

Biological Analysis Report

NW-DIST-2012-02-28-01

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

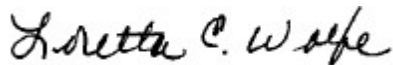
Event Description: **Project Greenshores**
Request ID: **RQ-2012-02-27-14**
Customer: **NW-DIST**
Project ID: **DISCRTNARY**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 308
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

For additional information please contact
David D. Whiting - Administrator
Elizabeth Miller - Bench Biology
Cheryl Swanson - Taxonomy (Invertebrate & Algal)
J. Marshall Faircloth - Aquatic Toxicology
Daisys Tamayo - Microbiology
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8177

Certified by: Loretta E. Wolfe, Environmental Manager

Date Certified: 15-MAR-2012 08:26



Abbreviations and data remark codes

CERT # - NELAP (National Environmental Laboratory Accreditation Program) Certification Number of the laboratory that performed the analysis.
LCS – Laboratory Control Sample; in the QC Failures column, this notation indicates a batch recovery failure.
MS – Matrix Spike; in the QC Failures column, this notation indicates a batch recovery failure.
RPD – Relative Percent Difference; in the QC Failures column, this notation indicates a batch failure for precision.
CCV – Continuing Calibration Verification; in the QC Failures column, this notation indicates a failure of the calibration verification check sample.
RSD – Relative Standard Deviation expressed as a percentage.
SMP – Sample.
** - The laboratory is not NELAP certified for this analyte/method, or certification is not applicable.

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
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).

Precision is reported as relative percent difference unless otherwise noted.

Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published test performance acceptance criteria.

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.

All sample collection performed by Bureau of Laboratories staff followed the field Standard Operating Procedures adopted by reference in Rule 62-160 FAC unless otherwise noted.

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.

Results for NELAP accredited tests contained in this report meet the requirements specified by the National Environmental Laboratory Accreditation Conference (NELAC). All samples received were in acceptable condition and met NELAC requirements unless otherwise noted. Results generated in this report pertain to the samples collected and submitted for analysis.

Job: TLH-2012-02-28-43
Job: TLH-2012-02-28-45
Job: TLH-2012-02-28-47

Group: Chlorophyll/Grain Size/BOD
Group: Chlorophyll/Grain Size/BOD
Group: Overflow

Sample Location: # 12

Collection Date/Time: 02/27/2012 12:04 PM

Field ID: # 12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410943	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.4	I	mg/L	P236804	
1410957	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4.7		ug/L	P236871	
		Phaeophytin-a	0.65	I	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.6			P236871	
		Chlorophyll-a, Uncorrected	5.3		ug/L	P236871	
1410975	EPA 1600 (MF)	Enterococci-Membrane Filter	6	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	14	BQ	cfu/100 mL		

Sample Location: 1/2 BETWEEN BRIDGE AND MUSCOGEE

Collection Date/Time: 02/27/2012 11:11 AM

Field ID: # 2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410934	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.6	I	mg/L	P236803	
1410948	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4.8		ug/L	P236871	
		Phaeophytin-a	0.59	I	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.6			P236871	
		Chlorophyll-a, Uncorrected	5.3		ug/L	P236871	
1410966	EPA 1600 (MF)	Enterococci-Membrane Filter	4	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	13	BQ	cfu/100 mL		

Sample Location: 1/2 BETWEEN BRIDGE AND PORT

Collection Date/Time: 02/27/2012 11:56 AM

Field ID: # 7

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410939	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.8	I	mg/L	P236803	
1410953	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.8		ug/L	P236871	
		Phaeophytin-a	0.60	I	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.6			P236871	
		Chlorophyll-a, Uncorrected	6.4		ug/L	P236871	
1410971	EPA 1600 (MF)	Enterococci-Membrane Filter	6	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	13	BQ	cfu/100 mL		

**Sample Location: 1/2 BETWEEN MUSCOGEE AND HAWKSHAW
400 FT FROM SHORE**

Collection Date/Time: 02/27/2012 12:58 PM

Field ID: # 6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410938	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.7	I	mg/L	P236803	
1410952	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.1		ug/L	P236871	
		Phaeophytin-a	0.62	I	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.6			P236871	
		Chlorophyll-a, Uncorrected	5.6		ug/L	P236871	
1410970	EPA 1600 (MF)	Enterococci-Membrane Filter	8	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	11	BQ	cfu/100 mL		

Sample Location: 100 FT SOUTH OF STORMDRAIN

Collection Date/Time: 02/27/2012 11:28 AM

Field ID: # 4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410936	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.7	I	mg/L	P236803	
1410950	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.5		ug/L	P236871	
		Phaeophytin-a	0.46	I	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.6			P236871	
		Chlorophyll-a, Uncorrected	6.0		ug/L	P236871	
1410968	EPA 1600 (MF)	Enterococci-Membrane Filter	10	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	20	BQ	cfu/100 mL		

