

Chemical Analysis Report

NW-DIST-2017-11-30-01

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-2017-11-27-11**

Customer: **NW-DIST**

Project ID: **DISTRICT**

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
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Thekkekalathil Chandrasekhar, Chemist Administrator Date Certified: 18-DEC-2017 15:56



NON-CONFORMANCE REPORT INCLUDED

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical group are included in this report: Nutrients.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

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.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- 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 and/or the analysis did not meet established quality control criteria.
- 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).

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.

Sample Location: RANGE MARKER E. OF TEXAR

Collection Date/Time: 11/27/2017 10:37

Field ID: 1

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949570	EPA 180.1 Rev. 2.0	Turbidity	0.80	Q	NTU	P336145	
	SM 2120 B	Color (true)	3.3	IAQ	PCU	P336113	
	SM 2540 D-97	TSS	3	U	mg/L	P336306	
1949585	EPA 350.1 Rev. 2.0	Ammonia-N	0.003	I	mg N/L	P336627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	I	mg N/L	P336475	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.040		mg N/L	P336276	
	EPA 365.1 Rev. 2.0	Total-P	0.008	I	mg P/L	P336377	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: 1/2 BRIDGE AND MUSCOGEE

Collection Date/Time: 11/27/2017 10:50

Field ID: 2

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949571	EPA 180.1 Rev. 2.0	Turbidity	0.80	AQ	NTU	P336145	
	SM 2120 B	Color (true)	3.4	IQ	PCU	P336113	
	SM 2540 D-97	TSS	3	U	mg/L	P336306	
1949586	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P336627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.26	I	mg N/L	P336476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P336276	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P336377	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: EAST OF PRIMARY STORMDRAIN

Collection Date/Time: 11/27/2017 11:00

Field ID: 3

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949572	EPA 180.1 Rev. 2.0	Turbidity	0.45	Q	NTU	P336145	
	SM 2120 B	Color (true)	2.5	UQ	PCU	P336113	
	SM 2540 D-97	TSS	3	U	mg/L	P336306	
1949587	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P336627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.17	I	mg N/L	P336476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.031		mg N/L	P336276	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P336377	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: 100FT SOUTH OF STORMDRAIN

Collection Date/Time: 11/27/2017 11:06

Field ID: 4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
-----------	-------------	-----------	--------	------	-------	----------	----------

Field ID: 4

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949573	EPA 180.1 Rev. 2.0	Turbidity	0.45	Q	NTU	P336145	
	SM 2120 B	Color (true)	2.5	IQ	PCU	P336113	
	SM 2540 D-97	TSS	3	U	mg/L	P336306	
1949588	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P336627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.23	I	mg N/L	P336476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.034		mg N/L	P336276	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P336377	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: END OF CHASE STREET

Collection Date/Time: 11/27/2017 11:20

Field ID: 5

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949574	EPA 180.1 Rev. 2.0	Turbidity	0.55	Q	NTU	P336145	
	SM 2120 B	Color (true)	2.5	UQ	PCU	P336113	
	SM 2540 D-97	TSS	3	U	mg/L	P336306	
1949589	EPA 350.1 Rev. 2.0	Ammonia-N	0.005	I	mg N/L	P336627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.20	I	mg N/L	P336476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.048		mg N/L	P336276	
	EPA 365.1 Rev. 2.0	Total-P	0.007	I	mg P/L	P336377	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: 1/2 MUSCOGEE AND HAWKSHAW 400FT FROM SHORE

Collection Date/Time: 11/27/2017 11:30

Field ID: 6

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949575	EPA 180.1 Rev. 2.0	Turbidity	0.65	Q	NTU	P336145	
	SM 2120 B	Color (true)	3.0	IQ	PCU	P336113	
	SM 2540 D-97	TSS	3	U	mg/L	P336306	
1949590	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P336627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24	I	mg N/L	P336476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.059		mg N/L	P336276	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P336378	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: DUPLICATE 1/2 MUSCOGEE AND HAWKSHAW 400FT FROM SHORE

Collection Date/Time: 11/27/2017 11:34

Field ID: 6 DUP

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
-----------	-------------	-----------	--------	------	-------	----------	----------

