

Chemical Analysis Report

CEN-DIST-2023-08-09-03

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

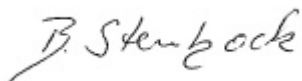
Event Description: **Run 23**
Request ID: **RQ-2023-08-07-45**
Customer: **CEN-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
3319 Maguire Blvd., Suite 232
Orlando, FL 32803-3767
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Certified by: Dr. rer. nat. Bettina Steinbock, Environmental Administrator

Date Certified: 29-AUG-2023 12:53



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: HICKS DITCH SE OF EAST RD

Collection Date/Time: 08/08/2023 13:41

Field ID: G1CE0126

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2429974	EPA 8321B	2,4-D	0.0020	U	ug/L	P433687	
		Acesulfame K	0.10	U	ug/L	P433621	MS
		2,4,5-T	0.0040	U	ug/L	P433687	
		AMPA	0.10	U	ug/L	P433621	
		Acetaminophen	0.0080	U	ug/L	P433687	
		Endothall	0.25	U	ug/L	P433621	
		Acetamiprid	0.0020	U	ug/L	P433687	MS
		Glufosinate	0.10	U	ug/L	P433621	
		Glyphosate	0.10	U	ug/L	P433621	
		Afidopyropen	0.0020	U	ug/L	P433687	
		Bentazon	8.0E-04	U	ug/L	P433687	
		Sucralose	0.015	I	ug/L	P433621	
		Benzovindiflupyr	0.0020	U	ug/L	P433687	
		Carbamazepine	8.0E-04	U	ug/L	P433687	MS
		Clothianidin	0.0020	U	ug/L	P433687	
		Dinotefuran	0.0020	U	ug/L	P433687	
		Diuron	0.0020	U	ug/L	P433687	MS
		Fenuron	0.032	U	ug/L	P433687	MS
		Fluridone	8.0E-04	U	ug/L	P433687	
		Imazapyr	0.0062	I	ug/L	P433687	
		Hydrocodone	0.0020	U	ug/L	P433687	
		Ibuprofen	0.080	U	ug/L	P433687	
		Imidacloprid	0.0020	U	ug/L	P433687	
		Linuron	0.0040	U	ug/L	P433687	
		Mandestrobin	0.0020	U	ug/L	P433687	
		MCPP	0.0020	U	ug/L	P433687	
		Naproxen	0.0080	U	ug/L	P433687	
		Primidone	0.0040	U	ug/L	P433687	
		Pyraclostrobin	0.0020	U	ug/L	P433687	
		Silvex	0.0040	U	ug/L	P433687	
		Thiamethoxam	0.0020	U	ug/L	P433687	
		Tolfenpyrad	0.0020	U	ug/L	P433687	
		Triclopyr	0.0040	U	ug/L	P433687	
2429975	EPA 200.7 Rev. 4.4	Calcium	6.50		mg/L	P433806	
		Iron	1.34E+03		ug/L	P433806	
		Magnesium	2.62		mg/L	P433806	
		Potassium	1.9		mg/L	P433806	
		Sodium	8.5		mg/L	P433806	
		Strontium	28.0		ug/L	P433806	
		Tin	3.0	U	ug/L	P433806	
		Titanium	2.9	I	ug/L	P433806	
		Vanadium	2.0	U	ug/L	P433806	
		Zinc	5.0	U	ug/L	P433806	
	EPA 200.8 Rev. 5.4	Aluminum	125		ug/L	P433806	

