

Chemical Analysis Report

NE-DIST-2024-04-18-02

Florida DEP Laboratory
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DOH Accreditation E31780

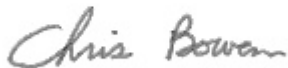
Event Description: **LSJR North 2024**
Request ID: **RQ-2024-04-22-12**
Customer: **NE-DIST**
Project ID: **SMP**

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

Date Certified: 17-MAY-2024 00:02



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: TROUT R AT I 95 BURT MAXWELL DOCK

Collection Date/Time: 04/17/2024 09:25

Field ID: 20030121

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2483305	DEP SOP: NU-094-1	Color (true)	81		PCU	P444475	
	EPA 180.1 Rev. 2.0	Turbidity	7.0		NTU	P444493	
	EPA 300.0 Rev. 2.1	Chloride	5.3E+03		mg Cl/L	P444876	
		Sulfate	760		mg SO4/L	P444879	
	SM 2320 B-2011	Total Alkalinity	81		mg CaCO3/L	P444925	
	SM 2540 C-2015	TDS	8.84E+03		mg/L	P444845	
	SM 2540 D-2015	TSS	9	I	mg/L	P444746	
	SM 4500-F- C-2011	Fluoride	0.41		mg F/L	P444928	
2483307	EPA 350.1 Rev. 2.0	Ammonia-N	0.008		mg N/L	P444566	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P445185	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P444606	
	EPA 365.1 Rev. 2.0	Total-P	0.090		mg P/L	P444619	
	SM 5310 B-2014	Organic Carbon	12		mg C/L	P444811	

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

Sample Location: RUSHING BR AT ALTA YELLOW BLUFF RD

Collection Date/Time: 04/17/2024 10:25

Field ID: 20030352

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2483425	EPA 8321B	2,4-D	0.020		ug/L	P444465	
		Acesulfame K	0.10	U	ug/L	P444443	
		2,4,5-T	0.0040	U	ug/L	P444465	
		AMPA	0.10	U	ug/L	P444443	
		Acetaminophen	0.0080	U	ug/L	P444465	
		Acetamiprid	0.0020	U	ug/L	P444465	
		Endothall	0.25	U	ug/L	P444443	
		Glufosinate	0.10	U	ug/L	P444443	
		Glyphosate	0.11	I	ug/L	P444443	
		Afidopyropen	0.0020	U	ug/L	P444465	
		Bentazon	0.087		ug/L	P444465	
		Sucralose	0.13		ug/L	P444443	
		Benzovindiflupyr	0.0020	U	ug/L	P444465	
		Carbamazepine	8.0E-04	U	ug/L	P444465	
		Clothianidin	0.0020	U	ug/L	P444465	
		Dinotefuran	0.0093		ug/L	P444465	
		Diuron	0.0026	I	ug/L	P444465	
		Fenuron	0.032	U	ug/L	P444465	
		Fluridone	0.012		ug/L	P444465	
		Imazapyr	0.24		ug/L	P444465	
		Hydrocodone	0.0020	U	ug/L	P444465	
		Ibuprofen	0.080	U	ug/L	P444465	
		Imidacloprid	0.0037	I	ug/L	P444465	
		Linuron	0.0020	U	ug/L	P444465	
		Mandestrobin	0.0020	U	ug/L	P444465	
		MCPP	0.0020	U	ug/L	P444465	
		Naproxen	0.0080	U	ug/L	P444465	
		Primidone	0.0040	U	ug/L	P444465	
		Pyraclostrobin	0.0020	U	ug/L	P444465	
		Silvex	0.0040	U	ug/L	P444465	
		Thiamethoxam	0.0020	U	ug/L	P444465	
		Tolfenpyrad	0.0020	U	ug/L	P444465	
		Triclopyr	0.0040	U	ug/L	P444465	

