Chemical Analysis Report

NW-DIST-2010-11-23-03

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-2010-11-22-04**
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
Timothy W. Fitzpatrick
Liang-Tsair Lin, Ph.D.
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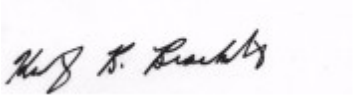
Phone (850) 245-8085

Certified by: Kathryn Brackett, Environmental Manager

Date Certified: 08-DEC-2010 10:25



NON-CONFORMANCE REPORT INCLUDED

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 BETWEEN BRIDGE & MUSCOGEE **Collection Date/Time: 11/22/2010 10:12 AM**

Field ID: 3302J8GS2 (2) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314494	EPA 180.1 Rev. 2.0	Turbidity	1.6			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	25			mg/L	
1314508	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U	MS	mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.036			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 7 units. This value does not represent the field pH.

Sample Location: 1/2 BETWEEN BRIDGE AND PORT **Collection Date/Time: 11/22/2010 11:12 AM**

Field ID: 3302J8GS7 (7) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314499	EPA 180.1 Rev. 2.0	Turbidity	1.6			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	18			mg/L	
1314513	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.028			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 6 units. This value does not represent the field pH.

Sample Location: 1/2 BETWEEN MUSCOGEE AND HAWKSHAW **Collection Date/Time: 11/22/2010 11:00 AM**

Field ID: 3302J1GS6 (6) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314498	EPA 180.1 Rev. 2.0	Turbidity	1.2	A		NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	24			mg/L	
1314512	EPA 350.1 Rev. 2.0	Ammonia-N	0.012	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.22	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.032			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 7 units. This value does not represent the field pH.

Sample Location: 1/4 BETWEEN BRIDGE AND PORT **Collection Date/Time: 11/22/2010 11:20 AM**

Field ID: 3302J7GS12 (12) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314504	EPA 180.1 Rev. 2.0	Turbidity	1.3			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	22			mg/L	
1314518	EPA 350.1 Rev. 2.0	Ammonia-N	0.013	I		mg N/L	

Field ID: 3302J7GS12 (12) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314518	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.39	I		mg N/L	E31780
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.042			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.014	I		mg P/L	

Ref. Method and Comment:
SM 2120 B-01: The pH of the aliquot used to measure the color is 7 units. This value does not represent the field pH.

Sample Location: 100FT S OF STORMDRAIN **Collection Date/Time: 11/22/2010 10:35 AM**

Field ID: 3302J2GS4 (4) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314496	EPA 180.1 Rev. 2.0	Turbidity	0.95			NTU	E31780
	SM 2120 B-01	Color (apparent)	10			PCU	
	SM 2540 D-97	TSS	22			mg/L	
1314510	EPA 350.1 Rev. 2.0	Ammonia-N	0.032			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.032			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 7 units. This value does not represent the field pH.

Sample Location: BETWEEN MARINE AND OUTFALL **Collection Date/Time: 11/22/2010 11:45 AM**

Field ID: 3302J7GS10 (10) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314502	EPA 180.1 Rev. 2.0	Turbidity	0.90			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	21	A		mg/L	
1314516	EPA 350.1 Rev. 2.0	Ammonia-N	0.023			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.27	I		mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.038			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.013	I		mg P/L	

Ref. Method and Comment:
SM 2120 B-01: The pH of the aliquot used to measure the color is 7 units. This value does not represent the field pH.

Sample Location: EAST OF PRIMARY STORMDRAIN **Collection Date/Time: 11/22/2010 10:27 AM**

Field ID: 3302J2GJ3 (3) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314495	EPA 180.1 Rev. 2.0	Turbidity	1.2	A		NTU	E31780
	SM 2120 B-01	Color (apparent)	15	A		PCU	
	SM 2540 D-97	TSS	26			mg/L	
1314509	EPA 350.1 Rev. 2.0	Ammonia-N	0.010	U		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	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	0.009	I		mg P/L	

Ref. Method and Comment:
SM 2120 B-01: The pH of the aliquot used to measure the color is 7 A units. This value does not represent the field pH.