Field ID: 6 DUP

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949576	EPA 180.1 Rev. 2.0	Turbidity	0.55	Q	NTU	P336145	
	SM 2120 B	Color (true)	2.5	UQ	PCU	P336113	
	SM 2540 D-97	TSS	3	U	mg/L	P336306	
1949591	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P336627	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P336476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.057		mg N/L	P336276	
	EPA 365.1 Rev. 2.0	Total-P	0.007	I	mg P/L	P336378	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: 1/2 BRIDGE AND PORT

Collection Date/Time: 11/27/2017 11:38

Field ID: 7

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949577	EPA 180.1 Rev. 2.0	Turbidity	0.80	Q	NTU	P336145	
	SM 2120 B	Color (true)	2.5	UQ	PCU	P336113	
	SM 2540 D-97	TSS	3	U	mg/L	P336306	
1949592	EPA 350.1 Rev. 2.0	Ammonia-N	0.007		mg N/L	P336806	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.21	I	mg N/L	P336476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.058		mg N/L	P336276	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P336378	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: WEST OF STORMDRAIN INSIDE ROCKS

Collection Date/Time: 11/27/2017 11:14

Field ID: 8

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949578	EPA 180.1 Rev. 2.0	Turbidity	0.35	Q	NTU	P336145	
	SM 2120 B	Color (true)	2.5	UQ	PCU	P336113	
	SM 2540 D-97	TSS	3	UA	mg/L	P336306	
1949593	EPA 350.1 Rev. 2.0	Ammonia-N	0.016		mg N/L	P336806	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.16	U	mg N/L	P336476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.032		mg N/L	P336276	
	EPA 365.1 Rev. 2.0	Total-P	0.007	I	mg P/L	P336378	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

**Sample Location: WEST END OF HAWKSHAW 100FT S. OF
OUTFALL**

Collection Date/Time: 11/27/2017 12:06

Field ID: 9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949579	EPA 180.1 Rev. 2.0	Turbidity	0.55	Q	NTU	P336145	

Field ID: 9

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949579	SM 2120 B	Color (true)	2.5	UQ	PCU	P336113	
	SM 2540 D-97	TSS	3	U	mg/L	P336307	
1949594	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P336806	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.19	I	mg N/L	P336476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.040		mg N/L	P336277	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P336378	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: BETWEEN MARINA AND OUTFALL

Collection Date/Time: 11/27/2017 12:01

Field ID: 10

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949580	EPA 180.1 Rev. 2.0	Turbidity	0.50	AQ	NTU	P336146	
	SM 2120 B	Color (true)	2.5	UAQ	PCU	P336114	
	SM 2540 D-97	TSS	3	UA	mg/L	P336307	
1949595	EPA 350.1 Rev. 2.0	Ammonia-N	0.010		mg N/L	P336806	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24	I	mg N/L	P336476	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P336277	
	EPA 365.1 Rev. 2.0	Total-P	0.006	I	mg P/L	P336378	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: ENTRANCE OF MARINA

Collection Date/Time: 11/27/2017 11:56

Field ID: 11

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949581	EPA 180.1 Rev. 2.0	Turbidity	0.50	Q	NTU	P336146	
	SM 2120 B	Color (true)	2.5	UQ	PCU	P336114	
	SM 2540 D-97	TSS	3	U	mg/L	P336307	
1949596	EPA 350.1 Rev. 2.0	Ammonia-N	0.024		mg N/L	P336806	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.28	I	mg N/L	P336566	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.061		mg N/L	P336277	
	EPA 365.1 Rev. 2.0	Total-P	0.009	I	mg P/L	P336378	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: 1/4 BETWEEN BRIDGE AND PORT 400FT FROM SHORE

Collection Date/Time: 11/27/2017 11:48

Field ID: 12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949582	EPA 180.1 Rev. 2.0	Turbidity	0.60	Q	NTU	P336146	
	SM 2120 B	Color (true)	2.5	UQ	PCU	P336114	

Field ID: 12

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949582	SM 2540 D-97	TSS	3	U	mg/L	P336307	
1949597	EPA 350.1 Rev. 2.0	Ammonia-N	0.005		mg N/L	P336806	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24	I	mg N/L	P336566	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.054		mg N/L	P336277	
	EPA 365.1 Rev. 2.0	Total-P	0.009	I	mg P/L	P336378	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: INSIDE HAWKSHAW LAGOON