Sample Location: TERRAPIN CREEK AT FAYE ROAD

Collection Date/Time: 04/17/2024 09:00

Field ID: 20030653

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2483332	EPA 200.7 Rev. 4.4	Calcium	19.2		mg/L	P444559	
		Iron	1.11E+03		ug/L	P444559	
		Magnesium	2.87		mg/L	P444559	
		Potassium	0.90	I	mg/L	P444559	
		Sodium	11.3		mg/L	P444559	
		Strontium	106		ug/L	P444559	
		Tin	3.0	U	ug/L	P444559	
		Titanium	1.5	I	ug/L	P444559	
		Vanadium	3.6	I	ug/L	P444559	
		Zinc	5.0	U	ug/L	P444559	
	EPA 200.8 Rev. 5.4	Aluminum	195		ug/L	P444559	
		Antimony	0.056	I	ug/L	P444559	
		Arsenic	0.32		ug/L	P444559	
		Barium	23.3		ug/L	P444559	
		Beryllium	0.052		ug/L	P444559	
		Boron	21.4		ug/L	P444559	
		Cadmium	0.020	U	ug/L	P444559	
		Chromium	0.53	I	ug/L	P444559	
		Cobalt	0.236		ug/L	P444559	
		Copper	1.15		ug/L	P444559	
		Lead	0.20	U	ug/L	P444559	
		Manganese	20.6		ug/L	P444559	
		Molybdenum	0.52	I	ug/L	P444559	
		Nickel	0.85	I	ug/L	P444559	
		Selenium	0.20	U	ug/L	P444559	
		Silver	0.010	U	ug/L	P444559	
		Thallium	0.10	U	ug/L	P444559	
	SM 2340 B-2011	Hardness	59.8		mg/L	P444559	

Sample Location: BROWARD R HARTS RD BR

Collection Date/Time: 04/17/2024 09:50

Field ID: 20030146

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2483426	EPA 8321B	2,4-D	0.034		ug/L	P444465	
		Acesulfame K	0.10	U	ug/L	P444441	
		2,4,5-T	0.0040	U	ug/L	P444465	
		AMPA	0.13	I	ug/L	P444441	
		Acetaminophen	0.0080	U	ug/L	P444465	
		Acetamiprid	0.0020	U	ug/L	P444465	
		Endothall	0.25	U	ug/L	P444441	
		Glufosinate	0.10	U	ug/L	P444441	
		Glyphosate	0.17	I	ug/L	P444441	
		Afidopyropen	0.0020	U	ug/L	P444465	
		Bentazon	0.022		ug/L	P444465	
		Sucralose	0.62		ug/L	P444441	
		Benzovindiflupyr	0.0020	U	ug/L	P444465	
		Carbamazepine	8.0E-04	U	ug/L	P444465	
		Clothianidin	0.0046	I	ug/L	P444465	
		Dinotefuran	0.0037	I	ug/L	P444465	
		Diuron	0.012		ug/L	P444465	
		Fenuron	0.032	U	ug/L	P444465	
		Fluridone	0.0049		ug/L	P444465	
		Imazapyr	0.91		ug/L	P444465	
		Hydrocodone	0.0020	U	ug/L	P444465	
		Ibuprofen	0.080	U	ug/L	P444465	
		Imidacloprid	0.017		ug/L	P444465	
		Linuron	0.0020	U	ug/L	P444465	
		Mandestrobin	0.0020	U	ug/L	P444465	
		MCPP	0.0026	I	ug/L	P444465	
		Naproxen	0.0080	U	ug/L	P444465	
		Primidone	0.0040	U	ug/L	P444465	
		Pyraclostrobin	0.0020	U	ug/L	P444465	
		Silvex	0.0040	U	ug/L	P444465	
		Thiamethoxam	0.0020	U	ug/L	P444465	
		Tolfenpyrad	0.0020	U	ug/L	P444465	
		Triclopyr	0.0040	U	ug/L	P444465	

Quality Assurance Report

Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P444475

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P444493

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P444559

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: P444559

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: P444876

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report
Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444879

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444566

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445185

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444606

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444619

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

Reference Method: EPA 8321B
Batch ID: P444441

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: EPA 8321B
Batch ID: P444443

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: EPA 8321B
Batch ID: P444465

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P444465

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	4.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.080	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0020	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Silvex	0.0040	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: SM 2320 B-2011

Batch ID: P444925

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

Reference Method: SM 2540 C-2015

Batch ID: P444845

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P444746

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P444928

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 5310 B-2014
Batch ID: P444811

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: P444475

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.2		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P444493

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P444559

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	103		P	85 - 115
Magnesium	101		P	85 - 115
Potassium	97.5		P	85 - 115
Sodium	105		P	85 - 115
Strontium	96.2		P	85 - 115
Tin	92.0		P	85 - 115
Titanium	97.9		P	85 - 115
Vanadium	98.8		P	85 - 115
Zinc	96.2		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P444559

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	100		P	85 - 115
Antimony	101		P	85 - 115
Arsenic	99.0		P	85 - 115
Barium	101		P	85 - 115
Beryllium	102		P	85 - 115
Boron	107		P	85 - 115
Cadmium	98.9		P	85 - 115
Chromium	99.7		P	85 - 115
Cobalt	99.0		P	85 - 115
Copper	96.2		P	85 - 115
Lead	102		P	85 - 115
Manganese	101		P	85 - 115
Molybdenum	98.3		P	85 - 115
Nickel	96.7		P	85 - 115
Selenium	102		P	85 - 115
Silver	103		P	85 - 115
Thallium	98.7		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444876

