

Chemical Analysis Report

NW-DIST-2009-02-24-01

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

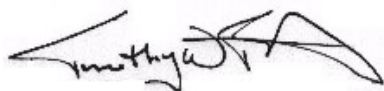
Event Description: **Project Greenshores**
Request ID: **RQ-2009-02-23-17**
Customer: **NW-DIST**
Project ID: **DISCRTNARY**

Send Reports to:
FL Dept. of Environmental Protection
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Pensacola, FL 32502-5794
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Certified by: Timothy Fitzpatrick, Program Administrator

Date Certified: 20-MAR-2009 16:59



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.

Sample Location: INSIDE HAWSHAW LAGOON

Collection Date/Time: 02/23/2009 01:31 PM

Field ID: #13

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168052	EPA 180.1 Rev. 2.0	Turbidity	1.7			NTU	E31780
	SM 2120 B-01	Color	15			PCU	
	SM 2540 D-97	TSS	13	I		mg/L	
1168066	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I	MS	mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.012	I		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.1 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: PENSACOLA BAY 1/2 BRIDGE AND PORT

Collection Date/Time: 02/23/2009 12:36 PM

Field ID: #7

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168046	EPA 180.1 Rev. 2.0	Turbidity	2.5			NTU	E31780
	SM 2120 B-01	Color	15			PCU	
	SM 2540 D-97	TSS	12	I		mg/L	
1168060	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.010	I		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.0 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: PENSACOLA BAY 1/2 BRIDGE AND MUSCOGEE

Collection Date/Time: 02/23/2009 11:40 AM

Field ID: #2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168041	EPA 180.1 Rev. 2.0	Turbidity	3.2			NTU	E31780
	SM 2120 B-01	Color	15			PCU	
	SM 2540 D-97	TSS	15	I		mg/L	
1168055	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57		MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.015			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.012	I		mg P/L	

Field ID: #2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.0 units. This value does not represent the field pH.
 SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: PENSACOLA BAY 1/2 MUSCOGEE AND HAWK SHAW
Collection Date/Time: 02/23/2009 01:43 PM

Field ID: #6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168045	EPA 180.1 Rev. 2.0	Turbidity	2.6			NTU	E31780
	SM 2120 B-01	Color	15			PCU	
	SM 2540 D-97	TSS	14	I		mg/L	
1168059	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.41			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.008	I		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.1 units. This value does not represent the field pH.
 SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: PENSACOLA BAY 100'S OF OUTFALL
Collection Date/Time: 02/23/2009 12:07 PM

Field ID: #4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168043	EPA 180.1 Rev. 2.0	Turbidity	2.1			NTU	E31780
	SM 2120 B-01	Color	15			PCU	
	SM 2540 D-97	TSS	15	I		mg/L	
1168057	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38	I		mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.039			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.008	U		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.0 units. This value does not represent the field pH.
 SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.
 EPA 351.2 Rev. 2.0 The PQL was elevated due to sample matrix interference.

Sample Location: PENSACOLA BAY B/E BRIDGE AND PORT
Collection Date/Time: 02/23/2009 12:16 PM

Field ID: #12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168051	EPA 180.1 Rev. 2.0	Turbidity	2.4	A		NTU	E31780
	SM 2120 B-01	Color	15			PCU	
	SM 2540 D-97	TSS	10	I		mg/L	
1168065	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		MS	mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.011	I		mg P/L	

Field ID: #12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.1 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: PENSACOLA BAY E OF STORM DRAIN**Collection Date/Time: 02/23/2009 11:50 AM****Field ID: #3**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168042	EPA 180.1 Rev. 2.0	Turbidity	2.2	A		NTU	E31780
	SM 2120 B-01	Color	15			PCU	
	SM 2540 D-97	TSS	13	I		mg/L	
1168056	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.009	I		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.0 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: PENSACOLA BAY E OF TEXAR**Collection Date/Time: 02/23/2009 11:27 AM****Field ID: #1**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168040	EPA 180.1 Rev. 2.0	Turbidity	3.8			NTU	E31780
	SM 2120 B-01	Color	15	A		PCU	
	SM 2540 D-97	TSS	18			mg/L	
1168054	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.59		MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U		mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.017	I		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 7.9 A units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: PENSACOLA BAY E. OF OUTFALL**Collection Date/Time: 02/23/2009 01:39 PM****Field ID: #14**

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168053	EPA 180.1 Rev. 2.0	Turbidity	1.9			NTU	E31780
	SM 2120 B-01	Color	15			PCU	
	SM 2540 D-97	TSS	14	I		mg/L	
1168067	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.49			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030		MS	mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.009	I		mg P/L	

Field ID: #14

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.0 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: PENSACOLA BAY END OF CHASE ST

Collection Date/Time: 02/23/2009 12:24 PM

Field ID: #5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168044	EPA 180.1 Rev. 2.0	Turbidity	2.1			NTU	E31780
	SM 2120 B-01	Color	15			PCU	
	SM 2540 D-97	TSS	14	I		mg/L	
1168058	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.50			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.038			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.009	I		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.1 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: PENSACOLA BAY ENTRANCE OF MARINA

Collection Date/Time: 02/23/2009 12:57 PM

Field ID: #11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168050	EPA 180.1 Rev. 2.0	Turbidity	2.5			NTU	E31780
	SM 2120 B-01	Color	15	A		PCU	
	SM 2540 D-97	TSS	6	I		mg/L	
1168064	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.029		MS	mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.013	I		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.1 A units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: PENSACOLA BAY INSIDE ROCKS

Collection Date/Time: 02/23/2009 12:18 PM

Field ID: #8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168047	EPA 180.1 Rev. 2.0	Turbidity	1.7			NTU	E31780
	SM 2120 B-01	Color	10			PCU	
	SM 2540 D-97	TSS	11	I		mg/L	
1168061	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40	I		mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.010	I		mg P/L	

Field ID: #8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
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Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.1 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

EPA 351.2 Rev. 2.0 The PQL was elevated due to sample matrix interference.

