

Biological Analysis Report

NW-DIST-2009-08-25-01

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-2009-08-24-19**
Customer: **NW-DIST**
Project ID: **DISCRTNARY**

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

For additional information please contact
David D. Whiting - Administrator
Loretta E. Wolfe - Bench Biology
Elizabeth Miller - Algal Taxonomy
Cheryl Swanson - Invertebrate Taxonomy
J. Marshall Faircloth - Aquatic Toxicology
Daisys Tamayo - Microbiology
Andrew R. Tintle, QA Officer
Phone (850) 245-8177

Certified by: Cheryl A. Swanson, Environmental Supervisor II

Date Certified: 16-SEP-2009 13:43



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.

* - Item was outside the QC Limits.

** - 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-2009-08-25-09

Job: TLH-2009-08-25-10

Job: TLH-2009-08-25-11

Group: Chlorophyll/Grain Size/BOD

Group: Chlorophyll/Grain Size/BOD

Group: Overflow

Sample Location: 1/2 BRIDGE & MUSCOGEE

Collection Date/Time: 08/24/2009 11:35 AM

Field ID: # 2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1211022	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.7	I		mg/L	E31780
1211036	SM 10200 H (mod.)	Chlorophyll-a, Corrected	6.2			ug/L	
		Phaeophytin-a	0.40	U	RPD	ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	6.4			ug/L	
1211050	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	4	B		#/100 mL	

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Sample Location: 1/2 BRIDGE & PORT

Collection Date/Time: 08/24/2009 12:00 PM

Field ID: # 7

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1211027	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.2	I		mg/L	E31780
1211041	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.4			ug/L	
		Phaeophytin-a	0.40	U	RPD	ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	3.5			ug/L	
1211055	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Sample Location: 1/2 MUSCOGEE & HAWKSHAW

Collection Date/Time: 08/24/2009 01:05 PM

Field ID: # 6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1211026	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.7	I		mg/L	E31780
1211040	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.5			ug/L	
		Phaeophytin-a	0.40	U	RPD	ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	5.6			ug/L	
1211054	EPA 1600	Enterococci-Membrane Filter	2	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	2	B		#/100 mL	

Field ID: # 6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
-----------	-------------	-----------	--------	------	-------------	-------	--------

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Sample Location: 100'S OF OUT FALL**Collection Date/Time: 08/24/2009 11:45 AM****Field ID: # 4**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1211024	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.3	I		mg/L	E31780
1211038	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.0			ug/L	
		Phaeophytin-a	0.40	U	RPD	ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	5.2			ug/L	
1211052	EPA 1600	Enterococci-Membrane Filter	2	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Sample Location: BETWEEN BRIDGE & PORT 400 FROM SHORE**Collection Date/Time: 08/24/2009 12:07 PM****Field ID: # 12**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1211032	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.0	I		mg/L	E31780
1211046	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.7			ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.6				
		Chlorophyll-a, Uncorrected	3.0			ug/L	
1211060	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	2	B		#/100 mL	

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Sample Location: BETWEEN MARINA & OUT FALL**Collection Date/Time: 08/24/2009 12:23 PM****Field ID: # 10**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1211030	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.1	I		mg/L	E31780
1211044	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.9			ug/L	
		Phaeophytin-a	0.40	U	RPD	ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	4.0			ug/L	
1211058	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	B		#/100 mL	

Field ID: # 10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
-----------	-------------	-----------	--------	------	-------------	-------	--------

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Sample Location: E OF OUT FALL IN PGS2

Collection Date/Time: 08/24/2009 12:55 PM

Field ID: # 14

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
-----------	-------------	-----------	--------	------	-------------	-------	--------

1211034	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.0	I		mg/L	E31780
1211048	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.7			ug/L	
		Phaeophytin-a	0.40	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	1.9			ug/L	
1211062	EPA 1600	Enterococci-Membrane Filter	8	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	5	B		#/100 mL	

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Sample Location: E OF STORM DRAIN

Collection Date/Time: 08/24/2009 11:40 AM

Field ID: # 3

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
-----------	-------------	-----------	--------	------	-------------	-------	--------

1211023	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.2	I		mg/L	E31780
1211037	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.5			ug/L	
		Phaeophytin-a	0.40	U	RPD	ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	5.7			ug/L	
1211051	EPA 1600	Enterococci-Membrane Filter	4	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	4	B		#/100 mL	

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Sample Location: END OF CHASE ST.

