

Chemical Analysis Report

NE-DIST-2024-05-07-02

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

Event Description: **LSJR South West 2024**
Request ID: **RQ-2024-05-06-29**
Customer: **NE-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
8800 Baymeadows Way West
Suite 100
Jacksonville, FL 32256
Attn: Jeremy Parrish

For additional information please contact
Colin Wright, Ph.D.
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 10-JUN-2024 14:46



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 groups are included in this report: Metals, Nutrients and 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: MILL LOG AT RUSSEL RD

Collection Date/Time: 05/06/2024 10:25

Field ID: g2ne1150

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2487434	DEP SOP: NU-094-1	Color (true)	100		PCU	P445367	
	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P445356	
	EPA 300.0 Rev. 2.1	Chloride	16		mg Cl/L	P445700	
	SM 4500-F- C-2011	Fluoride	0.10		mg F/L	P445722	
2487445	EPA 200.7 Rev. 4.4	Calcium	32.2		mg/L	P445446	
		Iron	930		ug/L	P445446	
		Magnesium	7.14		mg/L	P445446	
		Potassium	1.8		mg/L	P445446	
		Sodium	13.9		mg/L	P445446	
		Strontium	512		ug/L	P445446	
		Tin	3.0	U	ug/L	P445446	
		Titanium	0.75	U	ug/L	P445446	
		Vanadium	2.0	U	ug/L	P445446	
		Zinc	10	I	ug/L	P445446	
	EPA 200.8 Rev. 5.4	Aluminum	37		ug/L	P445446	
		Antimony	0.19	I	ug/L	P445446	
		Arsenic	1.25		ug/L	P445446	
		Barium	37.9		ug/L	P445446	
		Beryllium	0.013	I	ug/L	P445446	
		Boron	34.9		ug/L	P445446	
		Cadmium	0.020	U	ug/L	P445446	
		Chromium	0.40	U	ug/L	P445446	
		Cobalt	0.154		ug/L	P445446	
		Copper	2.06		ug/L	P445446	
		Lead	0.20	U	ug/L	P445446	
		Manganese	52.5		ug/L	P445446	
		Molybdenum	0.32	I	ug/L	P445446	
		Nickel	0.50	U	ug/L	P445446	
		Selenium	0.20	U	ug/L	P445446	
		Silver	0.010	U	ug/L	P445446	
		Thallium	0.10	U	ug/L	P445446	
	SM 2340 B-2011	Hardness	110		mg/L	P445446	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: CORMORANT BRANCH AT MARBON RD

Collection Date/Time: 05/06/2024 09:10

Field ID: 20030852

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2487440	EPA 8321B	Acesulfame K	0.18	I	ug/L	P445250	
		AMPA	0.38	I	ug/L	P445250	
		Endothall	0.25	U	ug/L	P445250	
		Glufosinate	0.10	U	ug/L	P445250	
		Glyphosate	0.68		ug/L	P445250	
		Sucralose	0.18		ug/L	P445250	
2487444	EPA 200.7 Rev. 4.4	Calcium	30.4		mg/L	P445446	
		Iron	690		ug/L	P445446	
		Magnesium	3.63		mg/L	P445446	
		Potassium	5.5		mg/L	P445446	
		Sodium	10.8		mg/L	P445446	
		Strontium	101		ug/L	P445446	
	EPA 200.8 Rev. 5.4	Tin	3.0	U	ug/L	P445446	
		Titanium	0.96	I	ug/L	P445446	
		Vanadium	2.0	U	ug/L	P445446	
		Zinc	8.4	I	ug/L	P445446	
		Aluminum	239		ug/L	P445446	
		Antimony	0.075	I	ug/L	P445446	
		Arsenic	0.77		ug/L	P445446	
		Barium	22.0		ug/L	P445446	
		Beryllium	0.021	I	ug/L	P445446	
		Boron	29.7		ug/L	P445446	
		Cadmium	0.020	U	ug/L	P445446	
		Chromium	0.60	I	ug/L	P445446	
		Cobalt	0.157		ug/L	P445446	
		Copper	0.40	U	ug/L	P445446	
		Lead	0.24	I	ug/L	P445446	
		Manganese	18.1		ug/L	P445446	
		Molybdenum	0.42	I	ug/L	P445446	
	SM 2340 B-2011	Nickel	0.50	U	ug/L	P445446	
		Selenium	0.25	I	ug/L	P445446	
		Silver	0.010	U	ug/L	P445446	
		Thallium	0.10	U	ug/L	P445446	
		Hardness	90.9		mg/L	P445446	

