**
Request ID: **RQ-2020-01-27-18**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

For additional information please contact
Cheryl Swanson - Administrator
Jacqueline Savage - Microbiology
Diane Power - Bench Biology
Andrew Tintle - Aquatic Toxicology
Puja Jasrotia, Ph.D. - Molecular Biology
Amelia Rankin - Taxonomy (Invertebrate & Algal)
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8177

Certified by: Puja Jasrotia, Environmental Manager

Date Certified: 24-FEB-2020 09:58



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 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: Big Coldwater Creek West Fork upstream of Walling Rd

Collection Date/Time: 01/28/2020 13:20

Field ID: G4NW0436

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152459	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P378055	
		Phaeophytin-a	0.90	U	ug/L	P378055	
		Chlorophyll-a, Uncorrected	0.60	U	ug/L	P378055	
2152469	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	135		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: Clear Creek upstream of Pat Brown Road

Collection Date/Time: 01/28/2020 09:10

Field ID: G4NW0360

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152460	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P378055	
		Phaeophytin-a	0.90	U	ug/L	P378055	
		Chlorophyll-a, Uncorrected	0.60	U	ug/L	P378055	
2152470	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	41		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 Coldwater Creek below CR191

Collection Date/Time: 01/28/2020 09:30

Field ID: G4NW0026

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152458	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P378055	
		Phaeophytin-a	0.90	U	ug/L	P378055	
		Chlorophyll-a, Uncorrected	0.60	U	ug/L	P378055	
2152468	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	146		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 Coldwater Creek end of Steel Bridge Rd

Collection Date/Time: 01/28/2020 10:00

Field ID: G4NW0027

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152462	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P378249	
		Phaeophytin-a	0.90	U	ug/L	P378249	
		Chlorophyll-a, Uncorrected	0.60	U	ug/L	P378249	
2152472	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	98		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: CLEAR CREEK upstream of Hwy 87

Collection Date/Time: 01/28/2020 10:30

Field ID: G4NW0503

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Field ID: G4NW0503

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152463	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P378249	
		Phaeophytin-a	0.90	U	ug/L	P378249	
		Chlorophyll-a, Uncorrected	0.63	I	ug/L	P378249	
2152473	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	31		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: Coldwater Creek West Fork downstream of HWY 87

Collection Date/Time: 01/28/2020 10:55

Field ID: G4NW0017

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152457	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P378055	
		Phaeophytin-a	0.90	U	ug/L	P378055	
		Chlorophyll-a, Uncorrected	0.60	U	ug/L	P378055	
2152467	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	173		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: Manning Creek upstream of Manning Creek Rd

Collection Date/Time: 01/28/2020 11:20

Field ID: G4NW0435

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152464	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.3	U	ug/L	P378249	
		Phaeophytin-a	1.4	U	ug/L	P378249	
		Chlorophyll-a, Uncorrected	0.92	U	ug/L	P378249	
2152474	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	480		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: Manning Creek at Whitfield Road (North Side)

Collection Date/Time: 01/28/2020 11:50

Field ID: G4NW0200

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152461	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P378055	
		Phaeophytin-a	0.90	U	ug/L	P378055	
		Chlorophyll-a, Uncorrected	0.60	U	ug/L	P378055	
2152471	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	20		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 Coldwater Creek West Fork Upstream of HWY 4

Collection Date/Time: 01/28/2020 12:20

Field ID: G4NW0502

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Field ID: G4NW0502

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152465	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.82	U	ug/L	P378249	
		Phaeophytin-a	0.90	U	ug/L	P378249	
		Chlorophyll-a, Uncorrected	0.60	U	ug/L	P378249	
2152475	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	98		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: Coldwater Creek West Fork CR 178

Collection Date/Time: 01/28/2020 12:55

Field ID: G4NW0016

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2152466	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.4	U	ug/L	P378249	
		Phaeophytin-a	1.5	U	ug/L	P378249	
		Chlorophyll-a, Uncorrected	1.0	U	ug/L	P378249	
2152476	SM 9223 B Quanti-Tray	Escherichia Coli-Quanti-Tray	96		MPN/100 mL		

Ref. Method and Comment:

SM 10200 H (mod.): Lab dup result is 1.4 U for Chl-a Corrected, 1.0 U for Chl-a Uncorrected, and 1.5 U for Phaeophytin-a. Precision data is unavailable due to the small amount of analyte in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)

Batch ID: P378055

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 10200 H (mod.)

Batch ID: P378249

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)

Batch ID: P378055

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	108		P	84 - 116

Reference Method: SM 10200 H (mod.)

Batch ID: P378249

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

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
 Batch ID: P378055

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2152305	Chlorophyll-a, Corrected	10.7	Sample	P	0 - 25
2152305	Chlorophyll-a, Uncorrected	10.8	Sample	P	0 - 25

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

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
SM 10200 H (mod.)	Chlorophyll-a, Corrected	108			10.7	
	Chlorophyll-a, Corrected	115				
	Chlorophyll-a, Uncorrected				10.8	

Reference Method Descriptions

Method	Description	Associated Samples
SM 10200 H (mod.)	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2152457, 2152458, 2152459, 2152460, 2152461, 2152462, 2152463, 2152464, 2152465, 2152466
SM 9223 B Quanti-Tray	E. coli by Colilert-18/QT by UWF in Pensacola	2152467, 2152468, 2152469, 2152470, 2152471, 2152472, 2152473, 2152474, 2152475, 2152476

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 10200 H (mod.)	01/29/2020	01/29/2020 14:46	Anthony Mirabito	01/30/2020 10:30	Jessica Fetgatter	2152457, 2152458, 2152459, 2152460, 2152461
	01/29/2020	01/29/2020 14:46	Anthony Mirabito	01/31/2020 09:25	Jessica Fetgatter	2152462, 2152463, 2152464, 2152465, 2152466
SM 9223 B Quanti-Tray	01/28/2020	01/28/2020 15:55		01/29/2020 12:16	UWF Lab	2152467, 2152468, 2152469, 2152470, 2152471, 2152472, 2152473, 2152474, 2152475, 2152476