Collection Date/Time: 08/24/2009 11:50 AM

Field ID: # 5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
-----------	-------------	-----------	--------	------	-------------	-------	--------

1211025	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.2	I		mg/L	E31780
1211039	SM 10200 H (mod.)	Chlorophyll-a, Corrected	6.0			ug/L	
		Phaeophytin-a	0.40	U	RPD	ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	6.3			ug/L	
1211053	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	4	B		#/100 mL	

Field ID: # 5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
-----------	-------------	-----------	--------	------	-------------	-------	--------

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Sample Location: ENTRANCE OF MARINA

Collection Date/Time: 08/24/2009 12:15 PM

Field ID: # 11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
-----------	-------------	-----------	--------	------	-------------	-------	--------

1211031	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.0	I		mg/L	E31780
1211045	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.8			ug/L	
		Phaeophytin-a	0.68	I		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.5				
		Chlorophyll-a, Uncorrected	2.3		RPD	ug/L	
1211059	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	2	B		#/100 mL	

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Sample Location: INSIDE HAWKSHAW LAGOON

Collection Date/Time: 08/24/2009 12:40 PM

Field ID: # 13

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
-----------	-------------	-----------	--------	------	-------------	-------	--------

1211033	SM 5210 B	Biochemical Oxygen Demand-5 Day	2.9			mg/L	E31780
1211047	SM 10200 H (mod.)	Chlorophyll-a, Corrected	9.3			ug/L	
		Phaeophytin-a	5.7			ug/L	
		Chlorophyll/Phaeophytin Ratio	1.4				
		Chlorophyll-a, Uncorrected	13			ug/L	
1211061	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	15	B		#/100 mL	

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L. Result is greater than 10 times the blank result.

Sample Location: INSIDE ROCKS

Collection Date/Time: 08/24/2009 11:55 AM

Field ID: # 8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
-----------	-------------	-----------	--------	------	-------------	-------	--------

1211028	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.3	I		mg/L	E31780
1211042	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.1			ug/L	
		Phaeophytin-a	0.40	U	RPD	ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	5.3			ug/L	
1211056	EPA 1600	Enterococci-Membrane Filter	620	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	440			#/100 mL	

Field ID: # 8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
-----------	-------------	-----------	--------	------	-------------	-------	--------

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L. Laboratory duplicate result is 1.2 I mg/L. Precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: RANGE MARK E AT TEXAN

Collection Date/Time: 08/24/2009 11:20 AM

Field ID: # 1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1211021	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.0	I		mg/L	E31780
1211035	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.1			ug/L	
		Phaeophytin-a	0.40	U	RPD	ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	3.3			ug/L	
1211049	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Sample Location: W OF HAWKSHAW 400's AT OUT FALL

Collection Date/Time: 08/24/2009 12:28 PM

Field ID: # 9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1211029	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.4	I		mg/L	E31780
1211043	SM 10200 H (mod.)	Chlorophyll-a, Corrected	2.7			ug/L	
		Phaeophytin-a	0.40	U	RPD	ug/L	
		Chlorophyll/Phaeophytin Ratio	1.8				
		Chlorophyll-a, Uncorrected	2.7			ug/L	
1211057	EPA 1600	Enterococci-Membrane Filter	2	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	2	B		#/100 mL	

Ref. Method and Comment:

SM 5210 B Dilution water blank exceeds method limit of 0.20 mg/L but is within laboratory historical limit of 0.50 mg/L.

