Chemical 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

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
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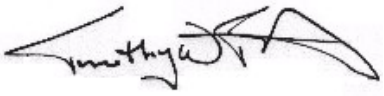
Certified by: Timothy Fitzpatrick, Program Administrator

Date Certified: 16-SEP-2009 10:36



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: **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 #
1211064	EPA 180.1 Rev. 2.0	Turbidity	2.7			NTU	E31780
	SM 2120 B-01	Color (apparent)	20			PCU	
	SM 2540 D-97	TSS	12	I		mg/L	
1211078	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	0.007	I		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: **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 #
1211069	EPA 180.1 Rev. 2.0	Turbidity	1.4			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	7	I		mg/L	
1211083	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I		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 8.2 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.

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 #
1211068	EPA 180.1 Rev. 2.0	Turbidity	2.3			NTU	E31780
	SM 2120 B-01	Color (apparent)	20			PCU	
	SM 2540 D-97	TSS	12	I		mg/L	
1211082	EPA 350.1 Rev. 2.0	Ammonia-N	0.016	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.37	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I		mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.012	I		mg P/L	

Field ID: # 6 Matrix: W-SURF-SLT

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

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.

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 #
1211066	EPA 180.1 Rev. 2.0	Turbidity	2.2			NTU	E31780
	SM 2120 B-01	Color (apparent)	20			PCU	
	SM 2540 D-97	TSS	6	I		mg/L	
1211080	EPA 350.1 Rev. 2.0	Ammonia-N	0.017	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43	J	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I		mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.011	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.
EPA 351.2 Rev. 2.0 QC failure(s) observed.

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 #
1211074	EPA 180.1 Rev. 2.0	Turbidity	1.6			NTU	E31780
	SM 2120 B-01	Color (apparent)	20			PCU	
	SM 2540 D-97	TSS	10	I		mg/L	
1211088	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I		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 8.2 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.

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 #
1211072	EPA 180.1 Rev. 2.0	Turbidity	1.4	A		NTU	E31780
	SM 2120 B-01	Color (apparent)	20			PCU	
	SM 2540 D-97	TSS	4	I		mg/L	
1211086	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.36	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I		mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.008	U		mg P/L	

Field ID: # 10 Matrix: W-SURF-SLT

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

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.

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 #
1211076	EPA 180.1 Rev. 2.0	Turbidity	1.7			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	10	I		mg/L	
1211090	EPA 350.1 Rev. 2.0	Ammonia-N	0.036			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025			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 8.2 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.

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 #
1211065	EPA 180.1 Rev. 2.0	Turbidity	2.2			NTU	E31780
	SM 2120 B-01	Color (apparent)	20			PCU	
	SM 2540 D-97	TSS	4	I		mg/L	
1211079	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43			mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I		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: 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 #
1211067	EPA 180.1 Rev. 2.0	Turbidity	2.6			NTU	E31780
	SM 2120 B-01	Color (apparent)	20			PCU	
	SM 2540 D-97	TSS	10	I		mg/L	
1211081	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.43		MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I		mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.013	I		mg P/L	

Field ID: # 5 Matrix: W-SURF-SLT

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

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.

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 #
1211073	EPA 180.1 Rev. 2.0	Turbidity	2.0			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	10	I		mg/L	
1211087	EPA 350.1 Rev. 2.0	Ammonia-N	0.015	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.33	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.014			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: 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 #
1211075	EPA 180.1 Rev. 2.0	Turbidity	7.2			NTU	E31780
	SM 2120 B-01	Color (apparent)	30			PCU	
	SM 2540 D-97	TSS	19			mg/L	
1211089	EPA 350.1 Rev. 2.0	Ammonia-N	0.032			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.65		MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.005	I		mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.040			mg P/L	

Ref. Method and Comment:
SM 2120 B-01 The pH of the aliquot used to measure the color is 7.8 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: 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 #
1211070	EPA 180.1 Rev. 2.0	Turbidity	2.6			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	7	I		mg/L	
1211084	EPA 350.1 Rev. 2.0	Ammonia-N	0.011	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.40		MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I		mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.011	I		mg P/L	

Field ID: # 8 Matrix: W-SURF-SLT

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

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.