Field ID: G1CE0126

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2429975	EPA 200.8 Rev. 5.4	Antimony	0.063	I	ug/L	P433806	
		Arsenic	0.72		ug/L	P433806	
		Barium	26.3		ug/L	P433806	
		Beryllium	0.053		ug/L	P433806	
		Boron	35.9		ug/L	P433806	
		Cadmium	0.020	U	ug/L	P433806	
		Chromium	0.89	I	ug/L	P433806	
		Cobalt	0.414		ug/L	P433806	
		Copper	0.40	U	ug/L	P433806	
		Lead	0.27	I	ug/L	P433806	
		Manganese	35.6		ug/L	P433806	
		Molybdenum	0.15	U	ug/L	P433806	
		Nickel	0.85	I	ug/L	P433806	
		Selenium	0.26	I	ug/L	P433806	
		Silver	0.010	U	ug/L	P433806	
		Thallium	0.10	U	ug/L	P433806	
	SM 2340 B-2011	Hardness	27.0		mg/L	P433806	

Ref. Method and Comment:
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

**Sample Location: DEAD RIVER AT 50M FROM S OF US 441
 (2817C)**

Collection Date/Time: 08/08/2023 11:38

Field ID: G1CE0100

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2429968	DEP SOP: NU-094-1	Color (true)	11		PCU	P433638	
	EPA 180.1 Rev. 2.0	Turbidity	6.1		NTU	P433642	
	EPA 300.0 Rev. 2.1	Chloride	21		mg Cl/L	P434077	
		Sulfate	5.6		mg SO4/L	P434080	
	SM 2320 B-2011	Total Alkalinity	85		mg CaCO3/L	P433830	
	SM 2540 C-2015	TDS	148		mg/L	P434110	
	SM 2540 D-2015	TSS	8	I	mg/L	P434106	
	SM 4500-F- C-2011	Fluoride	0.10		mg F/L	P433928	
2429969	EPA 350.1 Rev. 2.0	Ammonia-N	0.006		mg N/L	P434068	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P433749	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P434369	
	EPA 365.1 Rev. 2.0	Total-P	0.027		mg P/L	P433769	
	SM 5310 B-2011	Organic Carbon	12		mg C/L	P433803	

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: P433638

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433642

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P433806

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: P433806

Component	Result	Code	Units
Aluminum	12	I	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: P434077

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: P434080

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434068

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433749

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434369

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433769

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

Reference Method: EPA 8321B
Batch ID: P433621

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: P433687

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P433687

Component	Result	Code	Units
Fenuron	0.032	U	ug/L
Fluridone	8.0E-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	0.0040	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: P433830

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

Reference Method: SM 2540 C-2015

Batch ID: P434110

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015

Batch ID: P434106

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P433928

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P433803

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: P433638

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	97.8		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433642

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	99.7		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P433806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	102		P	85 - 115
Iron	104		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	94.0		P	85 - 115
Sodium	97.3		P	85 - 115
Strontium	96.4		P	85 - 115
Tin	98.6		P	85 - 115
Titanium	101		P	85 - 115
Vanadium	100		P	85 - 115
Zinc	101		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433806

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	99.5		P	85 - 115
Barium	104		P	85 - 115
Beryllium	96.3		P	85 - 115
Boron	104		P	85 - 115
Cadmium	101		P	85 - 115
Chromium	99.1		P	85 - 115
Cobalt	96.4		P	85 - 115
Copper	95.2		P	85 - 115
Lead	93.9		P	85 - 115
Manganese	99.4		P	85 - 115
Molybdenum	99.6		P	85 - 115
Nickel	96.0		P	85 - 115
Selenium	100		P	85 - 115
Silver	111		P	85 - 115
Thallium	101		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434077

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.3		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434080

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Sulfate	96.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434068

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433749

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434369

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433769

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

Reference Method: EPA 8321B
Batch ID: P433621

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	101		P	40 - 150
AMPA	81.6		P	40 - 150
Endothall	103		P	40 - 150
Glufosinate	98.0		P	40 - 150
Glyphosate	114		P	40 - 150
Sucralose	93.2		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P433687

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	71.5		P	40 - 150
2,4,5-T	70.0		P	40 - 150
Acetaminophen	73.7		P	30 - 150
Acetamiprid	76.5		P	40 - 150
Afidopyropen	46.7		P	30 - 150
Bentazon	146		P	30 - 150
Benzovindiflupyr	63.5		P	40 - 150
Carbamazepine	53.7		P	40 - 150
Clothianidin	96.0		P	40 - 150
Dinotefuran	140		P	40 - 150
Diuron	54.7		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P433687

