

Biological Analysis Report

NW-DIST-2024-06-05-02

Florida DEP 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: **Project Greenshores**
Request ID: **RQ-2024-05-13-21**
Customer: **NW-DIST**
Project ID: **DISTRICT**

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

For additional information please contact
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Toxicity
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Certified by: Puja Jasrotia, Environmental Administrator

Date Certified: 09-JUL-2024 11:50



NON-CONFORMANCE REPORT INCLUDED

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: South of Primary Stormdrain

Collection Date/Time: 06/04/2024 10:42

Field ID: 4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491478	SM 10150 B	Chlorophyll-a, Corrected	4.5		ug/L	P446817	
		Phaeophytin-a	1.0	U	ug/L	P446817	
		Chlorophyll-a, Uncorrected	4.8		ug/L	P446817	
2491489	Enterolert/QT	Enterococci-Quanti-Tray	10	U	MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: End of Chase Street

Collection Date/Time: 06/04/2024 10:56

Field ID: 5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491479	SM 10150 B	Chlorophyll-a, Corrected	6.8		ug/L	P446817	
		Phaeophytin-a	1.0	U	ug/L	P446817	
		Chlorophyll-a, Uncorrected	7.4		ug/L	P446817	
2491490	Enterolert/QT	Enterococci-Quanti-Tray	10	U	MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: Midpoint Between Muscogee and Hawkshaw

Collection Date/Time: 06/04/2024 11:19

Field ID: 6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491480	SM 10150 B	Chlorophyll-a, Corrected	6.9		ug/L	P446817	
		Phaeophytin-a	1.0	U	ug/L	P446817	
		Chlorophyll-a, Uncorrected	7.4		ug/L	P446817	
2491491	Enterolert/QT	Enterococci-Quanti-Tray	10	U	MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: Midpoint Between Bridge and Port Spoil Pond

Collection Date/Time: 06/04/2024 11:37

Field ID: 7

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491481	SM 10150 B	Chlorophyll-a, Corrected	11		ug/L	P446817	
		Phaeophytin-a	1.0	U	ug/L	P446817	
		Chlorophyll-a, Uncorrected	10		ug/L	P446817	
2491492	Enterolert/QT	Enterococci-Quanti-Tray	10	U	MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: West of Primary Stormdrain

Collection Date/Time: 06/04/2024 11:07

Field ID: 8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491482	SM 10150 B	Chlorophyll-a, Corrected	4.7		ug/L	P446818	

Field ID: 8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491482	SM 10150 B	Phaeophytin-a	1.0	U	ug/L	P446818	
		Chlorophyll-a, Uncorrected	5.2		ug/L	P446818	
2491493	Enterolert/QT	Enterococci-Quanti-Tray	10	U	MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: West of Hawkshaw Lagoon Collection Date/Time: 06/04/2024 12:20

Field ID: 9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491483	SM 10150 B	Chlorophyll-a, Corrected	3.4		ug/L	P446818	
		Phaeophytin-a	1.0	U	ug/L	P446818	
		Chlorophyll-a, Uncorrected	3.5		ug/L	P446818	
2491494	Enterolert/QT	Enterococci-Quanti-Tray	75		MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: South of Bayfront Stormdrain Collection Date/Time: 06/04/2024 12:10

Field ID: 10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491484	SM 10150 B	Chlorophyll-a, Corrected	5.1		ug/L	P446818	
		Phaeophytin-a	1.0	U	ug/L	P446818	
		Chlorophyll-a, Uncorrected	5.6		ug/L	P446818	
2491495	Enterolert/QT	Enterococci-Quanti-Tray	41		MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: Seville Marina Inlet Collection Date/Time: 06/04/2024 12:02

Field ID: 11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491485	SM 10150 B	Chlorophyll-a, Corrected	4.8		ug/L	P446818	
		Phaeophytin-a	1.0	U	ug/L	P446818	
		Chlorophyll-a, Uncorrected	4.9		ug/L	P446818	
2491496	Enterolert/QT	Enterococci-Quanti-Tray	122		MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: East of Port Spoil Pond Collection Date/Time: 06/04/2024 11:43

Field ID: 12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491486	SM 10150 B	Chlorophyll-a, Corrected	7.3		ug/L	P446818	
		Phaeophytin-a	1.0	U	ug/L	P446818	
		Chlorophyll-a, Uncorrected	8.0		ug/L	P446818	

Field ID: 12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491497	Enterolert/QT	Enterococci-Quanti-Tray	10	U	MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: Hawkshaw Lagoon at Memorial Bridge Collection Date/Time: 06/04/2024 12:49

Field ID: 13

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491487	SM 10150 B	Chlorophyll-a, Corrected	12		ug/L	P446818	
		Phaeophytin-a	1.0	U	ug/L	P446818	
		Chlorophyll-a, Uncorrected	13		ug/L	P446818	
2491498	Enterolert/QT	Enterococci-Quanti-Tray	85		MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: 150ft. South of Hawkshaw Lagoon East Stormdrain Collection Date/Time: 06/04/2024 12:31

Field ID: 14

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491488	SM 10150 B	Chlorophyll-a, Corrected	3.6		ug/L	P446818	
		Phaeophytin-a	1.0	U	ug/L	P446818	
		Chlorophyll-a, Uncorrected	4.2		ug/L	P446818	
2491499	Enterolert/QT	Enterococci-Quanti-Tray	323		MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: Range Marker East of Bayou Texar Collection Date/Time: 06/04/2024 10:17