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

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444879

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444566

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	96.0		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445185

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.9		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444606

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444619

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

Reference Method: EPA 8321B
Batch ID: P444441

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	126		P	40 - 150
AMPA	97.7		P	40 - 160
Endothall	105		P	40 - 160
Glufosinate	95.1		P	40 - 160
Glyphosate	99.4		P	40 - 160
Sucralose	109		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P444443

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	105		P	40 - 150
AMPA	97.1		P	40 - 160
Endothall	99.0		P	40 - 160
Glufosinate	102		P	40 - 160
Glyphosate	99.5		P	40 - 160
Sucralose	104		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P444465

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P444465

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	108		P	40 - 150
2,4,5-T	103		P	40 - 150
Acetaminophen	87.0		P	30 - 150
Acetamiprid	82.5		P	40 - 150
Afidopyropen	64.4		P	30 - 150
Bentazon	95.1		P	30 - 150
Benzovindiflupyr	86.6		P	40 - 150
Carbamazepine	85.4		P	40 - 150
Clothianidin	92.5		P	40 - 150
Dinotefuran	93.4		P	40 - 150
Diuron	76.8		P	40 - 150
Fenuron	93.7		P	40 - 150
Fluridone	83.1		P	40 - 150
Hydrocodone	93.9		P	40 - 150
Ibuprofen	76.8		P	40 - 150
Imazapyr	83.0		P	40 - 150
Imidacloprid	88.9		P	40 - 150
Linuron	89.2		P	40 - 150
Mandestrobin	87.1		P	40 - 150
MCPP	116		P	40 - 150
Naproxen	70.3		P	40 - 150
Primidone	85.7		P	40 - 150
Pyraclostrobin	86.5		P	40 - 150
Silvex	85.2		P	40 - 150
Thiamethoxam	96.1		P	40 - 150
Tolfenpyrad	50.3		P	30 - 150
Triclopyr	88.8		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P444925

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P444845

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.0		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P444746

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	113		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P444928

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.8		P	94 - 106

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: SM 5310 B-2014
Batch ID: P444811

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.7		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P444559

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483228	Calcium	99.3	98.0	P/P	80 - 120
2483228	Iron	101	99.6	P/P	80 - 120
2483228	Magnesium	99.8	98.4	P/P	80 - 120
2483228	Potassium	105	103	P/P	80 - 120
2483228	Sodium	102	99.9	P/P	80 - 120
2483228	Strontium	95.0	94.7	P/P	80 - 120
2483228	Tin	89.1	88.4	P/P	80 - 120
2483228	Titanium	98.5	98.6	P/P	80 - 120
2483228	Vanadium	98.7	96.4	P/P	80 - 120
2483228	Zinc	93.4	93.2	P/P	80 - 120
2483448	Calcium	94.9		P	80 - 120
2483448	Iron	101		P	80 - 120
2483448	Magnesium	99.6		P	80 - 120
2483448	Potassium	95.3		P	80 - 120
2483448	Sodium	98.3		P	80 - 120
2483448	Strontium	102		P	80 - 120
2483448	Tin	85.2		P	80 - 120
2483448	Titanium	96.2		P	80 - 120
2483448	Vanadium	98.7		P	80 - 120
2483448	Zinc	93.3		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P444559

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483228	Aluminum	98.0	97.9	P/P	80 - 120
2483228	Antimony	99.6	98.2	P/P	80 - 120
2483228	Arsenic	97.3	96.6	P/P	80 - 120
2483228	Barium	100	99.1	P/P	80 - 120
2483228	Beryllium	103	102	P/P	80 - 120
2483228	Boron	103	103	P/P	80 - 120
2483228	Cadmium	99.4	97.5	P/P	80 - 120
2483228	Chromium	100	99.7	P/P	80 - 120
2483228	Cobalt	97.8	96.6	P/P	80 - 120
2483228	Copper	97.4	97.0	P/P	80 - 120
2483228	Lead	102	101	P/P	80 - 120
2483228	Manganese	101	99.2	P/P	80 - 120
2483228	Molybdenum	97.5	97.6	P/P	80 - 120
2483228	Nickel	97.4	96.5	P/P	80 - 120
2483228	Selenium	97.0	97.2	P/P	80 - 120
2483228	Silver	101	101	P/P	80 - 120
2483228	Thallium	99.1	99.2	P/P	80 - 120
2483448	Aluminum	95.1		P	80 - 120
2483448	Antimony	97.2		P	80 - 120
2483448	Arsenic	98.3		P	80 - 120
2483448	Barium	100		P	80 - 120
2483448	Beryllium	100		P	80 - 120
2483448	Boron	103		P	80 - 120
2483448	Cadmium	99.9		P	80 - 120
2483448	Chromium	97.7		P	80 - 120
2483448	Cobalt	97.2		P	80 - 120
2483448	Copper	94.5		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P444559