Sample Location: END OF CHASE ST **Collection Date/Time: 11/22/2010 10:53 AM**

Field ID: 3302J2GS5 (5) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314497	EPA 180.1 Rev. 2.0	Turbidity	0.75			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	22			mg/L	
1314511	EPA 350.1 Rev. 2.0	Ammonia-N	0.040			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.25	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.054			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.015	I		mg P/L	

Ref. Method and Comment:
SM 2120 B-01: The pH of the aliquot used to measure the color is 7 units. This value does not represent the field pH.

Sample Location: ENTRANCE OF MARINA **Collection Date/Time: 11/22/2010 11:28 AM**

Field ID: 3302J7GS11 (11) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314503	EPA 180.1 Rev. 2.0	Turbidity	1.0			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	20			mg/L	
1314517	EPA 350.1 Rev. 2.0	Ammonia-N	0.077			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30	I		mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.34			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.027			mg P/L	

Ref. Method and Comment:
SM 2120 B-01: The pH of the aliquot used to measure the color is 7 units. This value does not represent the field pH.

Sample Location: INSIDE HAWKSHAW **Collection Date/Time: 11/22/2010 12:05 PM**

Field ID: 3302J1HL1 (13) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314505	EPA 180.1 Rev. 2.0	Turbidity	1.1			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	20			mg/L	
1314519	EPA 350.1 Rev. 2.0	Ammonia-N	0.028			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35	I		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	0.021			mg P/L	

Ref. Method and Comment:
SM 2120 B-01: The pH of the aliquot used to measure the color is 7 units. This value does not represent the field pH.

Sample Location: INSIDE PGSII E OF DRAIN **Collection Date/Time: 11/22/2010 12:15 PM**

Field ID: 3302J1GS7 (14) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314506	EPA 180.1 Rev. 2.0	Turbidity	0.90			NTU	E31780
	SM 2120 B-01	Color (apparent)	15	A		PCU	
	SM 2540 D-97	TSS	21	A		mg/L	
1314520	EPA 350.1 Rev. 2.0	Ammonia-N	0.022			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.30	I		mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034			mg N/L	

Field ID: 3302J1GS7 (14) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314520	EPA 365.1 Rev. 2.0	Total-P	0.012	I		mg P/L	E31780

Ref. Method and Comment:
SM 2120 B-01: The pH of the aliquot used to measure the color is 7 A units. This value does not represent the field pH.

Sample Location: RANGE MARKER E OF TEXOR **Collection Date/Time: 11/22/2010 09:56 AM**

Field ID: 3302H32GS1 (1) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314493	EPA 180.1 Rev. 2.0	Turbidity	1.4			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	18			mg/L	
1314507	EPA 350.1 Rev. 2.0	Ammonia-N	0.011	I	MS	mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.18	I	MS	mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.012			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 7 units. This value does not represent the field pH.

Sample Location: W OF STORMDRAIN INSIDE ROCKS **Collection Date/Time: 11/22/2010 10:45 AM**

Field ID: 3302J2GS8 (8) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314500	EPA 180.1 Rev. 2.0	Turbidity	1.1			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	20			mg/L	
1314514	EPA 350.1 Rev. 2.0	Ammonia-N	0.036			mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31	I		mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.058			mg N/L	
	EPA 365.1 Rev. 2.0	Total-P	0.016	I		mg P/L	

Ref. Method and Comment:
SM 2120 B-01: The pH of the aliquot used to measure the color is 7 units. This value does not represent the field pH.

Sample Location: WEST END OF HAWKSHAW **Collection Date/Time: 11/22/2010 11:55 AM**

Field ID: 3302J1GS9 (9) Matrix: W-OTHER

Sample ID	Ref. Method	Component	Result	Code	QC Failures	Units	Cert #
1314501	EPA 180.1 Rev. 2.0	Turbidity	0.90			NTU	E31780
	SM 2120 B-01	Color (apparent)	15			PCU	
	SM 2540 D-97	TSS	22			mg/L	
1314515	EPA 350.1 Rev. 2.0	Ammonia-N	0.019	I		mg N/L	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31	I		mg N/L	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.041			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 7 units. This value does not represent the field pH.