Collection Date/Time: 11/27/2017 12:18

Field ID: 13

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949583	EPA 180.1 Rev. 2.0	Turbidity	1.2	Q	NTU	P336146	
	SM 2120 B	Color (true)	4.6	IQ	PCU	P336114	
	SM 2540 D-97	TSS	3	U	mg/L	P336307	
1949598	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P336806	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.35	I	mg N/L	P336566	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P336277	
	EPA 365.1 Rev. 2.0	Total-P	0.014		mg P/L	P336378	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Sample Location: EAST OF STORMDRAIN INSIDE PGSII

Collection Date/Time: 11/27/2017 12:26

Field ID: 14

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1949584	EPA 180.1 Rev. 2.0	Turbidity	0.65	Q	NTU	P336146	
	SM 2120 B	Color (true)	2.5	UQ	PCU	P336114	
	SM 2540 D-97	TSS	3	U	mg/L	P336307	
1949599	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P336806	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.24	I	mg N/L	P336566	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.025		mg N/L	P336277	
	EPA 365.1 Rev. 2.0	Total-P	0.005	I	mg P/L	P336378	

Ref. Method and Comment:

EPA 180.1 Rev. 2.0: The sample expired upon receipt.

SM 2120 B: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The sample expired upon receipt.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Non-Conformance Report

NCR ID: 6793

Event(s)

NW-DIST-2017-11-30-01
NW-DIST-2017-11-30-01

Job(s)

TLH-2017-11-30-29
TLH-2017-11-30-34

Sample(s)

Test(s)

Non-Conformance Report

NCR ID: 6793

<u>Event(s)</u>	<u>Job(s)</u>	<u>Sample(s)</u>	<u>Test(s)</u>
NCR Type: SHIPPING/RECEIVING		NCR Category: Samples arrived late	
Observation: Samples arrived one or more days late,by FedEx, samples received within the acceptable temperature range.			
FedExTracking 811977807525 811977807836 811977807814 811977807847			
Resolution: Zachary Schang was contacted, email correspondence attached to sample submittal forms. Data will be qualified as appropriate. Biology and Chemistry supervisors were notified by email.			

Authorized by/Date: Joshua Ayres 12/5/2017

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

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P336145

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P336146

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336627

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336806

Component	Result	Code	Units
Ammonia-N	0.002	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336475

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336476

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336566

Component	Result	Code	Units
Kjeldahl Nitrogen	0.080	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336276

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336277

Component	Result	Code	Units
NO2NO3-N	0.004	U	mg N/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336377

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336378

Component	Result	Code	Units
Total-P	0.002	U	mg P/L

Reference Method: SM 2120 B
Batch ID: P336113

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P336114

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2540 D-97
Batch ID: P336306

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 D-97
 Batch ID: P336307

Component	Result	Code	Units
TSS	3	U	mg/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P336627

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P336806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	104		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P336475

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	109		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P336476

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	109		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P336566

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	102		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P336276

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P336277

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P336377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
-----------	---------	---------	-----------	----------------

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336377

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	102		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336378

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total-P	98.0		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336627

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1949158	Ammonia-N	109	106	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1949592	Ammonia-N	104	108	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336475

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1949395	Kjeldahl Nitrogen	102	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336476

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1949595	Kjeldahl Nitrogen	104	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1949598	Kjeldahl Nitrogen	96.4	96.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336276

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1949494	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336277

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
---------------	-----------	---------	---------	-----------	----------------

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P336277

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1949594	NO2NO3-N	107	106	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336377

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1949490	Total-P	91.5	93.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P336378

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
1949593	Total-P	95.0	96.3	P/P	90 - 110

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P336145

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949571	Turbidity	0.613	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P336146

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949580	Turbidity	4.95	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336627

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949158	Ammonia-N	2.99	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P336806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949592	Ammonia-N	3.02	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P336475

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949395	Kjeldahl Nitrogen	0.868	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P336476

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949595	Kjeldahl Nitrogen	2.81	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P336566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949598	Kjeldahl Nitrogen	0.157	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P336276