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483448	Lead	102		P	80 - 120
2483448	Manganese	99.5		P	80 - 120
2483448	Molybdenum	99.2		P	80 - 120
2483448	Nickel	95.8		P	80 - 120
2483448	Selenium	98.3		P	80 - 120
2483448	Silver	99.6		P	80 - 120
2483448	Thallium	101		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444876

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483122	Chloride	102		P	90 - 110
2483185	Chloride	103		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444879

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483122	Sulfate	103		P	90 - 110
2483185	Sulfate	104		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444566

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482890	Ammonia-N	94.6	96.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445185

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483307	Kjeldahl Nitrogen	103	106	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444606

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483327	NO2NO3-N	100	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444619

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482985	Total-P	104	106	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P444441

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483426	Acesulfame K	51.1	45.6	P/P	40 - 150
2483426	AMPA	101	103	P/P	40 - 160

Quality Assurance Report

Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P444441

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483426	Endothall	101	106	P/P	40 - 160
2483426	Glufosinate	100	101	P/P	40 - 160
2483426	Glyphosate	107	110	P/P	40 - 160
2483426	Sucralose	120	116	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P444443

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483171	Acesulfame K	113	111	P/P	40 - 150
2483171	AMPA	103	98.8	P/P	40 - 160
2483171	Endothall	98.1	106	P/P	40 - 160
2483171	Glufosinate	99.3	97.9	P/P	40 - 160
2483171	Glyphosate	112	110	P/P	40 - 160
2483171	Sucralose	107	99.4	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P444465

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482710	2,4-D	131	141	P/P	40 - 150
2482710	2,4,5-T	116	129	P/P	40 - 150
2482710	Acetaminophen	101	112	P/P	30 - 150
2482710	Acetamiprid	89.7	97.4	P/P	40 - 150
2482710	Afidopyropen	60.1	58.9	P/P	30 - 150
2482710	Bentazon	69.2	77.1	P/P	30 - 150
2482710	Benzovindiflupyr	86.0	91.1	P/P	40 - 150
2482710	Carbamazepine	87.1	91.9	P/P	40 - 150
2482710	Clothianidin	107	112	P/P	40 - 150
2482710	Dinotefuran	109	113	P/P	40 - 150
2482710	Diuron	72.8	78.9	P/P	40 - 150
2482710	Fenuron	91.3	98.2	P/P	40 - 150
2482710	Fluridone	80.6	84.4	P/P	40 - 150
2482710	Hydrocodone	105	113	P/P	40 - 150
2482710	Ibuprofen	88.8	90.9	P/P	40 - 150
2482710	Imazapyr	91.5	101	P/P	40 - 150
2482710	Imidacloprid	115	127	P/P	40 - 150
2482710	Linuron	84.9	93.4	P/P	40 - 150
2482710	Mandestrobin	88.5	96.7	P/P	40 - 150
2482710	MCPP	120	128	P/P	40 - 150
2482710	Naproxen	76.2	79.0	P/P	40 - 150
2482710	Primidone	97.9	106	P/P	40 - 150
2482710	Pyraclostrobin	87.7	95.2	P/P	40 - 150
2482710	Silvex	90.8	100	P/P	40 - 150
2482710	Thiamethoxam	117	124	P/P	40 - 150
2482710	Tolfenpyrad	59.5	68.0	P/P	30 - 150
2482710	Triclopyr	105	109	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P444928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report
Matrix Spike Accuracy

Reference Method: SM 4500-F- C-2011
Batch ID: P444928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2482981	Fluoride	104	105	P/P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P444811

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2483307	Organic Carbon	96.5	94.9	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P444475

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483200	Color (true)	4.56	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P444493

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483282	Turbidity	6.86	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P444559

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483228	Calcium	0.907	Spike	P	0 - 20
2483228	Iron	1.13	Spike	P	0 - 20
2483228	Magnesium	1.17	Spike	P	0 - 20
2483228	Potassium	1.67	Spike	P	0 - 20
2483228	Sodium	1.53	Spike	P	0 - 20
2483228	Strontium	0.303	Spike	P	0 - 20
2483228	Tin	0.791	Spike	P	0 - 20
2483228	Titanium	0.153	Spike	P	0 - 20
2483228	Vanadium	2.31	Spike	P	0 - 20
2483228	Zinc	0.254	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P444559