Ref. Method and Comment:

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for manganese are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Non-Conformance Report

NCR ID: 10476

Event(s)

NE-DIST-2024-05-07-02

Job(s)

TLH-2024-05-07-98

Sample(s)

Test(s)

NCR Type: CUSTODY

NCR Category: General

Observation: After 05/09/2024, sample(s) were stored above room temperature for multiple days because of a power outage.

Resolution: Customer elected not to receive Y and/or Q qualified data resulting from power outage, so any affected tests were removed or the sample was cancelled.

Authorized by/Date: Sarah A Nixon 5/29/2024

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: DEP SOP: NU-094-1
Batch ID: P445367

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P445356

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P445446

Component	Result	Code	Units
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Strontium	2.0	U	ug/L
Tin	3.0	U	ug/L
Titanium	0.75	U	ug/L
Vanadium	2.0	U	ug/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P445446

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	U	ug/L
Barium	0.20	U	ug/L
Beryllium	0.010	U	ug/L
Boron	2.0	U	ug/L
Cadmium	0.020	U	ug/L
Chromium	0.40	U	ug/L
Cobalt	0.020	U	ug/L
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Manganese	0.10	U	ug/L
Molybdenum	0.15	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445700

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 8321B
Batch ID: P445250

Component	Result	Code	Units
Acesulfame K	0.10	U	ug/L
AMPA	0.10	U	ug/L
Endothall	0.25	U	ug/L
Glufosinate	0.10	U	ug/L
Glyphosate	0.10	U	ug/L
Sucralose	0.010	U	ug/L

Reference Method: SM 4500-F- C-2011
Batch ID: P445722

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: DEP SOP: NU-094-1
Batch ID: P445367

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.4		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P445356

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P445446

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	108		P	85 - 115
Magnesium	112		P	85 - 115
Potassium	99.0		P	85 - 115
Sodium	100		P	85 - 115
Strontium	96.9		P	85 - 115
Tin	99.7		P	85 - 115
Titanium	99.8		P	85 - 115
Vanadium	105		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P445446

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	96.6		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	97.9		P	85 - 115
Barium	101		P	85 - 115
Beryllium	101		P	85 - 115
Boron	104		P	85 - 115
Cadmium	100		P	85 - 115
Chromium	98.3		P	85 - 115
Cobalt	95.7		P	85 - 115
Copper	96.3		P	85 - 115
Lead	97.0		P	85 - 115
Manganese	99.3		P	85 - 115
Molybdenum	101		P	85 - 115
Nickel	95.7		P	85 - 115
Selenium	98.0		P	85 - 115
Silver	113		P	85 - 115
Thallium	97.2		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445700

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P445250

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	83.8		P	40 - 150
AMPA	99.7		P	40 - 160
Endothall	104		P	40 - 160
Glufosinate	96.1		P	40 - 160
Glyphosate	106		P	40 - 160
Sucralose	84.0		P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P445722

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	95 - 106

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P445446

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2487070	Calcium	103		P	80 - 120
2487070	Iron	107	107	P/P	80 - 120
2487070	Magnesium	109	109	P/P	80 - 120
2487070	Potassium	97.3	97.8	P/P	80 - 120
2487070	Sodium	99.3		P	80 - 120
2487070	Strontium	95.3	95.5	P/P	80 - 120
2487070	Tin	98.5	101	P/P	80 - 120
2487070	Titanium	101	102	P/P	80 - 120
2487070	Vanadium	108	109	P/P	80 - 120
2487070	Zinc	103	104	P/P	80 - 120
2487445	Calcium	101		P	80 - 120
2487445	Iron	105		P	80 - 120
2487445	Magnesium	102		P	80 - 120
2487445	Potassium	97.5		P	80 - 120
2487445	Sodium	98.7		P	80 - 120
2487445	Strontium	94.7		P	80 - 120
2487445	Tin	98.3		P	80 - 120
2487445	Titanium	101		P	80 - 120
2487445	Vanadium	105		P	80 - 120
2487445	Zinc	99.7		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P445446