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949494	NO2NO3-N	0.480	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P336277

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949594	NO2NO3-N	0.794	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P336377

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949490	Total-P	2.13	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P336378

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
1949593	Total-P	1.33	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
 Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Calibration Verification

Reference Method: SM 2120 B
 Run ID: A80606

Included Lab Sample IDs: 1949570, 1949571, 1949572, 1949573, 1949574, 1949575, 1949576, 1949577, 1949578, 1949579, 1949580, 1949581, 1949582, 1949583, 1949584

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	104	P/P	85 - 115
Color (true)	103	102	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A80613

Included Lab Sample IDs: 1949570, 1949571, 1949572, 1949573, 1949574, 1949575, 1949576, 1949577, 1949578, 1949579, 1949580, 1949581, 1949582, 1949583, 1949584

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	101	P/P	95 - 105
Turbidity	101	101	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A80664

Included Lab Sample IDs: 1949585, 1949586, 1949587, 1949588, 1949589, 1949590, 1949591, 1949592, 1949593, 1949594, 1949595, 1949596, 1949597, 1949598, 1949599

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	100	100	P/P	90 - 110
NO2NO3-N	99.5	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A80765

Included Lab Sample IDs: 1949585, 1949586, 1949587, 1949588, 1949589, 1949590, 1949591, 1949592, 1949593, 1949594, 1949595

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	105	P/P	90 - 110
Kjeldahl Nitrogen	105	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A80773

Included Lab Sample IDs: 1949585, 1949586, 1949587, 1949588, 1949589, 1949590, 1949591

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	104	106	P/P	90 - 110
Ammonia-N	106	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A80787

Included Lab Sample IDs: 1949585, 1949586, 1949587, 1949588

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A80796

Included Lab Sample IDs: 1949589, 1949590, 1949591, 1949592, 1949593, 1949594, 1949595, 1949596, 1949597, 1949598, 1949599

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	104	100	P/P	90 - 110
Total-P	99.5	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A80797

Included Lab Sample IDs: 1949596, 1949597, 1949598, 1949599

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.4	104	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A80842

Included Lab Sample IDs: 1949592, 1949593, 1949594, 1949595, 1949596, 1949597, 1949598, 1949599

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	104	104	P/P	90 - 110
Ammonia-N	104	101	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.

Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity				0.613	
	Turbidity				4.95	
EPA 350.1 Rev. 2.0	Ammonia-N	101	109 106			2.99
	Ammonia-N	104	104 108			3.02
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	109	102 101			0.868
	Kjeldahl Nitrogen	109	104 101			2.81
	Kjeldahl Nitrogen	102	96.4 96.6			0.157
EPA 353.2 Rev. 2.0	NO2NO3-N	105	104 104			0.480
	NO2NO3-N	105	107 106			0.794
EPA 365.1 Rev. 2.0	Total-P	102	91.5 93.6			2.13
	Total-P	98.0	95.0 96.3			1.33

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	1949570, 1949571, 1949572, 1949573, 1949574, 1949575, 1949576, 1949577, 1949578, 1949579, 1949580, 1949581, 1949582, 1949583, 1949584
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	1949585, 1949586, 1949587, 1949588, 1949589, 1949590, 1949591, 1949592, 1949593, 1949594, 1949595, 1949596, 1949597, 1949598, 1949599
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	1949585, 1949586, 1949587, 1949588, 1949589, 1949590, 1949591, 1949592, 1949593, 1949594, 1949595, 1949596, 1949597, 1949598, 1949599
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	1949585, 1949586, 1949587, 1949588, 1949589, 1949590, 1949591, 1949592, 1949593, 1949594, 1949595, 1949596, 1949597, 1949598, 1949599
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	1949585, 1949586, 1949587, 1949588, 1949589, 1949590, 1949591, 1949592, 1949593, 1949594, 1949595, 1949596, 1949597, 1949598, 1949599
SM 2120 B / E31780	True Color measured at 450 nm	1949570, 1949571, 1949572, 1949573, 1949574, 1949575, 1949576, 1949577, 1949578, 1949579, 1949580, 1949581, 1949582, 1949583, 1949584