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483228	Aluminum	0.118	Spike	P	0 - 20
2483228	Antimony	1.49	Spike	P	0 - 20
2483228	Arsenic	0.704	Spike	P	0 - 20
2483228	Barium	1.17	Spike	P	0 - 20
2483228	Beryllium	1.17	Spike	P	0 - 20
2483228	Boron	0.225	Spike	P	0 - 20
2483228	Cadmium	1.95	Spike	P	0 - 20
2483228	Chromium	0.620	Spike	P	0 - 20
2483228	Cobalt	1.27	Spike	P	0 - 20
2483228	Copper	0.356	Spike	P	0 - 20
2483228	Lead	1.18	Spike	P	0 - 20
2483228	Manganese	0.986	Spike	P	0 - 20
2483228	Molybdenum	0.119	Spike	P	0 - 20
2483228	Nickel	1.01	Spike	P	0 - 20
2483228	Selenium	0.273	Spike	P	0 - 20
2483228	Silver	0.173	Spike	P	0 - 20
2483228	Thallium	0.121	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444876

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483122	Chloride	1.77	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P444879

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483122	Sulfate	1.47	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P444566

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482890	Ammonia-N	1.33	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P445185

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483307	Kjeldahl Nitrogen	2.81	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P444606

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483327	NO2NO3-N	0.990	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P444619

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482985	Total-P	1.86	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P444441

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483426	Acesulfame K	11.2	Spike	P	0 - 30
2483426	AMPA	2.40	Spike	P	0 - 30
2483426	Endothall	4.92	Spike	P	0 - 30
2483426	Glufosinate	1.05	Spike	P	0 - 30
2483426	Glyphosate	2.39	Spike	P	0 - 30
2483426	Sucralose	2.59	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P444443

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483171	Acesulfame K	1.90	Spike	P	0 - 30
2483171	AMPA	3.71	Spike	P	0 - 30
2483171	Endothall	7.82	Spike	P	0 - 30
2483171	Glufosinate	1.47	Spike	P	0 - 30
2483171	Glyphosate	1.36	Spike	P	0 - 30
2483171	Sucralose	6.87	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P444465

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482710	2,4-D	6.75	Spike	P	0 - 30
2482710	2,4,5-T	11.1	Spike	P	0 - 30
2482710	Acetaminophen	10.4	Spike	P	0 - 30
2482710	Acetamiprid	8.28	Spike	P	0 - 30
2482710	Afidopyropen	1.99	Spike	P	0 - 30
2482710	Bentazon	10.9	Spike	P	0 - 30
2482710	Benzovindiflupyr	5.82	Spike	P	0 - 30
2482710	Carbamazepine	5.31	Spike	P	0 - 30
2482710	Clothianidin	5.38	Spike	P	0 - 30
2482710	Dinotefuran	3.64	Spike	P	0 - 30
2482710	Diuron	8.08	Spike	P	0 - 30
2482710	Fenuron	7.30	Spike	P	0 - 30
2482710	Fluridone	4.63	Spike	P	0 - 30
2482710	Hydrocodone	6.86	Spike	P	0 - 30
2482710	Ibuprofen	2.31	Spike	P	0 - 30
2482710	Imazapyr	7.08	Spike	P	0 - 30
2482710	Imidacloprid	10.2	Spike	P	0 - 30
2482710	Linuron	9.56	Spike	P	0 - 30
2482710	Mandestrobin	8.83	Spike	P	0 - 30
2482710	MCPP	6.34	Spike	P	0 - 30
2482710	Naproxen	3.59	Spike	P	0 - 30
2482710	Primidone	8.13	Spike	P	0 - 30
2482710	Pyraclostrobin	8.24	Spike	P	0 - 30
2482710	Silvex	9.68	Spike	P	0 - 30
2482710	Thiamethoxam	6.00	Spike	P	0 - 30
2482710	Tolfenpyrad	13.3	Spike	P	0 - 30
2482710	Triclopyr	3.44	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P444925

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483878	Total Alkalinity	2.04	Sample	P	0 - 3.9

Quality Assurance Report

Precision

Reference Method: SM 2540 C-2015

Batch ID: P444845

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483282	TDS	0.746	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P444928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2482981	Fluoride	0.501	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2014

Batch ID: P444811

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2483307	Organic Carbon	1.23	Spike	P	0 - 15