Non-Conformance Report

Non-Conformance Report

NCR ID: 3569

Event(s)	Job(s)	Sample(s)	Test(s)
NW-DIST-2010-11-23-03			

NCR Type: SHIPPING/RECEIVING **NCR Category: Receiving**

Observation: There was insufficient information provided for matching the lab labels to the sample containers. The field IDs on the field sheets were not written on the bottles. The bottles were labeled with sequential numbers that were not listed on the field sheets.

Resolution: Customer was contacted (Zach Schang) by R. White. Zach had a copy of the field form that included the sequential numbers. He provided the information to R. White. The field sheet was updated and the bottles were labeled using the updated information.

Authorised by/Date: Kathryn Brackett 11/24/2010

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry Tim Fitzpatrick (850) 245-8085
Biology David D. Whiting (850) 245-8177

Quality Control Report

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					2.51	
	Turbidity					1.61	
EPA 350.1 Rev. 2.0	Ammonia-N	100	113*	113*			0.0606
	Ammonia-N	101	108	105			2.56
	Ammonia-N	98.0	103	108			4.16
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	98.4	91.8	87.4*			4.33
	Kjeldahl Nitrogen	96.5	90.8	90.6			0.193
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	102	102			0.0
	NO2NO3-N	99.0	95.2				0.372
EPA 365.1 Rev. 2.0	Total-P	103	95.8	98.9			2.95
	Total-P	102	99.6	102			2.16
SM 2120 B-01	Color (apparent)					0.0	
	Color (apparent)					0.0	
	Color (apparent)					0.0	
SM 2540 D-97	TSS					5.61	
	TSS					1.90	

Reference Method Descriptions

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	11/23/2010			11/23/2010 16:49	Blanca Fach	1314493, 1314494, 1314495, 1314496, 1314497, 1314498, 1314499, 1314500, 1314501, 1314502, 1314503, 1314504, 1314505, 1314506
EPA 350.1 Rev. 2.0	11/23/2010			11/24/2010	Diana M. Dunbar	1314507, 1314508, 1314509, 1314510, 1314511, 1314512, 1314513, 1314514, 1314515, 1314516, 1314517, 1314518
	11/23/2010			12/01/2010	Diana M. Dunbar	1314519, 1314520
EPA 351.2 Rev. 2.0	11/23/2010	11/29/2010	Christopher Armour	11/30/2010	Christopher Armour	1314507, 1314508, 1314509, 1314510, 1314511, 1314512, 1314513
	11/23/2010	11/30/2010	Christopher Armour	12/01/2010	Bryan A. Werth	1314514, 1314515, 1314516, 1314517, 1314518, 1314519, 1314520
EPA 353.2 Rev. 2.0	11/23/2010			11/30/2010	Sima Feizi	1314507, 1314508, 1314509, 1314510, 1314511, 1314512, 1314513, 1314514, 1314515, 1314516, 1314517, 1314518, 1314519, 1314520
EPA 365.1 Rev. 2.0	11/23/2010	11/29/2010	Megan E. Faircloth	11/30/2010	Megan E. Faircloth	1314507, 1314508, 1314509, 1314510, 1314511, 1314512, 1314513, 1314514, 1314515
	11/23/2010	12/01/2010	Megan E. Faircloth	12/02/2010	Megan E. Faircloth	1314516, 1314517, 1314518, 1314519, 1314520
SM 2120 B-01	11/23/2010			11/23/2010 17:40	Rochelle Y Jackson	1314493, 1314494, 1314495, 1314496, 1314497, 1314498, 1314499, 1314500, 1314501, 1314502, 1314503, 1314504, 1314505, 1314506
SM 2540 D-97	11/23/2010			11/29/2010	Yijie Li	1314493, 1314494, 1314495, 1314496, 1314497, 1314498, 1314499, 1314500, 1314501, 1314502, 1314503, 1314504, 1314505, 1314506