Reference Method Descriptions

Method / DoH Cert #	Description	<u>Associated Samples</u>
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices	1949570, 1949571, 1949572, 1949573, 1949574, 1949575, 1949576, 1949577, 1949578, 1949579, 1949580, 1949581, 1949582, 1949583, 1949584

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	11/30/2017			11/30/2017 11:31	Tanya Welborn	1949571
	11/30/2017			11/30/2017 11:35	Tanya Welborn	1949572
	11/30/2017			11/30/2017 11:37	Tanya Welborn	1949573
	11/30/2017			11/30/2017 11:39	Tanya Welborn	1949574
	11/30/2017			11/30/2017 11:40	Tanya Welborn	1949575
	11/30/2017			11/30/2017 11:42	Tanya Welborn	1949576
	11/30/2017			11/30/2017 11:48	Tanya Welborn	1949577
	11/30/2017			11/30/2017 11:50	Tanya Welborn	1949578
	11/30/2017			11/30/2017 11:52	Tanya Welborn	1949579
	11/30/2017			11/30/2017 11:57	Tanya Welborn	1949570
	11/30/2017			11/30/2017 12:21	Tanya Welborn	1949581
	11/30/2017			11/30/2017 12:23	Tanya Welborn	1949582
	11/30/2017			11/30/2017 12:25	Tanya Welborn	1949583
	11/30/2017			11/30/2017 12:26	Tanya Welborn	1949584
	11/30/2017			11/30/2017 12:28	Tanya Welborn	1949580
EPA 350.1 Rev. 2.0	11/30/2017			12/07/2017	Sofia Elnemr	1949585, 1949586, 1949587, 1949588, 1949589, 1949590, 1949591
	11/30/2017			12/11/2017	Sofia Elnemr	1949592, 1949593, 1949594, 1949595, 1949596, 1949597, 1949598, 1949599
EPA 351.2 Rev. 2.0	11/30/2017	12/06/2017	Adrian Shelby	12/07/2017	Joseph Suarez	1949585, 1949586, 1949587, 1949588, 1949589, 1949590, 1949591, 1949592, 1949593, 1949594, 1949595
	11/30/2017	12/07/2017	Adrian Shelby	12/08/2017	Joseph Suarez	1949596, 1949597, 1949598, 1949599
EPA 353.2 Rev. 2.0	11/30/2017			12/04/2017	Beverly Y. Sanders	1949585, 1949586, 1949587, 1949588, 1949589, 1949590, 1949591, 1949592, 1949593, 1949594, 1949595, 1949596, 1949597, 1949598, 1949599
EPA 365.1 Rev. 2.0	11/30/2017	12/05/2017	Sima Feizi	12/08/2017	Beverly Y. Sanders	1949585, 1949586, 1949587, 1949588
	11/30/2017	12/05/2017	Sima Feizi	12/08/2017	Lipi Saha	1949589, 1949590, 1949591, 1949592, 1949593, 1949594, 1949595, 1949596, 1949597, 1949598, 1949599
SM 2120 B	11/30/2017			11/30/2017 11:04	Tanya Welborn	1949570, 1949571
	11/30/2017			11/30/2017 11:05	Tanya Welborn	1949572
	11/30/2017			11/30/2017 11:06	Tanya Welborn	1949573
	11/30/2017			11/30/2017 11:07	Tanya Welborn	1949574
	11/30/2017			11/30/2017 11:08	Tanya Welborn	1949575, 1949576
	11/30/2017			11/30/2017 11:09	Tanya Welborn	1949577
	11/30/2017			11/30/2017 11:10	Tanya Welborn	1949578
	11/30/2017			11/30/2017 11:11	Tanya Welborn	1949579
	11/30/2017			11/30/2017 11:14	Tanya Welborn	1949580
	11/30/2017			11/30/2017 11:15	Tanya Welborn	1949581
	11/30/2017			11/30/2017 11:16	Tanya Welborn	1949582

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2120 B	11/30/2017			11/30/2017 11:17	Tanya Welborn	1949583, 1949584
SM 2540 D-97	11/30/2017			12/01/2017	DeAsia Armster	1949570, 1949571, 1949572, 1949573, 1949574, 1949575, 1949576, 1949577, 1949578, 1949579, 1949580, 1949581, 1949582, 1949583, 1949584