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

Quality Assurance Report

Surrogates

Lab Sample ID: 2483425

Field Sample ID: 20030352

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	110	P	30 - 160
EPA 8321B	Acetaminophen-d4	118	P	30 - 160
EPA 8321B	Carbamazepine-d10	77.2	P	30 - 160
EPA 8321B	Diuron-d6	77.4	P	30 - 160
EPA 8321B	Endothall-d6	110	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	104	P	30 - 160
EPA 8321B	Ibuprofen-d3	76.7	P	30 - 160
EPA 8321B	Primidone-d5	103	P	30 - 160
EPA 8321B	Sucralose-d6	123	P	30 - 160

Lab Sample ID: 2483426

Field Sample ID: 20030146

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	106	P	30 - 160
EPA 8321B	Acetaminophen-d4	132	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.0	P	30 - 160
EPA 8321B	Diuron-d6	70.5	P	30 - 160
EPA 8321B	Endothall-d6	106	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	104	P	30 - 160
EPA 8321B	Ibuprofen-d3	77.7	P	30 - 160
EPA 8321B	Primidone-d5	101	P	30 - 160
EPA 8321B	Sucralose-d6	125	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A125395
Included Lab Sample IDs: 2483305

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.8	98.1	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A125402
Included Lab Sample IDs: 2483305

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

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A125430
Included Lab Sample IDs: 2483307

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	98.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A125445
Included Lab Sample IDs: 2483307

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	101	104	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A125458
Included Lab Sample IDs: 2483425, 2483426

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	100	96.3	P/P	60 - 160
AMPA	95.7	95.5	P/P	60 - 160
Endothall	103	106	P/P	60 - 160
Endothall	103	106	P/P	60 - 160
Glufosinate	93.0	98.9	P/P	60 - 160
Glufosinate	93.8	94.0	P/P	60 - 160
Glyphosate	103	104	P/P	60 - 160
Glyphosate	104	99.9	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A125461
Included Lab Sample IDs: 2483332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.7	97.9	P/P	90 - 110
Antimony	98.5	98.9	P/P	90 - 110
Arsenic	98.3	98.5	P/P	90 - 110
Barium	98.9	99.4	P/P	90 - 110
Beryllium	100	99.2	P/P	90 - 110
Boron	99.5	99.4	P/P	90 - 110
Cadmium	99.2	99.1	P/P	90 - 110
Chromium	97.3	97.9	P/P	90 - 110
Cobalt	97.9	98.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A125461

Included Lab Sample IDs: 2483332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Copper	96.4	96.3	P/P	90 - 110
Lead	100	100	P/P	90 - 110
Manganese	98.8	99.7	P/P	90 - 110
Molybdenum	98.3	97.9	P/P	90 - 110
Nickel	96.8	96.5	P/P	90 - 110
Selenium	98.3	98.6	P/P	90 - 110
Silver	99.0	98.8	P/P	90 - 110
Thallium	101	99.6	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A125464

Included Lab Sample IDs: 2483425, 2483426

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	109	141	P/P	60 - 160
Acesulfame K	127	109	P/P	60 - 160
Sucralose	97.2	118	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A125466

Included Lab Sample IDs: 2483425

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	71.8	82.4	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A125493

Included Lab Sample IDs: 2483307

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.0	99.5	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A125504

Included Lab Sample IDs: 2483332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	96.6	97.7	P/P	90 - 110
Iron	99.3	99.8	P/P	90 - 110
Magnesium	95.9	96.8	P/P	90 - 110
Potassium	99.1	100	P/P	90 - 110
Sodium	99.7	101	P/P	90 - 110
Strontium	105	106	P/P	90 - 110
Tin	91.8	93.7	P/P	90 - 110
Titanium	97.2	98.1	P/P	90 - 110
Zinc	92.0	92.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2014
Run ID: A125527
Included Lab Sample IDs: 2483307

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	115	94.8	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A125536
Included Lab Sample IDs: 2483332

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Vanadium	95.2	97.4	P/P	95 - 105

Reference Method: SM 2320 B-2011
Run ID: A125568
Included Lab Sample IDs: 2483305

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.9	102	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A125568
Included Lab Sample IDs: 2483305

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	101	98.5	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A125571
Included Lab Sample IDs: 2483305

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	102	P/P	90 - 110
Sulfate	102	104	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A125705
Included Lab Sample IDs: 2483307

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	96.5	97.2	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A125769
Included Lab Sample IDs: 2483425, 2483426