Sample Location: BETWEEN MARINA AND OUTFALL

Collection Date/Time: 02/27/2012 12:24 PM

Field ID: # 10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410942	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.4	I	mg/L	P236804	
1410956	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4.7		ug/L	P236871	
		Phaeophytin-a	0.67	I	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.6			P236871	
		Chlorophyll-a, Uncorrected	5.2		ug/L	P236871	
1410974	EPA 1600 (MF)	Enterococci-Membrane Filter	10	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	6	BQ	cfu/100 mL		

Sample Location: EAST OF PRIMARY STORMDRAIN

Collection Date/Time: 02/27/2012 11:20 AM

Field ID: # 3

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410935	SM 5210 B	Biochemical Oxygen Demand-5 Day	2.0		mg/L	P236803	
1410949	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.0		ug/L	P236871	
		Phaeophytin-a	0.59	I	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.6			P236871	
		Chlorophyll-a, Uncorrected	5.6		ug/L	P236871	
1410967	EPA 1600 (MF)	Enterococci-Membrane Filter	18	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	9	BQ	cfu/100 mL		

Sample Location: EAST OF STORMDRAIN INSIDE PG 2

Collection Date/Time: 02/27/2012 12:38 PM

Field ID: # 14

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410945	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.5	I	mg/L	P236804	
1410959	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.3		ug/L	P236871	
		Phaeophytin-a	0.90	I	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.5			P236871	
		Chlorophyll-a, Uncorrected	2.9		ug/L	P236871	
1410977	EPA 1600 (MF)	Enterococci-Membrane Filter	10	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	16	BQ	cfu/100 mL		

Sample Location: END OF CHASE STREET

Collection Date/Time: 02/27/2012 11:48 AM

Field ID: # 5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410937	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.7	I	mg/L	P236803	
1410951	SM 10200 H (mod.)	Chlorophyll-a, Corrected	7.2		ug/L	P236871	
		Phaeophytin-a	0.70	I	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.6			P236871	
		Chlorophyll-a, Uncorrected	7.9		ug/L	P236871	
1410969	EPA 1600 (MF)	Enterococci-Membrane Filter	6	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	18	BQ	cfu/100 mL		

Sample Location: ENTRANCE OF MARINA

Collection Date/Time: 02/27/2012 12:15 PM

Field ID: # 11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410946	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.3	I	mg/L	P236804	
1410960	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.7		ug/L	P236871	
		Phaeophytin-a	0.75	I	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.6			P236871	
		Chlorophyll-a, Uncorrected	4.3		ug/L	P236871	
1410978	EPA 1600 (MF)	Enterococci-Membrane Filter	44	Q	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	26	BQ	cfu/100 mL		

Sample Location: INSIDE HAWKSHAW LAGOON

Collection Date/Time: 02/27/2012 01:20 PM

Field ID: # 13

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410944	SM 5210 B	Biochemical Oxygen Demand-5 Day	2.1		mg/L	P236804	
1410958	SM 10200 H (mod.)	Chlorophyll-a, Corrected	22		ug/L	P236871	
		Phaeophytin-a	9.7		ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.5			P236871	
		Chlorophyll-a, Uncorrected	29		ug/L	P236871	
1410976	EPA 1600 (MF)	Enterococci-Membrane Filter	16	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	24	BQ	cfu/100 mL		

Sample Location: RANGE MARKER E OF TEXOR

Collection Date/Time: 02/27/2012 10:58 AM

Field ID: # 1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410933	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.3	I	mg/L	P236803	
1410947	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4.7		ug/L	P236871	
		Phaeophytin-a	2.6		ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.5			P236871	
		Chlorophyll-a, Uncorrected	6.4		ug/L	P236871	
1410965	EPA 1600 (MF)	Enterococci-Membrane Filter	8	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	15	BQ	cfu/100 mL		

Sample Location: WEST END OF HAWKSHAW 100FT S OF OUTFALL

Collection Date/Time: 02/27/2012 12:30 PM

Field ID: # 9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410941	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.4	I	mg/L	P236804	
1410955	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.9		ug/L	P236871	
		Phaeophytin-a	0.79	I	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.5			P236871	
		Chlorophyll-a, Uncorrected	2.4		ug/L	P236871	
1410973	EPA 1600 (MF)	Enterococci-Membrane Filter	22	BQ	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	11	BQ	cfu/100 mL		

Sample Location: WEST END OF HAWKSHAW 100FT SOUTH OF OUT FALL **Collection Date/Time: 02/27/2012 11:38 PM**

