

Biological Analysis Report

NW-DIST-2008-11-18-01

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

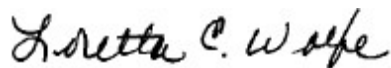
Overflow Analyses Performed By:
University of West Florida
11000 University Parkway
Pensacola, FL 32514
DOH Accreditation E71969

Event Description: **Project Greenshores**
Request ID: **RQ-2008-11-17-06**
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

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Certified by: Loretta E. Wolfe, Environmental Manager



Date Certified: 10-DEC-2008 08:46

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-2008-11-18-17
Job: TLH-2008-11-18-19
Job: TLH-2008-11-18-20

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

Sample Location: 1/2 BRIDGE & MUSCOGEE**Collection Date/Time: 11/17/2008 11:00 AM****Field ID: # 2**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148143	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.6	I		mg/L	E31780
1148168	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4.9			ug/L	
		Phaeophytin-a	0.24	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	5.1			ug/L	
1148182	EPA 1600	Enterococci-Membrane Filter	2	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Sample Location: 1/2 BRIDGE & PORT**Collection Date/Time: 11/17/2008 11:27 AM****Field ID: # 7**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148148	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.6	I		mg/L	E31780
1148173	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4.2			ug/L	
		Phaeophytin-a	0.24	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	4.4			ug/L	
1148187	EPA 1600	Enterococci-Membrane Filter	4	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Sample Location: 1/2 MUSCOGEE & HAWKSHAW 400 ' SHORE**Collection Date/Time: 11/17/2008 12:05 PM****Field ID: # 6**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148147	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.6	I		mg/L	E31780
1148172	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4.5			ug/L	
		Phaeophytin-a	0.24	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	4.6			ug/L	
1148186	EPA 1600	Enterococci-Membrane Filter	4	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Sample Location: 100' S OF OUTFALL**Collection Date/Time: 11/17/2008 11:10 AM****Field ID: # 4**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Field ID: # 4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148145	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.8	I		mg/L	E31780
1148170	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4.6			ug/L	
		Phaeophytin-a	0.24	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	4.8			ug/L	
1148184	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	B		#/100 mL	

Sample Location: B /T BRIDGE & PORT 400 ' SHORE

Collection Date/Time: 11/17/2008 11:33 AM

Field ID: # 12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148153	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.5	I		mg/L	E31780
1148178	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4.2			ug/L	
		Phaeophytin-a	0.24	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	4.4			ug/L	
1148192	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Sample Location: B/T MARINA & OUT FALL

Collection Date/Time: 11/17/2008 11:43 AM

Field ID: # 10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148151	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.99	I		mg/L	E31780
1148176	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.7			ug/L	
		Phaeophytin-a	0.24	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	3.8			ug/L	
1148190	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Sample Location: E OF OUT FALL IN PGS-2

Collection Date/Time: 11/17/2008 12:07 PM

Field ID: # 14

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Field ID: # 14

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148155	SM 5210 B	Biochemical Oxygen Demand-5 Day	0.87	I		mg/L	E31780
1148180	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.7			ug/L	
		Phaeophytin-a	0.24	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	1.8			ug/L	
1148194	EPA 1600	Enterococci-Membrane Filter	2	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Sample Location: E OF STORM DRAIN

Collection Date/Time: 11/17/2008 11:05 AM

Field ID: # 3

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148144	SM 5210 B	Biochemical Oxygen Demand-5 Day	2.0			mg/L	E31780
1148169	SM 10200 H (mod.)	Chlorophyll-a, Corrected	5.6			ug/L	
		Phaeophytin-a	0.24	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	5.8			ug/L	
1148183	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	2	B		#/100 mL	

Sample Location: END OF CHASE ST.

Collection Date/Time: 11/17/2008 11:22 AM

Field ID: # 5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148146	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.7	I		mg/L	E31780
1148171	SM 10200 H (mod.)	Chlorophyll-a, Corrected	6			ug/L	
		Phaeophytin-a	0.24	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	6.2			ug/L	
1148185	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Sample Location: ENTRANCE AT MARINA

Collection Date/Time: 11/17/2008 11:39 AM

Field ID: # 11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Field ID: # 11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148152	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.4	I		mg/L	E31780
1148177	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.1			ug/L	
		Phaeophytin-a	0.24	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	3.1			ug/L	
1148191	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	B		#/100 mL	

Sample Location: INSIDE HAWKSHAW LAGOON

Collection Date/Time: 11/17/2008 11:54 AM

Field ID: # 13

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148154	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.3	I		mg/L	E31780
1148179	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.71	I		ug/L	
		Phaeophytin-a	0.46	I		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.4				
		Chlorophyll-a, Uncorrected	1			ug/L	
1148193	EPA 1600	Enterococci-Membrane Filter	4	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	8	B		#/100 mL	

Sample Location: RANGE MARKER E OF TEXAN

Collection Date/Time: 11/17/2008 10:45 AM

Field ID: # 1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148142	SM 5210 B	Biochemical Oxygen Demand-5 Day	3.3	A		mg/L	E31780
1148167	SM 10200 H (mod.)	Chlorophyll-a, Corrected	6.1	A		ug/L	
		Phaeophytin-a	0.25	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7	A			
		Chlorophyll-a, Uncorrected	6.3	A		ug/L	
1148181	EPA 1600	Enterococci-Membrane Filter	2	U		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	B		#/100 mL	

Ref. Method and Comment:
SM 10200 H (mod.) Duplicate was analyzed and result was 0.25 U for Phaeophytin-a.