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 #
1211063	EPA 180.1 Rev. 2.0	Turbidity	1.8	A		NTU	E31780
	SM 2120 B-01	Color (apparent)	20			PCU	
	SM 2540 D-97	TSS	10	I		mg/L	
1211077	EPA 350.1 Rev. 2.0	Ammonia-N	0.013	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39	I		mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020	U		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 8.1 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 353.2 Rev. 2.0 The MDL was elevated due to sample matrix interference.

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 #
1211071	EPA 180.1 Rev. 2.0	Turbidity	2.3			NTU	E31780
	SM 2120 B-01	Color (apparent)	20	A		PCU	
	SM 2540 D-97	TSS	6	I		mg/L	
1211085	EPA 350.1 Rev. 2.0	Ammonia-N	0.011	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I		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 8.1 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		Precision LCS	Precision SMP	Precision MS
SM 2120 B-01	Color (apparent)					0.0	
	Color (apparent)					0.0	
EPA 180.1 Rev. 2.0	Turbidity					1.09	
	Turbidity					8.39	
EPA 350.1 Rev. 2.0	Ammonia-N	105	97.3	90.7			5.95
	Ammonia-N	102	97.2	92.7			4.44
EPA 353.2 Rev. 2.0	NO2NO3-N	104	105	104			0.462
	NO2NO3-N	104	103	103			0.0
	NO2NO3-N	105	103	104			0.471
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	106	106	95.4			9.03
EPA 365.1 Rev. 2.0	Total-P	91.0	90.4	94.8			4.60
	Total-P	92.1	98.8	94.0			4.59
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.0	103	107			2.92
	Kjeldahl Nitrogen	104	113*	103			7.75

Reference Method Descriptions

Ref. Method:	Description
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L
EPA 365.1 Rev. 2.0	Low Level Total Phosphorus in fresh water matrices
SM 2120 B-01	Apparent color in water samples
SM 2540 D-97	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	8/25/2009			08/25/2009 15:20	Blanca Fach	1211063, 1211064, 1211065, 1211066, 1211067, 1211068, 1211069, 1211070, 1211071, 1211072, 1211073, 1211074, 1211075, 1211076
EPA 350.1 Rev. 2.0	8/25/2009			08/26/2009	Peter D. Kaus	1211077, 1211078, 1211079, 1211080, 1211081, 1211082, 1211083, 1211084, 1211085, 1211086, 1211087, 1211088, 1211089, 1211090
EPA 351.2 Rev. 2.0	8/25/2009	08/27/2009	Bryan A. Werth	09/01/2009	Virginia P. Bryant	1211077, 1211078, 1211079
EPA 351.2 Rev. 2.0	8/25/2009	09/03/2009	Bryan A. Werth	09/04/2009	Virginia P. Bryant	1211090
EPA 351.2 Rev. 2.0	8/25/2009	09/03/2009	Bryan A. Werth	09/08/2009	Christopher Armour	1211080, 1211081, 1211082, 1211083, 1211084, 1211085, 1211086, 1211087, 1211088, 1211089
EPA 353.2 Rev. 2.0	8/25/2009			08/27/2009	Sima Feizi	1211077, 1211078, 1211079, 1211080, 1211081, 1211082, 1211083, 1211084, 1211085, 1211086, 1211087, 1211088, 1211089, 1211090
EPA 365.1 Rev. 2.0	8/25/2009	09/02/2009	Megan E. Faircloth	09/03/2009	Megan E. Faircloth	1211077, 1211078, 1211079, 1211080, 1211081, 1211082, 1211083, 1211084, 1211085, 1211086, 1211087, 1211088, 1211089, 1211090
SM 2120 B-01	8/25/2009			08/25/2009 15:30	Rochelle Y Jackson	1211063, 1211064, 1211065, 1211066, 1211067, 1211068, 1211069, 1211070, 1211071, 1211072, 1211073, 1211074, 1211075, 1211076
SM 2540 D-97	8/25/2009			08/28/2009	Yijie Li	1211063, 1211064, 1211065, 1211066, 1211067, 1211068, 1211069, 1211070, 1211071, 1211072, 1211073, 1211074, 1211075, 1211076