Field ID: # 8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Failures
1410940	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.5	I	mg/L	P236803	
1410954	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.2		ug/L	P236871	
		Phaeophytin-a	0.40	U	ug/L	P236871	
		Chlorophyll/Phaeophytin Ratio	1.7			P236871	
		Chlorophyll-a, Uncorrected	3.4		ug/L	P236871	
1410972	EPA 1600 (MF)	Enterococci-Membrane Filter	48	Q	cfu/100 mL		
	SM 9222 D	Fecal Coliforms-Membrane Filter	60	Q	cfu/100 mL		

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)

Batch ID: P236871

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 5210 B

Batch ID: P236803

Component	Result	Code	Units
Biochemical Oxygen Demand-5 Day	0.20	U	mg/L

Reference Method: SM 5210 B

Batch ID: P236804

Component	Result	Code	Units
Biochemical Oxygen Demand-5 Day	0.20	U	mg/L

Quality Assurance Report Precision

Quality Assurance Report Precision

Reference Method: SM 10200 H (mod.)
Batch ID: P236871

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1411108	Chlorophyll/Phaeophytin Ratio	0.0	Sample	P	0 - 25
1411108	Chlorophyll-a, Corrected	1.77	Sample	P	0 - 25
1411108	Chlorophyll-a, Uncorrected	1.07	Sample	P	0 - 25

Reference Method: SM 5210 B
Batch ID: P236803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1410836	Biochemical Oxygen Demand-5 Day	10.2	Sample	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 Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
SM 10200 H (mod.)	Chlorophyll/Phaeophytin Ratio				0.0	
	Chlorophyll-a, Corrected				1.77	
	Chlorophyll-a, Uncorrected				1.07	
SM 5210 B	Biochemical Oxygen Demand-5 Day				10.2	

Reference Method Descriptions

Method / NELAC Cert. #	Description
EPA 1600 (MF) / E71969	Enterococci by membrane filter method by UWF Overflow Laboratory for NWD
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, phaeophytin and ratio by spectrophotometry
SM 5210 B / E31780	BOD, NOT nitrogen-inhibited
SM 9222 D / E71969	Fecal coliforms by membrane filter method by UWF Overflow Laboratory for NWD

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 1600 (MF)	02/27/2012			02/27/2012 16:57	UWF Lab	1410965
	02/27/2012			02/27/2012 17:00	UWF Lab	1410966
	02/27/2012			02/27/2012 17:03	UWF Lab	1410967
	02/27/2012			02/27/2012 17:06	UWF Lab	1410968
	02/27/2012			02/27/2012 17:09	UWF Lab	1410969
	02/27/2012			02/27/2012 17:12	UWF Lab	1410970
	02/27/2012			02/27/2012 17:15	UWF Lab	1410971
	02/27/2012			02/27/2012 17:18	UWF Lab	1410972
	02/27/2012			02/27/2012 17:24	UWF Lab	1410973
	02/27/2012			02/27/2012 17:30	UWF Lab	1410974
	02/27/2012			02/27/2012 17:36	UWF Lab	1410978
	02/27/2012			02/27/2012 17:39	UWF Lab	1410975
	02/27/2012			02/27/2012 17:42	UWF Lab	1410976
	02/27/2012			02/27/2012 17:45	UWF Lab	1410977
SM 10200 H (mod.)	02/28/2012	02/28/2012 14:55	Meiqin Chen	03/06/2012	Meiqin Chen	1410947, 1410948, 1410949, 1410950, 1410951, 1410952, 1410953, 1410954, 1410955, 1410956, 1410957, 1410958, 1410959, 1410960
SM 5210 B	02/28/2012			02/29/2012 08:15	Jonathan M. Woods	1410933, 1410934, 1410935, 1410936, 1410937, 1410938, 1410939, 1410940, 1410941, 1410942, 1410943, 1410944, 1410945, 1410946
SM 9222 D	02/27/2012			02/27/2012 17:17	UWF Lab	1410965
	02/27/2012			02/27/2012 17:21	UWF Lab	1410966
	02/27/2012			02/27/2012 17:24	UWF Lab	1410967
	02/27/2012			02/27/2012 17:27	UWF Lab	1410968
	02/27/2012			02/27/2012 17:30	UWF Lab	1410969
	02/27/2012			02/27/2012 17:33	UWF Lab	1410970
	02/27/2012			02/27/2012 17:36	UWF Lab	1410971
	02/27/2012			02/27/2012 17:39	UWF Lab	1410972
	02/27/2012			02/27/2012 17:45	UWF Lab	1410973
	02/27/2012			02/27/2012 17:51	UWF Lab	1410974
	02/27/2012			02/27/2012 17:55	UWF Lab	1410978
	02/27/2012			02/27/2012 17:59	UWF Lab	1410975
	02/27/2012			02/27/2012 18:05	UWF Lab	1410976
	02/27/2012			02/27/2012 18:10	UWF Lab	1410977