Sample Location: W OF HAWKSHAW 400 ' S OUT FALL

Collection Date/Time: 11/17/2008 11:49 AM

Field ID: # 9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Field ID: # 9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148150	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.5	I		mg/L	E31780
1148175	SM 10200 H (mod.)	Chlorophyll-a, Corrected	4			ug/L	
		Phaeophytin-a	0.24	U		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.7				
		Chlorophyll-a, Uncorrected	4.1			ug/L	
1148189	EPA 1600	Enterococci-Membrane Filter	2	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	1	U		#/100 mL	

Sample Location: WEST OF OUT FALL INSIDE ROCKS

Collection Date/Time: 11/17/2008 11:16 AM

Field ID: # 8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1148149	SM 5210 B	Biochemical Oxygen Demand-5 Day	1.4	I		mg/L	E31780
1148174	SM 10200 H (mod.)	Chlorophyll-a, Corrected	3.8			ug/L	
		Phaeophytin-a	0.35	I		ug/L	
		Chlorophyll/Phaeophytin Ratio	1.6				
		Chlorophyll-a, Uncorrected	4.2			ug/L	
1148188	EPA 1600	Enterococci-Membrane Filter	4	B		#/100 mL	E71969
	SM 9222 D	Fecal Coliforms-Membrane Filter	2	B		#/100 mL	

Quality Control Report

Ref. Method	Analyte	LCS %Recovery	MS %Recovery	LCS	Precision SMP	MS
SM 5210 B	Biochemical Oxygen Demand-5 Day				6.06 18.2	
SM 10200 H (mod.)	Chlorophyll-a, Corrected				20.7	
	Chlorophyll-a, Uncorrected				3.58	
	Chlorophyll/Phaeophytin Ratio				3.93	
					0.0	

Reference Method Descriptions

Ref. Method:

EPA 1600
SM 10200 H (mod.)
SM 5210 B
SM 9222 D

Description

Enterococci by membrane filter method by UWF Overflow Laboratory for NWD
Phytoplankton chlorophyll-a and phaeophytin and ratio by spectrophotometry
BOD, NOT nitrogen-inhibited
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	11/17/2008			11/17/2008 15:55	UWF Lab	1148181
EPA 1600	11/17/2008			11/17/2008 15:57	UWF Lab	1148182
EPA 1600	11/17/2008			11/17/2008 16:00	UWF Lab	1148183
EPA 1600	11/17/2008			11/17/2008 16:02	UWF Lab	1148184
EPA 1600	11/17/2008			11/17/2008 16:07	UWF Lab	1148185
EPA 1600	11/17/2008			11/17/2008 16:10	UWF Lab	1148186
EPA 1600	11/17/2008			11/17/2008 16:12	UWF Lab	1148187
EPA 1600	11/17/2008			11/17/2008 16:17	UWF Lab	1148188
EPA 1600	11/17/2008			11/17/2008 16:20	UWF Lab	1148189
EPA 1600	11/17/2008			11/17/2008 16:22	UWF Lab	1148190
EPA 1600	11/17/2008			11/17/2008 16:25	UWF Lab	1148191
EPA 1600	11/17/2008			11/17/2008 16:27	UWF Lab	1148192
EPA 1600	11/17/2008			11/17/2008 16:30	UWF Lab	1148193
EPA 1600	11/17/2008			11/17/2008 16:35	UWF Lab	1148194
SM 10200 H (mod.)	11/18/2008	11/18/2008 13:45	Kim M. Spencer	11/21/2008	Kim M. Spencer	1148167, 1148168, 1148169, 1148170, 1148171, 1148172, 1148173, 1148174, 1148175, 1148176, 1148177, 1148178, 1148179, 1148180
SM 5210 B	11/18/2008			11/19/2008 07:40	Jonathan M. Woods	1148142, 1148143, 1148144, 1148145, 1148146, 1148147, 1148148, 1148149, 1148150, 1148151, 1148152, 1148153, 1148154, 1148155
SM 9222 D	11/17/2008			11/17/2008 15:02	UWF Lab	1148181
SM 9222 D	11/17/2008			11/17/2008 15:04	UWF Lab	1148182
SM 9222 D	11/17/2008			11/17/2008 15:07	UWF Lab	1148183
SM 9222 D	11/17/2008			11/17/2008 15:09	UWF Lab	1148184
SM 9222 D	11/17/2008			11/17/2008 15:14	UWF Lab	1148185
SM 9222 D	11/17/2008			11/17/2008 15:17	UWF Lab	1148186
SM 9222 D	11/17/2008			11/17/2008 15:19	UWF Lab	1148187

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared by	Analysis Date/Time	Analyzed by	Associated Samples
SM 9222 D	11/17/2008			11/17/2008 15:24	UWF Lab	1148188
SM 9222 D	11/17/2008			11/17/2008 15:26	UWF Lab	1148189
SM 9222 D	11/17/2008			11/17/2008 15:29	UWF Lab	1148190
SM 9222 D	11/17/2008			11/17/2008 15:33	UWF Lab	1148191
SM 9222 D	11/17/2008			11/17/2008 15:36	UWF Lab	1148192
SM 9222 D	11/17/2008			11/17/2008 15:38	UWF Lab	1148193
SM 9222 D	11/17/2008			11/17/2008 15:41	UWF Lab	1148194