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fenuron	103		P	40 - 150
Fluridone	107		P	40 - 150
Hydrocodone	92.2		P	40 - 150
Ibuprofen	60.5		P	40 - 150
Imazapyr	96.2		P	40 - 150
Imidacloprid	78.3		P	40 - 150
Linuron	92.0		P	40 - 150
Mandestrobin	83.7		P	40 - 150
MCPP	84.7		P	40 - 150
Naproxen	54.8		P	40 - 150
Primidone	97.6		P	40 - 150
Pyraclostrobin	64.4		P	40 - 150
Silvex	81.1		P	40 - 150
Thiamethoxam	90.8		P	40 - 150
Tolfenpyrad	50.5		P	30 - 150
Triclopyr	70.2		P	40 - 150

Reference Method: SM 2320 B-2011
Batch ID: P433830

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	98.2		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P434110

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	99.1		P	90 - 110

Reference Method: SM 2540 D-2015
Batch ID: P434106

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	91.4		P	85 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P433928

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.7		P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433803

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	92.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P433806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429374	Calcium	102		P	80 - 120
2429374	Iron	102	103	P/P	80 - 120
2429374	Magnesium	101	103	P/P	80 - 120
2429374	Potassium	91.4	93.0	P/P	80 - 120
2429374	Sodium	98.2		P	80 - 120
2429374	Strontium	94.8	95.5	P/P	80 - 120
2429374	Tin	97.6	95.9	P/P	80 - 120
2429374	Titanium	102	100	P/P	80 - 120
2429374	Vanadium	102	99.9	P/P	80 - 120
2429374	Zinc	101	98.9	P/P	80 - 120
2429871	Calcium	104		P	75 - 125
2429871	Iron	104		P	75 - 125
2429871	Magnesium	102		P	75 - 125
2429871	Potassium	98.3		P	75 - 125
2429871	Sodium	102		P	75 - 125
2429871	Strontium	101		P	75 - 125
2429871	Tin	99.1		P	75 - 125
2429871	Titanium	103		P	75 - 125
2429871	Vanadium	104		P	75 - 125
2429871	Zinc	99.9		P	75 - 125

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P433806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429374	Aluminum	98.8	97.7	P/P	80 - 120
2429374	Antimony	105	105	P/P	80 - 120
2429374	Arsenic	98.3	99.5	P/P	80 - 120
2429374	Barium	106	105	P/P	80 - 120
2429374	Beryllium	96.2	98.0	P/P	80 - 120
2429374	Boron	102	101	P/P	80 - 120
2429374	Cadmium	103	104	P/P	80 - 120
2429374	Chromium	97.4	97.4	P/P	80 - 120
2429374	Cobalt	93.8	93.6	P/P	80 - 120
2429374	Copper	94.0	94.1	P/P	80 - 120
2429374	Lead	94.2	94.5	P/P	80 - 120
2429374	Manganese	97.2	100	P/P	80 - 120
2429374	Molybdenum	101	101	P/P	80 - 120
2429374	Nickel	91.7	92.0	P/P	80 - 120
2429374	Selenium	98.4	98.5	P/P	80 - 120
2429374	Silver	110	109	P/P	80 - 120
2429374	Thallium	105	105	P/P	80 - 120
2429871	Aluminum	98.5		P	80 - 120
2429871	Antimony	106		P	80 - 120
2429871	Arsenic	99.3		P	80 - 120
2429871	Barium	106		P	80 - 120
2429871	Beryllium	98.4		P	80 - 120
2429871	Boron	104		P	80 - 120
2429871	Cadmium	103		P	80 - 120
2429871	Chromium	98.0		P	80 - 120
2429871	Cobalt	91.5		P	80 - 120
2429871	Copper	89.0		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433806

