

Biological Analysis Report

SE-DIST-2016-05-24-01

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

Event Description: **SMP-Biscayne bay Run**
Request ID: **RQ-2016-05-23-23**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
2199 South Rock Road
Fort Pierce, FL 34945
Attn: Matthew Sewell

For additional information please contact
Cheryl Swanson - Administrator
J. Marshall Faircloth - Aquatic Toxicology
Jacqueline Savage - Bench Biology
Jacqueline Savage - Microbiology
Daisys Matthews - Molecular Biology
Cheryl Swanson - Taxonomy (Invertebrate & Algal)
Thekkekalathil Chandrasekhar, PhD, QA Officer
Phone (850) 245-8177

Certified by: Jacqueline Savage, Environmental Specialist III

Date Certified: 22-JUN-2016 08:04



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: Chlorophyll/Grain Size/BOD.

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: Biscayne Bay (BB-32 Miami Dade)

Collection Date/Time: 05/23/2016 13:15

Field ID: G4SEBB32

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1801393	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.94	I	ug/L	P305560	
		Phaeophytin-a	0.40	U	ug/L	P305560	

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: ENRG7-8090

Collection Date/Time: 05/23/2016 13:40

Field ID: G5SE0033

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1801394	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.55	U	ug/L	P305560	
		Phaeophytin-a	0.40	U	ug/L	P305560	

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: ENRG7-8090-DUP

Collection Date/Time: 05/23/2016 13:45

Field ID: G5SE0033-Duplicate

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1801395	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.55	U	ug/L	P305560	
		Phaeophytin-a	0.40	U	ug/L	P305560	

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: ENRG7-Atlantic Ocean

Collection Date/Time: 05/23/2016 17:15

Field ID: G5SE0034

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1801396	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.55	U	ug/L	P305560	
		Phaeophytin-a	0.40	U	ug/L	P305560	

Ref. Method and Comment:

SM 10200 H (mod.): Lab dup result is 0.85 for Chl:Ph Ratio, 0.55 U for Chl-a Corrected, 0.40 U for Chl-a Uncorrected, and 0.40 U for Phaeophytin-a. Precision data is unavailable due to the small amount of analyte in the QC sample.

Sample Location: ENRG7-Angelfish Creek

Collection Date/Time: 05/23/2016 17:35

Field ID: 28040375

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1801397	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.55	U	ug/L	P305560	
		Phaeophytin-a	0.41	I	ug/L	P305560	

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: Florida City Canal (FL-09)

Collection Date/Time: 05/23/2016 15:30

Field ID: G4SEFC09

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Field ID: G4SEFC09

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1801651	SM 10200 H (mod.)	Chlorophyll-a, Corrected	1.3	I	ug/L	P305649	
		Phaeophytin-a	0.40	U	ug/L	P305649	

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: Florida City Canal @ SW 117th St

Collection Date/Time: 05/23/2016 15:45

Field ID: 28040076

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1801652	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.65	I	ug/L	P305649	
		Phaeophytin-a	0.40	U	ug/L	P305649	

Ref. Method and Comment:

SM 10200 H (mod.): Precision data is not available for at least one component due to the small amount of analyte in the QC sample. Refer to QA report for available precision data.

Sample Location: Florida City Canal @ SW 117th St dup

Collection Date/Time: 05/23/2016 15:50

Field ID: 28040076 dup

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
1801653	SM 10200 H (mod.)	Chlorophyll-a, Corrected	0.99	I	ug/L	P305649	
		Phaeophytin-a	0.40	U	ug/L	P305649	

Ref. Method and Comment:

SM 10200 H (mod.): Lab dup result is 1.6 for Chl:Ph Ratio, 0.87 I for Chl-a Corrected, 1.0 I for Chl-a Uncorrected, and 0.40 U for Phaeophytin-a. Precision data is unavailable due to the small amount of analyte in the QC sample.

Non-Conformance Report

NCR ID: 5881

Event(s)

Job(s)

Sample(s)

Test(s)

SE-DIST-2016-05-24-01

NCR Type: SHIPPING/RECEIVING

NCR Category: Samples arrived late

Observation: FedEx code:8099 4719 4649
 Samples arrived 1 day late by FedEx.
 1) Customer shipped 3 coolers on 05/23/2016 and lab received 2 coolers on 05/24/2016.
 Samples received (G4SEBB32, G5SE0033, G5SE0033-DUP, 28040375 and 28040076 Blank)
 2) Missing cooler arrived on 05/25/2016 @ 10:00 with temp:4.1c.

Resolution: All samples were logged in within holding time.

Authorised by/Date: Kathryn Holland 6/6/2016

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 Cheryl Swanson (850) 245-8177

Quality Assurance Report Method Blank Results

Quality Assurance Report Method Blank Results

Reference Method: SM 10200 H (mod.)
Batch ID: P305560

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.55	U	ug/L
Phaeophytin-a	0.40	U	ug/L

Reference Method: SM 10200 H (mod.)
Batch ID: P305649

Component	Result	Code	Units
Chlorophyll-a, Corrected	0.55	U	ug/L
Phaeophytin-a	0.40	U	ug/L

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 10200 H (mod.)
Batch ID: P305560

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	103		P	84 - 116

Reference Method: SM 10200 H (mod.)
Batch ID: P305649

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chlorophyll-a, Corrected	104		P	84 - 116

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery	LCS	Precision SMP	MS
SM 10200 H (mod.)	Chlorophyll-a, Corrected	103				
	Chlorophyll-a, Corrected	104				

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 10200 H (mod.) / E31780	Phytoplankton chlorophyll-a corrected, uncorrected, phaeophytin and ratio by spectrophotometry	1801393, 1801394, 1801395, 1801396, 1801397, 1801651, 1801652, 1801653

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 10200 H (mod.)	05/24/2016	05/24/2016 13:15	Meiqin Chen	06/03/2016	Kim M. Spencer	1801393, 1801394, 1801395, 1801396, 1801397
	05/25/2016	05/25/2016 13:25	Meiqin Chen	06/06/2016	Kim M. Spencer	1801651, 1801652, 1801653