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	102	103	P/P	50 - 150
2,4,5-T	114	104	P/P	50 - 150
Acetaminophen	117	122	P/P	60 - 160
Acetamiprid	125	129	P/P	50 - 150
Afidopyropen	120	122	P/P	50 - 150
Bentazon	116	126	P/P	50 - 160
Benzovindiflupyr	126	128	P/P	50 - 150
Carbamazepine	121	123	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A125769

Included Lab Sample IDs: 2483425, 2483426

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Clothianidin	116	115	P/P	60 - 150
Dinotefuran	121	127	P/P	50 - 150
Diuron	117	119	P/P	60 - 160
Fenuron	123	127	P/P	60 - 150
Fluridone	122	113	P/P	60 - 160
Hydrocodone	122	122	P/P	60 - 150
Ibuprofen	64.6	81.6	P/P	50 - 160
Imazapyr	110	102	P/P	50 - 150
Imidacloprid	115	117	P/P	60 - 150
Linuron	127	116	P/P	60 - 150
Mandestrobin	125	128	P/P	50 - 150
MCPP	118	118	P/P	50 - 150
Naproxen	98.3	107	P/P	50 - 160
Primidone	111	103	P/P	60 - 150
Pyraclostrobin	127	132	P/P	60 - 150
Silvex	119	117	P/P	50 - 150
Thiamethoxam	125	128	P/P	50 - 150
Tolfenpyrad	109	111	P/P	60 - 150
Triclopyr	101	108	P/P	50 - 150

* 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)	98.2				4.56	
EPA 180.1 Rev. 2.0	Turbidity	102				6.86	
EPA 200.7 Rev. 4.4	Calcium	102	99.3	98.0	94.9		0.907
	Iron	103	101	99.6	101		1.13
	Magnesium	101	99.8	98.4	99.6		1.17
	Potassium	97.5	105	103	95.3		1.67
	Sodium	105	102	99.9	98.3		1.53
	Strontium	96.2	95.0	94.7	102		0.303
	Tin	92.0	89.1	88.4	85.2		0.791
	Titanium	97.9	98.5	98.6	96.2		0.153
	Vanadium	98.8	98.7	96.4	98.7		2.31
	Zinc	96.2	93.4	93.2	93.3		0.254
EPA 200.8 Rev. 5.4	Aluminum	100	98.0	97.9	95.1		0.118
	Antimony	101	99.6	98.2	97.2		1.49
	Arsenic	99.0	97.3	96.6	98.3		0.704
	Barium	101	100	99.1	100		1.17
	Beryllium	102	103	102	100		1.17
	Boron	107	103	103	103		0.225
	Cadmium	98.9	99.4	97.5	99.9		1.95
	Chromium	99.7	100	99.7	97.7		0.620
	Cobalt	99.0	97.8	96.6	97.2		1.27
	Copper	96.2	97.4	97.0	94.5		0.356
	Lead	102	102	101	102		1.18
	Manganese	101	101	99.2	99.5		0.986
	Molybdenum	98.3	97.5	97.6	99.2		0.119
	Nickel	96.7	97.4	96.5	95.8		1.01
	Selenium	102	97.0	97.2	98.3		0.273
	Silver	103	101	101	99.6		0.173
	Thallium	98.7	99.1	99.2	101		0.121
EPA 300.0 Rev. 2.1	Chloride	103	102	103		1.77	
	Sulfate	105	103	104		1.47	
EPA 350.1 Rev. 2.0	Ammonia-N	96.0	94.6	96.0			1.33
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.9	103	106			2.81
EPA 353.2 Rev. 2.0	NO2NO3-N	101	100	102			0.990
EPA 365.1 Rev. 2.0	Total-P	105	104	106			1.86
EPA 8321B	2,4-D	108	131	141			6.75
	2,4,5-T	103	116	129			11.1
	Acesulfame K	126	51.1	45.6			11.2
	Acesulfame K	105	113	111			1.90
	Acetaminophen	87.0	101	112			10.4
	Acetamiprid	82.5	89.7	97.4			8.28
	Afidopyropen	64.4	60.1	58.9			1.99
	AMPA	97.7	101	103			2.40
	AMPA	97.1	103	98.8			3.71
	Bentazon	95.1	69.2	77.1			10.9
	Benzovindiflupyr	86.6	86.0	91.1			5.82
	Carbamazepine	85.4	87.1	91.9			5.31
	Clothianidin	92.5	107	112			5.38
	Dinotefuran	93.4	109	113			3.64
	Diuron	76.8	72.8	78.9			8.08
	Endothall	105	101	106			4.92
	Endothall	99.0	98.1	106			7.82
	Fenuron	93.7	91.3	98.2			7.30
	Fluridone	83.1	80.6	84.4			4.63