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2487070	Aluminum	96.7	95.9	P/P	80 - 120
2487070	Antimony	102	102	P/P	80 - 120
2487070	Arsenic	99.1	98.2	P/P	80 - 120
2487070	Barium	100	100	P/P	80 - 120
2487070	Beryllium	100	104	P/P	80 - 120
2487070	Boron	101	101	P/P	80 - 120
2487070	Cadmium	101	102	P/P	80 - 120
2487070	Chromium	97.3	97.3	P/P	80 - 120
2487070	Cobalt	93.9	93.8	P/P	80 - 120
2487070	Copper	92.9	92.6	P/P	80 - 120
2487070	Lead	97.8	99.0	P/P	80 - 120
2487070	Manganese	97.5	98.6	P/P	80 - 120
2487070	Molybdenum	100	100	P/P	80 - 120
2487070	Nickel	93.7	93.4	P/P	80 - 120
2487070	Selenium	99.3	98.8	P/P	80 - 120
2487070	Silver	108	108	P/P	80 - 120
2487070	Thallium	99.0	100	P/P	80 - 120
2487445	Aluminum	95.0		P	80 - 120
2487445	Antimony	102		P	80 - 120
2487445	Arsenic	96.0		P	80 - 120
2487445	Barium	99.7		P	80 - 120
2487445	Beryllium	99.1		P	80 - 120
2487445	Boron	99.4		P	80 - 120
2487445	Cadmium	102		P	80 - 120
2487445	Chromium	96.0		P	80 - 120
2487445	Cobalt	92.8		P	80 - 120
2487445	Copper	90.7		P	80 - 120

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P445446

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2487445	Lead	98.5		P	80 - 120
2487445	Molybdenum	98.8		P	80 - 120
2487445	Nickel	93.0		P	80 - 120
2487445	Selenium	95.2		P	80 - 120
2487445	Silver	109		P	80 - 120
2487445	Thallium	99.9		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445700

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2487833	Chloride	99.1		P	90 - 110
2488107	Chloride	104		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P445250

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2486588	Acesulfame K	70.5	61.7	P/P	40 - 150
2486588	AMPA	75.1	81.5	P/P	40 - 160
2486588	Endothall	119	135	P/P	40 - 160
2486588	Glufosinate	81.3	91.4	P/P	40 - 160
2486588	Glyphosate	62.3	76.0	P/P	40 - 160
2486588	Sucralose	85.1	74.3	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P445722

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2486815	Fluoride	103	104	P/P	95 - 107

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P445367

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2487422	Color (true)	1.71	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P445356

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2487161	Turbidity	0.897	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P445446

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2487070	Calcium	0.784	Spike	P	0 - 20
2487070	Iron	0.138	Spike	P	0 - 20
2487070	Magnesium	0.263	Spike	P	0 - 20
2487070	Potassium	0.297	Spike	P	0 - 20
2487070	Sodium	0.384	Spike	P	0 - 20
2487070	Strontium	0.218	Spike	P	0 - 20
2487070	Tin	2.15	Spike	P	0 - 20
2487070	Titanium	0.993	Spike	P	0 - 20
2487070	Vanadium	1.07	Spike	P	0 - 20
2487070	Zinc	1.48	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P445446

