

Chemical Analysis Report

SE-DIST-2023-08-25-01

Florida DEP Laboratory
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Tallahassee, FL 32399-2400
DOH Accreditation E31780

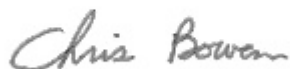
Event Description: **Jupiter / Jupiter Deployment**
Request ID: **RQ-2023-07-31-17**
Customer: **SE-DIST**
Project ID: **SMP**

Send Reports to:
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Certified by: Chris Bowen, Environmental Administrator

Date Certified: 18-SEP-2023 12:05



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 by the Florida Department of Health Environmental Laboratory Certification Program 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: Jones Creek Tidal at Footbridge

Collection Date/Time: 08/24/2023 09:50

Field ID: G2SE0075

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2433668	DEP SOP: NU-094-1	Color (true)	85	A	PCU	P434383	
	EPA 180.1 Rev. 2.0	Turbidity	3.3		NTU	P434385	
	EPA 300.0 Rev. 2.1	Chloride	150		mg Cl/L	P434532	
		Sulfate	30		mg SO4/L	P434535	
	SM 2320 B-2011	Total Alkalinity	158		mg CaCO3/L	P434549	
	SM 2540 C-2015	TDS	437		mg/L	P434695	
	SM 2540 D-2015	TSS	4	I	mg/L	P434696	
	SM 4500-F- C-2011	Fluoride	0.096	I	mg F/L	P434551	
2433669	EPA 350.1 Rev. 2.0	Ammonia-N	0.18		mg N/L	P434572	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.97		mg N/L	P434759	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P434796	
	EPA 365.1 Rev. 2.0	Total-P	0.15		mg P/L	P434415	
	SM 5310 B-2011	Organic Carbon	16		mg C/L	P434450	

Ref. Method and Comment:

SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P434383

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434385

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434532

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434535

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434572

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434759

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434796

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P434415

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

Reference Method: SM 2320 B-2011
Batch ID: P434549

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO3/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-2015
Batch ID: P434695

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P434696

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P434551

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P434450

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P434383

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434385

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434532

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434535

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434572

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434759

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.4		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434796

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P434415

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

Reference Method: SM 2320 B-2011
Batch ID: P434549

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.8		P	92 - 105

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P434695

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	93.8		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P434696

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.3		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P434551

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.4		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P434450

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	93.4		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434532

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433503	Chloride	103		P	90 - 110
2433612	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434535

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433503	Sulfate	101		P	90 - 110
2433612	Sulfate	102		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434572

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433615	Ammonia-N	97.8	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434759

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433834	Kjeldahl Nitrogen	102	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434796

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2432028	NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P434415

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433617	Total-P	105	104	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Batch ID: P434551

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433611	Fluoride	99.0	99.0	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P434450

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2433617	Organic Carbon	97.0	97.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P434383

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433668	Color (true)	0.647	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P434385

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433652	Turbidity	1.63	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434532

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433503	Chloride	0.243	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434535

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433503	Sulfate	0.572	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434572

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433615	Ammonia-N	2.42	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P434759

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433834	Kjeldahl Nitrogen	1.64	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434796

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2432028	NO2NO3-N	0.494	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P434415

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433617	Total-P	0.847	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-2011
Batch ID: P434549

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433611	Total Alkalinity	1.13	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P434695

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433614	TDS	5.07	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P434551

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433611	Fluoride	0.0	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2011
Batch ID: P434450

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2433617	Organic Carbon	0.822	Spike	P	0 - 20

* Sample, spike and/or laboratory control sample precision (LCS) is reported.

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A121253
Included Lab Sample IDs: 2433668

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A121255
Included Lab Sample IDs: 2433668

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.5	P/P	95 - 105

Reference Method: SM 5310 B-2011
Run ID: A121294
Included Lab Sample IDs: 2433669

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.8	96.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A121304
Included Lab Sample IDs: 2433669

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A121339
Included Lab Sample IDs: 2433668

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	109	P/P	90 - 110
Sulfate	100	102	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A121345
Included Lab Sample IDs: 2433668

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	97.0	95.4	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A121345
Included Lab Sample IDs: 2433668

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	98.9	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A121357
Included Lab Sample IDs: 2433669

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.6	99.4	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A121460

Included Lab Sample IDs: 2433669

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A121547

Included Lab Sample IDs: 2433669

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	92.5	97.9	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		Precision	
					LCS	MS
DEP SOP: NU-094-1	Color (true)	99.6			0.647	
EPA 180.1 Rev. 2.0	Turbidity	99.3			1.63	
EPA 300.0 Rev. 2.1	Chloride	101	103	103	0.243	
	Sulfate	101	101	102	0.572	
EPA 350.1 Rev. 2.0	Ammonia-N	98.2	97.8	100		2.42
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	95.4	102	104		1.64
EPA 353.2 Rev. 2.0	NO2NO3-N	104	102	101		0.494
EPA 365.1 Rev. 2.0	Total-P	102	105	104		0.847
SM 2320 B-2011	Total Alkalinity	97.8			1.13	
SM 2540 C-2015	TDS	93.8			5.07	
SM 2540 D-2015	TSS	95.3				
SM 4500-F- C-2011	Fluoride	97.4	99.0	99.0		0.0
SM 5310 B-2011	Organic Carbon	93.4	97.0	97.8		0.822

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2433668
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2433668
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2433668
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2433668
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2433669
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2433669
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2433669
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2433669
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2433668
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2433668
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2433668
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2433668
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2433669

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
DEP SOP: NU-094-1	08/25/2023			08/25/2023 13:24	Samantha L Bates	2433668
EPA 180.1 Rev. 2.0	08/25/2023			08/25/2023 14:14	Alexis Price	2433668
EPA 300.0 Rev. 2.1	08/25/2023			08/29/2023 06:24	James L Waggerby	2433668
EPA 350.1 Rev. 2.0	08/25/2023			09/05/2023 12:12	Khloe J Berg	2433669
EPA 351.2 Rev. 2.0	08/25/2023	09/11/2023 13:57	Simonne.V. Calhoun	09/14/2023 15:08	Samantha L Bates	2433669
EPA 353.2 Rev. 2.0	08/25/2023			09/11/2023 12:50	Anna M. Plaviak	2433669
EPA 365.1 Rev. 2.0	08/25/2023	08/28/2023 16:10	Adam P Silver	08/29/2023 10:14	James L Waggerby	2433669
SM 2320 B-2011	08/25/2023			09/01/2023 21:28	Dale L. Simmons	2433668
SM 2540 C-2015	08/25/2023			08/29/2023 13:58	Yijie Li	2433668
SM 2540 D-2015	08/25/2023			08/29/2023 13:58	Yijie Li	2433668
SM 4500-F- C-2011	08/25/2023			09/01/2023 21:28	Dale L. Simmons	2433668
SM 5310 B-2011	08/25/2023			08/29/2023 02:03	Elise M. Gillis	2433669