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429871	Lead	93.0		P	80 - 120
2429871	Manganese	99.2		P	80 - 120
2429871	Molybdenum	103		P	80 - 120
2429871	Nickel	89.8		P	80 - 120
2429871	Selenium	97.0		P	80 - 120
2429871	Silver	110		P	80 - 120
2429871	Thallium	104		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434077

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2430010	Chloride	98.9		P	90 - 110
2430089	Chloride	98.1		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434080

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2430010	Sulfate	97.3		P	90 - 110
2430089	Sulfate	95.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434068

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429969	Ammonia-N	98.0	99.8	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433749

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429844	Kjeldahl Nitrogen	98.3	97.5	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434369

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429833	NO2NO3-N	100	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433769

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429833	Total-P	106	104	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P433621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429139	Acesulfame K	155	157	F/F	40 - 150
2429139	AMPA	49.0	51.3	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P433621

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429139	Endothall	109	103	P/P	40 - 150
2429139	Glufosinate	88.1	86.4	P/P	40 - 150
2429139	Glyphosate	95.8	121	P/P	40 - 150
2429139	Sucralose	95.0	102	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P433687

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2430006	2,4-D	88.5	97.5	P/P	40 - 150
2430006	2,4,5-T	113	109	P/P	40 - 150
2430006	Acetaminophen	62.7	64.4	P/P	30 - 150
2430006	Acetamiprid	29.0	38.9	F/F	40 - 150
2430006	Afidopyropen	50.0	65.0	P/P	30 - 150
2430006	Benzovindiflupyr	61.7	51.1	P/P	40 - 150
2430006	Carbamazepine	34.1	37.4	F/F	40 - 150
2430006	Clothianidin	61.0	57.3	P/P	40 - 150
2430006	Dinotefuran	48.1	53.3	P/P	40 - 150
2430006	Diuron	34.3	32.4	F/F	40 - 150
2430006	Fenuron	41.0	38.6	P/F	40 - 150
2430006	Hydrocodone	44.5	44.4	P/P	40 - 150
2430006	Ibuprofen	59.5	73.8	P/P	40 - 150
2430006	Imazapyr	104	97.6	P/P	40 - 150
2430006	Imidacloprid	80.1	86.8	P/P	40 - 150
2430006	Linuron	59.5	57.4	P/P	40 - 150
2430006	Mandestrobin	92.2	80.6	P/P	40 - 150
2430006	MCPP	115	105	P/P	40 - 150
2430006	Naproxen	73.0	55.3	P/P	40 - 150
2430006	Primidone	64.1	64.0	P/P	40 - 150
2430006	Pyraclostrobin	62.1	65.7	P/P	40 - 150
2430006	Silvex	105	107	P/P	40 - 150
2430006	Thiamethoxam	58.3	55.8	P/P	40 - 150
2430006	Tolfenpyrad	64.8	54.8	P/P	30 - 150
2430006	Triclopyr	101	98.5	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P433928

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429952	Fluoride	98.4	98.9	P/P	94 - 106

Reference Method: SM 5310 B-2011
Batch ID: P433803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2429740	Organic Carbon	93.9	96.8	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P433638

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429832	Color (true)	1.70	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P433642

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429805	Turbidity	8.00	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P433806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429374	Calcium	1.21	Spike	P	0 - 20
2429374	Iron	1.24	Spike	P	0 - 20
2429374	Magnesium	1.35	Spike	P	0 - 20
2429374	Potassium	1.26	Spike	P	0 - 20
2429374	Sodium	0.0302	Spike	P	0 - 20
2429374	Strontium	0.713	Spike	P	0 - 20
2429374	Tin	1.69	Spike	P	0 - 20
2429374	Titanium	2.08	Spike	P	0 - 20
2429374	Vanadium	2.05	Spike	P	0 - 20
2429374	Zinc	1.91	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P433806