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2487070	Aluminum	0.734	Spike	P	0 - 20
2487070	Antimony	0.240	Spike	P	0 - 20
2487070	Arsenic	0.800	Spike	P	0 - 20
2487070	Barium	0.219	Spike	P	0 - 20
2487070	Beryllium	3.77	Spike	P	0 - 20
2487070	Boron	0.186	Spike	P	0 - 20
2487070	Cadmium	1.04	Spike	P	0 - 20
2487070	Chromium	0.0121	Spike	P	0 - 20
2487070	Cobalt	0.0566	Spike	P	0 - 20
2487070	Copper	0.361	Spike	P	0 - 20
2487070	Lead	1.27	Spike	P	0 - 20
2487070	Manganese	1.05	Spike	P	0 - 20
2487070	Molybdenum	0.149	Spike	P	0 - 20
2487070	Nickel	0.313	Spike	P	0 - 20
2487070	Selenium	0.453	Spike	P	0 - 20
2487070	Silver	0.321	Spike	P	0 - 20
2487070	Thallium	1.25	Spike	P	0 - 20

Quality Assurance Report

Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P445700

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2487833	Chloride	3.85	Sample	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P445250

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2486588	Acesulfame K	13.4	Spike	P	0 - 30
2486588	AMPA	6.63	Spike	P	0 - 30
2486588	Endothall	13.2	Spike	P	0 - 30
2486588	Glufosinate	11.7	Spike	P	0 - 30
2486588	Glyphosate	9.35	Spike	P	0 - 30
2486588	Sucralose	6.42	Spike	P	0 - 30

Reference Method: SM 4500-F- C-2011
Batch ID: P445722

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2486815	Fluoride	0.520	Spike	P	0 - 1.7

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2487440
Field Sample ID: 20030852

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Endothall-d6	149	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	145	P	30 - 160
EPA 8321B	Sucralose-d6	82.8	P	30 - 160

Quality Assurance Report

Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A125726
Included Lab Sample IDs: 2487434

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

Reference Method: DEP SOP: NU-094-1
Run ID: A125729
Included Lab Sample IDs: 2487434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.6	99.8	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A125761
Included Lab Sample IDs: 2487440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	77.0	83.4	P/P	60 - 160
Sucralose	83.2	78.7	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A125764
Included Lab Sample IDs: 2487440

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	114	128	P/P	60 - 160
Endothall	120	151	P/P	60 - 160
Glufosinate	126	156	P/P	60 - 160
Glyphosate	118	153	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A125788
Included Lab Sample IDs: 2487444, 2487445

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.9	96.2	P/P	90 - 110
Antimony	98.4	98.2	P/P	90 - 110
Arsenic	95.5	97.8	P/P	90 - 110
Barium	97.7	97.0	P/P	90 - 110
Beryllium	99.8	95.7	P/P	90 - 110
Boron	98.8	96.4	P/P	90 - 110
Cadmium	98.4	97.5	P/P	90 - 110
Chromium	95.9	94.2	P/P	90 - 110
Cobalt	93.8	93.2	P/P	90 - 110
Copper	94.4	94.5	P/P	90 - 110
Lead	96.5	95.6	P/P	90 - 110
Manganese	97.8	93.9	P/P	90 - 110
Molybdenum	96.1	96.5	P/P	90 - 110
Nickel	94.2	94.1	P/P	90 - 110
Selenium	97.0	100	P/P	90 - 110
Silver	95.6	96.1	P/P	90 - 110
Thallium	97.6	96.9	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A125804

Included Lab Sample IDs: 2487444, 2487445

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	101	P/P	90 - 110
Calcium	103	103	P/P	90 - 110
Iron	103	101	P/P	90 - 110
Iron	103	102	P/P	90 - 110
Magnesium	103	101	P/P	90 - 110
Magnesium	104	103	P/P	90 - 110
Potassium	99.2	99.6	P/P	90 - 110
Potassium	99.4	99.3	P/P	90 - 110
Sodium	99.5	100	P/P	90 - 110
Sodium	99.8	99.7	P/P	90 - 110
Strontium	98.4	101	P/P	90 - 110
Strontium	99.1	98.6	P/P	90 - 110
Tin	101	99.7	P/P	90 - 110
Tin	102	103	P/P	90 - 110
Titanium	101	101	P/P	90 - 110
Titanium	98.7	101	P/P	90 - 110
Vanadium	102	100	P/P	90 - 110
Vanadium	104	103	P/P	90 - 110
Zinc	101	103	P/P	90 - 110
Zinc	101	99.7	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A125878