Field ID: 1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491931	SM 10150 B	Chlorophyll-a, Corrected	7.1	Y	ug/L	P446965	
		Phaeophytin-a	1.0	UY	ug/L	P446965	
		Chlorophyll-a, Uncorrected	7.7	Y	ug/L	P446965	
2491934	Enterolert/QT	Enterococci-Quanti-Tray	10		MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: Midpoint between bay bridge and Muscogee Wharf Collection Date/Time: 06/04/2024 10:32

Field ID: 2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491932	SM 10150 B	Chlorophyll-a, Corrected	7.6	Y	ug/L	P446965	
		Phaeophytin-a	1.0	UY	ug/L	P446965	
		Chlorophyll-a, Uncorrected	8.3	Y	ug/L	P446965	

Field ID: 2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491935	Enterolert/QT	Enterococci-Quanti-Tray	10	U	MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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: East end of primary stormdrain Collection Date/Time: 06/04/2024 10:39

Field ID: 3

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2491933	SM 10150 B	Chlorophyll-a, Corrected	9.0	Y	ug/L	P446965	
		Phaeophytin-a	1.1	IY	ug/L	P446965	
		Chlorophyll-a, Uncorrected	10	Y	ug/L	P446965	
2491936	Enterolert/QT	Enterococci-Quanti-Tray	10	U	MPN/100 mL		

Ref. Method and Comment:
SM 10150 B: 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.

Non-Conformance Report

NCR ID: 10517

Event(s)	Job(s)	Sample(s)	Test(s)
NW-DIST-2024-06-05-02	TLH-2024-06-06-07	2491931	
NW-DIST-2024-06-05-02	TLH-2024-06-06-07	2491932	
NW-DIST-2024-06-05-02	TLH-2024-06-06-07	2491933	

NCR Type: SHIPPING/RECEIVING NCR Category: Samples arrived late

Observation: Samples arrived late, samples received outside the acceptable temperature range.
Resolution: Samples will be qualified as appropriate.
Customer contacted, email correspondence attached to sample submittal forms.
Biology and Chemistry supervisors were notified by email.

Authorized by/Date: Kyle Klug 6/14/2024

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry Colin Wright (850) 245-8085
Biology Cheryl Swanson (850) 245-8177

Quality Assurance Report
Method Blank Results

Reference Method: SM 10150 B
Batch ID: P446817

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.93	U	ug/L
Chlorophyll-a, Uncorrected	0.68	U	ug/L
Phaeophytin-a	1.0	U	ug/L

Reference Method: SM 10150 B
Batch ID: P446818

Component	Result	Code	Units
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Quality Assurance Report
Method Blank Results

Reference Method: SM 10150 B
Batch ID: P446818

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.93	U	ug/L
Chlorophyll-a, Uncorrected	0.68	U	ug/L
Phaeophytin-a	1.0	U	ug/L

Reference Method: SM 10150 B
Batch ID: P446965

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.93	U	ug/L
Chlorophyll-a, Uncorrected	0.68	U	ug/L
Phaeophytin-a	1.0	U	ug/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 10150 B
Batch ID: P446817

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	114		P	84 - 116

Reference Method: SM 10150 B
Batch ID: P446818

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	114		P	84 - 116

Reference Method: SM 10150 B
Batch ID: P446965

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	89.1		P	84 - 116

Quality Assurance Report
Precision

Reference Method: SM 10150 B
Batch ID: P446817

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2491387	Chlorophyll-a, Corrected	3.11	Sample	P	0 - 25
2491387	Chlorophyll-a, Uncorrected	2.50	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	Precision		
				LCS	SMP	MS
SM 10150 B	Chlorophyll-a, Corrected	114			3.11	
	Chlorophyll-a, Corrected	114				
	Chlorophyll-a, Corrected	89.1				
	Chlorophyll-a, Uncorrected				2.50	

Reference Method Descriptions

Method	Description	Associated Samples
Enterolert/QT	Enterococci by Enterolert/QT by UWF in Pensacola	2491489, 2491490, 2491491, 2491492, 2491493, 2491494, 2491495, 2491496, 2491497, 2491498, 2491499, 2491934, 2491935, 2491936
SM 10150 B	Phytoplankton chlorophyll-a corrected, uncorrected, and phaeophytin by spectrophotometry	2491478, 2491479, 2491480, 2491481, 2491482, 2491483, 2491484, 2491485, 2491486, 2491487, 2491488, 2491931, 2491932, 2491933

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
Enterolert/QT	06/04/2024	06/04/2024 16:20		06/05/2024 16:45	UWF Lab	2491489, 2491490, 2491491, 2491492, 2491493, 2491494, 2491495, 2491496, 2491497, 2491498, 2491499, 2491934, 2491935, 2491936
SM 10150 B	06/05/2024	06/05/2024 12:56	Tynan A Branch	06/17/2024 11:07	Callie Williams	2491478, 2491479, 2491480, 2491481
	06/05/2024	06/05/2024 12:56	Tynan A Branch	06/18/2024 14:41	Callie Williams	2491482, 2491483, 2491484, 2491485, 2491486, 2491487, 2491488
	06/06/2024	06/06/2024 09:56	Julia Herten	06/20/2024 10:32	Callie Williams	2491931, 2491932, 2491933