Quality Control Report

Ref. Method	Analyte	LCS %Recovery	MS %Recovery	LCS	Precision SMP	MS
SM 10200 H (mod.)	Chlorophyll-a, Corrected				9.51	
	Chlorophyll-a, Uncorrected				6.06	
	Chlorophyll/Phaeophytin Ratio				0.0	
	Phaeophytin-a				35.3*	
	Chlorophyll-a, Corrected				7.64	
	Chlorophyll-a, Uncorrected				8.93	
	Chlorophyll/Phaeophytin Ratio				0.0	
	Phaeophytin-a				23.2	
	Chlorophyll-a, Uncorrected				36.1*	
	Chlorophyll/Phaeophytin Ratio				6.45	

Reference Method Descriptions

Ref. Method:	Description
EPA 1600	Enterococci by membrane filter method by UWF Overflow Laboratory for NWD
SM 10200 H (mod.)	Phytoplankton chlorophyll-a and phaeophytin and ratio by spectrophotometry
SM 5210 B	BOD, NOT nitrogen-inhibited
SM 9222 D	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	8/24/2009			08/24/2009 15:42	UWF Lab	1211049
EPA 1600	8/24/2009			08/24/2009 15:45	UWF Lab	1211050
EPA 1600	8/24/2009			08/24/2009 15:50	UWF Lab	1211051
EPA 1600	8/24/2009			08/24/2009 15:52	UWF Lab	1211052
EPA 1600	8/24/2009			08/24/2009 15:55	UWF Lab	1211053
EPA 1600	8/24/2009			08/24/2009 15:57	UWF Lab	1211054
EPA 1600	8/24/2009			08/24/2009 16:00	UWF Lab	1211055
EPA 1600	8/24/2009			08/24/2009 16:05	UWF Lab	1211056
EPA 1600	8/24/2009			08/24/2009 16:07	UWF Lab	1211057
EPA 1600	8/24/2009			08/24/2009 16:10	UWF Lab	1211058
EPA 1600	8/24/2009			08/24/2009 16:12	UWF Lab	1211059
EPA 1600	8/24/2009			08/24/2009 16:15	UWF Lab	1211060
EPA 1600	8/24/2009			08/24/2009 16:17	UWF Lab	1211061
EPA 1600	8/24/2009			08/24/2009 16:20	UWF Lab	1211062
SM 10200 H (mod.)	8/25/2009	08/25/2009 12:50	Kim M. Spencer	08/31/2009	Kim M. Spencer	1211035, 1211036, 1211037, 1211038, 1211039, 1211040, 1211041, 1211042, 1211043, 1211044
SM 10200 H (mod.)	8/25/2009	08/25/2009 12:50	Kim M. Spencer	09/01/2009	Kim M. Spencer	1211045, 1211046, 1211047, 1211048
SM 5210 B	8/25/2009			08/26/2009 08:15	Amelia G. Rankin	1211021, 1211022, 1211023, 1211024, 1211025, 1211026, 1211027, 1211028, 1211029, 1211030, 1211031, 1211032, 1211033, 1211034
SM 9222 D	8/24/2009			08/24/2009 15:50	UWF Lab	1211049
SM 9222 D	8/24/2009			08/24/2009 15:53	UWF Lab	1211050
SM 9222 D	8/24/2009			08/24/2009 16:00	UWF Lab	1211051
SM 9222 D	8/24/2009			08/24/2009 16:03	UWF Lab	1211052
SM 9222 D	8/24/2009			08/24/2009 16:07	UWF Lab	1211053
SM 9222 D	8/24/2009			08/24/2009 16:11	UWF Lab	1211054

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared by	Analysis Date/Time	Analyzed by	Associated Samples
SM 9222 D	8/24/2009			08/24/2009 16:15	UWF Lab	1211055
SM 9222 D	8/24/2009			08/24/2009 16:21	UWF Lab	1211056
SM 9222 D	8/24/2009			08/24/2009 16:24	UWF Lab	1211057
SM 9222 D	8/24/2009			08/24/2009 16:27	UWF Lab	1211058
SM 9222 D	8/24/2009			08/24/2009 16:30	UWF Lab	1211059
SM 9222 D	8/24/2009			08/24/2009 16:34	UWF Lab	1211060
SM 9222 D	8/24/2009			08/24/2009 16:37	UWF Lab	1211061
SM 9222 D	8/24/2009			08/24/2009 16:40	UWF Lab	1211062