Included Lab Sample IDs: 2487434

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

Reference Method: SM 4500-F- C-2011

Run ID: A125880

Included Lab Sample IDs: 2487434

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	104	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 SMP	MS
			LCS				
DEP SOP: NU-094-1	Color (true)	97.4				1.71	
EPA 180.1 Rev. 2.0	Turbidity	102				0.897	
EPA 200.7 Rev. 4.4	Calcium	104	103	101			0.784
	Iron	108	107	107	105		0.138
	Magnesium	112	109	109	102		0.263
	Potassium	99.0	97.3	97.8	97.5		0.297
	Sodium	100	99.3	98.7			0.384
	Strontium	96.9	95.3	95.5	94.7		0.218
	Tin	99.7	98.5	101	98.3		2.15
	Titanium	99.8	101	102	101		0.993
	Vanadium	105	108	109	105		1.07
	Zinc	102	103	104	99.7		1.48
EPA 200.8 Rev. 5.4	Aluminum	96.6	96.7	95.9	95.0		0.734
	Antimony	101	102	102	102		0.240
	Arsenic	97.9	99.1	98.2	96.0		0.800
	Barium	101	100	99.7	100		0.219
	Beryllium	101	100	104	99.1		3.77
	Boron	104	101	101	99.4		0.186
	Cadmium	100	101	102	102		1.04
	Chromium	98.3	97.3	97.3	96.0		0.0121
	Cobalt	95.7	93.9	93.8	92.8		0.0566
	Copper	96.3	92.9	92.6	90.7		0.361
	Lead	97.0	97.8	99.0	98.5		1.27
	Manganese	99.3	97.5	98.6			1.05
	Molybdenum	101	100	100	98.8		0.149
	Nickel	95.7	93.7	93.4	93.0		0.313
	Selenium	98.0	99.3	98.8	95.2		0.453
	Silver	113	108	108	109		0.321
	Thallium	97.2	99.0	100	99.9		1.25
EPA 300.0 Rev. 2.1	Chloride	100	99.1	104		3.85	
EPA 8321B	Acesulfame K	83.8	70.5	61.7			13.4
	AMPA	99.7	75.1	81.5			6.63
	Endothall	104	119	135			13.2
	Glufosinate	96.1	81.3	91.4			11.7
	Glyphosate	106	62.3	76.0			9.35
	Sucralose	84.0	85.1	74.3			6.42
SM 4500-F- C-2011	Fluoride	102	103	104			0.520

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2487434
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2487434
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2487444, 2487445
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2487444, 2487445
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2487434
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2487440
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2487444, 2487445
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2487434

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	05/07/2024			05/07/2024 14:52	Jessica K Wilks	2487434
EPA 180.1 Rev. 2.0	05/07/2024			05/07/2024 14:35	Samantha L Bates	2487434
EPA 200.7 Rev. 4.4	05/07/2024	05/08/2024 13:30	George D Taylor	05/09/2024 15:29	Chase Roberts	2487445
	05/07/2024	05/08/2024 13:30	George D Taylor	05/09/2024 18:19	Chase Roberts	2487444
	05/07/2024	05/08/2024 13:30	George D Taylor	05/09/2024 17:09	McKinley C Carter	2487444
	05/07/2024	05/08/2024 13:30	George D Taylor	05/09/2024 17:18	McKinley C Carter	2487445
EPA 200.8 Rev. 5.4	05/07/2024			05/24/2024 15:45	Samantha L Bates	2487434
EPA 300.0 Rev. 2.1	05/07/2024	05/08/2024 09:00	Samatha Luckman	05/08/2024 12:48	Samatha Luckman	2487440
EPA 8321B	05/07/2024	05/08/2024 09:00	Samatha Luckman	05/08/2024 20:36	Samatha Luckman	2487440
	05/07/2024			05/09/2024 15:29	Chase Roberts	2487445
SM 2340 B-2011	05/07/2024			05/09/2024 18:19	Chase Roberts	2487444
	05/07/2024			05/25/2024 12:04	Dale L. Simmons	2487434