Sample Location: PENSACOLA BAY MARINA & OUTFALL

Collection Date/Time: 02/23/2009 01:07 PM

Field ID: #10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168049	EPA 180.1 Rev. 2.0	Turbidity	1.2			NTU	E31780
	SM 2120 B-01	Color	15			PCU	
	SM 2540 D-97	TSS	9	I		mg/L	
1168063	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.45			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.026	J	MS	mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.010	I		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.2 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

EPA 353.2 Rev. 2.0 The matrix spike recoveries were outside the QC limit.

Sample Location: PENSACOLA BUY W OF HAWKSHAW

Collection Date/Time: 02/23/2009 01:20 PM

Field ID: #9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1168048	EPA 180.1 Rev. 2.0	Turbidity	1.9			NTU	E31780
	SM 2120 B-01	Color	15			PCU	
	SM 2540 D-97	TSS	12	I		mg/L	
1168062	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.030			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.019	I		mg P/L	

Ref. Method and Comment:

SM 2120 B-01 The pH of the aliquot used to measure the color is 8.1 units. This value does not represent the field pH.

SM 2540 D-97 The precision data is unavailable due to the small amount of analyte in the QC sample.

Quality Control Report

Ref. Method	Analyte	LCS %Recovery	MS %Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				1.84	
	Turbidity				2.51	
SM 2120 B-01	Color				0.0	
	Color				0.0	
EPA 353.2 Rev. 2.0	NO2NO3-N	110	107 109			2.29
	NO2NO3-N	110	113* 113*			0.398
EPA 350.1 Rev. 2.0	Ammonia-N	97.5	91.6 93.7			2.10
	Ammonia-N	95.0	99.4 95.5			2.73
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	96.9	109 116*			3.99
	Kjeldahl Nitrogen	101	105 109			2.92
	Kjeldahl Nitrogen	99.3	99.0 95.6			2.89
EPA 365.1 Rev. 2.0	Total-P	105	98.9 101			1.99
	Total-P	104	101 104			2.20

Reference Method Descriptions

Ref. Method:

EPA 180.1 Rev. 2.0
EPA 350.1 Rev. 2.0
EPA 351.2 Rev. 2.0
EPA 353.2 Rev. 2.0
EPA 365.1 Rev. 2.0
SM 2120 B-01
SM 2540 D-97

Description

Turbidity in aqueous matrices
Ammonia in aqueous matrices as mg N/L
Total Kjeldahl Nitrogen in aqueous matrices
Nitrite/Nitrate in aqueous matrices as mg N/L
Low Level Total Phosphorus in fresh water matrices
Color in water samples
Total Suspended Solids in aqueous matrices

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared by	Analysis Date/Time	Analyzed by	Associated Samples
EPA 180.1 Rev. 2.0	2/24/2009			02/24/2009 16:51	Ping Hua	1168040, 1168041, 1168042, 1168043, 1168044, 1168045, 1168046, 1168047, 1168048, 1168049, 1168050, 1168051, 1168052, 1168053
EPA 350.1 Rev. 2.0	2/24/2009			02/25/2009	Peter D. Kaus	1168054, 1168055, 1168056, 1168057, 1168058, 1168059, 1168060, 1168061, 1168062, 1168063, 1168064, 1168065, 1168066, 1168067
EPA 351.2 Rev. 2.0	2/24/2009	03/02/2009	Megan E. Faircloth	03/04/2009	Christopher Armour	1168054, 1168055, 1168056, 1168057, 1168058, 1168059, 1168060, 1168061, 1168062, 1168063, 1168064, 1168065, 1168066, 1168067
EPA 353.2 Rev. 2.0	2/24/2009			02/26/2009	Sima Feizi	1168054, 1168055, 1168056, 1168057, 1168058, 1168059, 1168060, 1168061, 1168062, 1168063, 1168064, 1168065, 1168066, 1168067
EPA 365.1 Rev. 2.0	2/24/2009	03/13/2009	Rochelle Y Jackson	03/18/2009	Rochelle Y Jackson	1168054, 1168055, 1168056, 1168057, 1168058, 1168059, 1168060, 1168061, 1168062, 1168063, 1168064, 1168065, 1168066, 1168067
SM 2120 B-01	2/24/2009			02/24/2009 17:30	Naser Tassobi	1168040, 1168041, 1168042, 1168043, 1168044, 1168045, 1168046, 1168047, 1168048, 1168049, 1168050, 1168051, 1168052, 1168053
SM 2540 D-97	2/24/2009			02/26/2009	Yijie Li	1168040, 1168041, 1168042, 1168043, 1168044, 1168045, 1168046, 1168047, 1168048, 1168049, 1168050, 1168051, 1168052, 1168053