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	SMP
EPA 8321B	Glufosinate	95.1	100	101		1.05
	Glufosinate	102	99.3	97.9		1.47
	Glyphosate	99.4	107	110		2.39
	Glyphosate	99.5	112	110		1.36
	Hydrocodone	93.9	105	113		6.86
	Ibuprofen	76.8	88.8	90.9		2.31
	Imazapyr	83.0	91.5	101		7.08
	Imidacloprid	88.9	115	127		10.2
	Linuron	89.2	84.9	93.4		9.56
	Mandestrobin	87.1	88.5	96.7		8.83
	MCPP	116	120	128		6.34
	Naproxen	70.3	76.2	79.0		3.59
	Primidone	85.7	97.9	106		8.13
	Pyraclostrobin	86.5	87.7	95.2		8.24
	Silvex	85.2	90.8	100		9.68
	Sucralose	109	120	116		2.59
	Sucralose	104	107	99.4		6.87
	Thiamethoxam	96.1	117	124		6.00
	Tolfenpyrad	50.3	59.5	68.0		13.3
	Triclopyr	88.8	105	109		3.44
SM 2320 B-2011	Total Alkalinity	104				2.04
SM 2540 C-2015	TDS	96.0				0.746
SM 2540 D-2015	TSS	113				
SM 4500-F- C-2011	Fluoride	98.8	104	105		0.501
SM 5310 B-2014	Organic Carbon	98.7	96.5	94.9		1.23

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2483305
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2483305
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2483332
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2483332
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2483305
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2483305
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2483307
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2483307
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2483307
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2483307
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2483425, 2483426
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2483305
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2483332
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2483305
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2483305
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2483305
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2483307

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	04/18/2024			04/18/2024 13:01	Chandler E Cox	2483305
EPA 180.1 Rev. 2.0	04/18/2024			04/18/2024 12:32	Jessica K Wilks	2483305
EPA 200.7 Rev. 4.4	04/18/2024	04/19/2024 14:00	George D Taylor	04/24/2024 14:05	McKinley C Carter	2483332
	04/18/2024	04/19/2024 14:00	George D Taylor	04/25/2024 13:59	McKinley C Carter	2483332
EPA 200.8 Rev. 5.4	04/18/2024	04/19/2024 14:00	George D Taylor	04/22/2024 22:55	Emily M Philpot	2483332
EPA 300.0 Rev. 2.1	04/18/2024			04/28/2024 01:10	James L Waggeberby	2483305
EPA 350.1 Rev. 2.0	04/18/2024			04/19/2024 11:57	Khloe J Berg	2483307
EPA 351.2 Rev. 2.0	04/18/2024	05/03/2024 11:57	Ping Hua	05/06/2024 14:32	Samantha L Bates	2483307
EPA 353.2 Rev. 2.0	04/18/2024			04/19/2024 15:57	Fadila Guebre	2483307
EPA 365.1 Rev. 2.0	04/18/2024	04/22/2024 13:25	Adam P Silver	04/24/2024 14:06	Simonne.V. Calhoun	2483307
EPA 8321B	04/18/2024	04/18/2024 11:00	Samatha Luckman	04/19/2024 12:48	Samatha Luckman	2483425
	04/18/2024	04/18/2024 11:00	Samatha Luckman	04/20/2024 02:53	Samatha Luckman	2483425
	04/18/2024	04/19/2024 09:00	Hoor Shaik	05/08/2024 23:35	Juyoung Kim	2483425
	04/18/2024	04/19/2024 09:00	Hoor Shaik	05/08/2024 23:53	Juyoung Kim	2483426
	04/18/2024	04/19/2024 14:00	Samatha Luckman	04/19/2024 16:30	Samatha Luckman	2483426
	04/18/2024	04/19/2024 14:00	Samatha Luckman	04/20/2024 04:17	Samatha Luckman	2483426
SM 2320 B-2011	04/18/2024			04/26/2024 07:31	Dale L. Simmons	2483305
SM 2340 B-2011	04/18/2024			04/24/2024 14:05	McKinley C Carter	2483332
SM 2540 C-2015	04/18/2024			04/19/2024 16:49	Yijie Li	2483305
SM 2540 D-2015	04/18/2024			04/19/2024 16:49	Yijie Li	2483305
SM 4500-F- C-2011	04/18/2024			04/26/2024 04:16	Dale L. Simmons	2483305
SM 5310 B-2014	04/18/2024			04/24/2024 08:01	Jessica K Wilks	2483307