

Chemical Analysis Report

WPCS-2023-02-07-01

Florida DEP Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

Event Description: **PROP - Bruce Beach - Source ID Sampling Event**
Request ID: **RQ-2023-02-06-66**
Customer: **WPCS**
Project ID: **PROP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd.
Tallahassee, FL 32399-2400
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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant

Date Certified: 15-FEB-2023 11:34



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: Pesticides.

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: Outlet South Side of Road at Coyle Extension and Main Street **Collection Date/Time: 02/07/2023 08:40**

Field ID: 1.0

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385434	EPA 8321B	Acetaminophen	0.0080	U	ug/L	P425592	
		Sucralose	0.13		ug/L	P425414	
		Hydrocodone	0.0020	U	ug/L	P425592	
		Ibuprofen	0.080	U	ug/L	P425592	
		Naproxen	0.0080	U	ug/L	P425592	RPD

Sample Location: Outlet Southeast Side of Road at Spring Street and Cedar Street, in Bay **Collection Date/Time: 02/07/2023 09:05**

Field ID: EB_02072023

Matrix: W-EQPMT-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385437	EPA 8321B	Acetaminophen	0.0080	U	ug/L	P425592	
		Sucralose	0.010	U	ug/L	P425414	
		Hydrocodone	0.0020	U	ug/L	P425592	
		Ibuprofen	0.080	U	ug/L	P425592	
		Naproxen	0.0080	U	ug/L	P425592	RPD

Sample Location: Outlet Southeast Side of Road at Spring Street and Cedar Street, in Bay **Collection Date/Time: 02/07/2023 09:15**

Field ID: 5.3

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385435	EPA 8321B	Acetaminophen	0.0080	U	ug/L	P425592	
		Sucralose	0.14		ug/L	P425414	
		Hydrocodone	0.0020	U	ug/L	P425592	
		Ibuprofen	0.080	U	ug/L	P425592	
		Naproxen	0.0080	UJ	ug/L	P425592	RPD

Ref. Method and Comment:
EPA 8321B: Refer to the Lab Analysis Report for an explanation of QC Codes.

**Sample Location: Manhole West Side of Spring Street North of
Romana and South of Garden**

Collection Date/Time: 02/07/2023 09:45

Field ID: 5.2

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2385436	EPA 8321B	Acetaminophen	0.0080	U	ug/L	P425592	
		Sucralose	0.26		ug/L	P425414	
		Hydrocodone	0.0020	U	ug/L	P425592	
		Ibuprofen	0.080	U	ug/L	P425592	
		Naproxen	0.0080	U	ug/L	P425592	RPD

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B
Batch ID: P425414

Component	Result	Code	Units
Sucralose	0.010	U	ug/L

Reference Method: EPA 8321B
Batch ID: P425592

Component	Result	Code	Units
Acetaminophen	0.0080	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	U	ug/L
Naproxen	0.0080	U	ug/L

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P425414

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sucralose	137		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P425592

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetaminophen	83.3		P	30 - 150
Hydrocodone	86.0		P	40 - 150
Ibuprofen	56.8		P	40 - 150
Naproxen	63.2		P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P425414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385040	Sucralose	134	134	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P425592

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2385435	Acetaminophen	107	96.4	P/P	30 - 150
2385435	Hydrocodone	112	102	P/P	40 - 150
2385435	Ibuprofen	79.3	81.3	P/P	40 - 150
2385435	Naproxen	126	78.6	P/P	40 - 150

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P425414

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385040	Sucralose	0.655	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P425592

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2385435	Acetaminophen	10.5	Spike	P	0 - 30
2385435	Hydrocodone	9.17	Spike	P	0 - 30
2385435	Ibuprofen	2.45	Spike	P	0 - 30
2385435	Naproxen	46.1	Spike	F	0 - 30

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

Quality Assurance Report Surrogates

Lab Sample ID: 2385434
Field Sample ID: 1.0

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	90.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.2	P	30 - 160
EPA 8321B	Ibuprofen-d3	83.2	P	30 - 160
EPA 8321B	Sucralose-d6	134	P	30 - 160

Lab Sample ID: 2385435
Field Sample ID: 5.3

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	95.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	73.2	P	30 - 160
EPA 8321B	Sucralose-d6	133	P	30 - 160

Lab Sample ID: 2385436
Field Sample ID: 5.2

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	96.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	115	P	30 - 160
EPA 8321B	Ibuprofen-d3	106	P	30 - 160
EPA 8321B	Sucralose-d6	138	P	30 - 160

Lab Sample ID: 2385437
Field Sample ID: EB_02072023

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Acetaminophen-d4	85.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	121	P	30 - 160
EPA 8321B	Ibuprofen-d3	89.1	P	30 - 160
EPA 8321B	Sucralose-d6	113	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A117380

Included Lab Sample IDs: 2385434, 2385435, 2385436, 2385437

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	102	137	P/P	60 - 160
Sucralose	137	131	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A117405

Included Lab Sample IDs: 2385434, 2385435, 2385436, 2385437

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetaminophen	108	100	P/P	60 - 160
Hydrocodone	113	97.7	P/P	60 - 150
Ibuprofen	72.0	86.0	P/P	50 - 160
Naproxen	70.6	108	P/P	50 - 160

* 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	SMP	MS
EPA 8321B	Acetaminophen	83.3	107	96.4			10.5
	Hydrocodone	86.0	112	102			9.17
	Ibuprofen	56.8	79.3	81.3			2.45
	Naproxen	63.2	126	78.6			46.1
	Sucralose	137	134	134			0.655

Reference Method Descriptions

Method	Description	Associated Samples
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2385434, 2385435, 2385436, 2385437

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	02/07/2023	02/08/2023 16:00	Manjita Shrestha	02/08/2023 20:17	Manjita Shrestha	2385434
	02/07/2023	02/08/2023 16:00	Manjita Shrestha	02/08/2023 20:45	Manjita Shrestha	2385435
	02/07/2023	02/08/2023 16:00	Manjita Shrestha	02/08/2023 20:59	Manjita Shrestha	2385436
	02/07/2023	02/08/2023 16:00	Manjita Shrestha	02/08/2023 21:13	Manjita Shrestha	2385437
	02/07/2023	02/10/2023 10:00	June Rhew	02/10/2023 22:37	Juyoung Kim	2385435
	02/07/2023	02/10/2023 10:00	June Rhew	02/10/2023 22:56	Juyoung Kim	2385434
	02/07/2023	02/10/2023 10:00	June Rhew	02/10/2023 23:15	Juyoung Kim	2385436
	02/07/2023	02/10/2023 10:00	June Rhew	02/10/2023 23:34	Juyoung Kim	2385437