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429374	Aluminum	1.14	Spike	P	0 - 20
2429374	Antimony	0.407	Spike	P	0 - 20
2429374	Arsenic	1.16	Spike	P	0 - 20
2429374	Barium	1.13	Spike	P	0 - 20
2429374	Beryllium	1.89	Spike	P	0 - 20
2429374	Boron	0.628	Spike	P	0 - 20
2429374	Cadmium	1.04	Spike	P	0 - 20
2429374	Chromium	0.0312	Spike	P	0 - 20
2429374	Cobalt	0.120	Spike	P	0 - 20
2429374	Copper	0.0690	Spike	P	0 - 20
2429374	Lead	0.344	Spike	P	0 - 20
2429374	Manganese	2.49	Spike	P	0 - 20
2429374	Molybdenum	0.522	Spike	P	0 - 20
2429374	Nickel	0.306	Spike	P	0 - 20
2429374	Selenium	0.112	Spike	P	0 - 20
2429374	Silver	1.30	Spike	P	0 - 20
2429374	Thallium	0.170	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434077

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430010	Chloride	0.868	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P434080

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430010	Sulfate	3.15	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P434068

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429969	Ammonia-N	1.62	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P433749

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429844	Kjeldahl Nitrogen	0.478	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P434369

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429833	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P433769

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429833	Total-P	1.64	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P433621

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429139	Acesulfame K	0.818	Spike	P	0 - 30
2429139	AMPA	3.01	Spike	P	0 - 30
2429139	Endothall	5.59	Spike	P	0 - 30
2429139	Glufosinate	1.94	Spike	P	0 - 30
2429139	Glyphosate	6.79	Spike	P	0 - 30
2429139	Sucralose	6.38	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P433687

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2430006	2,4-D	8.76	Spike	P	0 - 30
2430006	2,4,5-T	3.58	Spike	P	0 - 30
2430006	Acetaminophen	2.78	Spike	P	0 - 30
2430006	Acetamiprid	29.1	Spike	P	0 - 30
2430006	Afidopyropen	26.1	Spike	P	0 - 30
2430006	Bentazon	4.45	Spike	P	0 - 30
2430006	Benzovindiflupyr	18.9	Spike	P	0 - 30
2430006	Carbamazepine	7.87	Spike	P	0 - 30
2430006	Clothianidin	6.20	Spike	P	0 - 30
2430006	Dinotefuran	10.4	Spike	P	0 - 30
2430006	Diuron	5.87	Spike	P	0 - 30
2430006	Fenuron	6.09	Spike	P	0 - 30
2430006	Fluridone	27.2	Spike	P	0 - 30
2430006	Hydrocodone	0.235	Spike	P	0 - 30
2430006	Ibuprofen	21.5	Spike	P	0 - 30
2430006	Imazapyr	4.61	Spike	P	0 - 30
2430006	Imidacloprid	7.98	Spike	P	0 - 30
2430006	Linuron	3.64	Spike	P	0 - 30
2430006	Mandestrobin	13.4	Spike	P	0 - 30
2430006	MCP	8.32	Spike	P	0 - 30
2430006	Naproxen	27.6	Spike	P	0 - 30
2430006	Primidone	0.0428	Spike	P	0 - 30
2430006	Pyraclostrobin	5.58	Spike	P	0 - 30
2430006	Silvex	2.28	Spike	P	0 - 30
2430006	Thiamethoxam	4.32	Spike	P	0 - 30
2430006	Tolfenpyrad	16.7	Spike	P	0 - 30
2430006	Triclopyr	2.75	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P433830

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429631	Total Alkalinity	3.31	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015

Batch ID: P434110

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429490	TDS	5.94	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P433928

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429952	Fluoride	0.495	Spike	P	0 - 1.9

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P433803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2429740	Organic Carbon	2.42	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2429974

Field Sample ID: G1CE0126

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	78.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	57.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	54.5	P	30 - 160
EPA 8321B	Diuron-d6	44.8	P	30 - 160
EPA 8321B	Endothall-d6	108	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	79.3	P	30 - 160
EPA 8321B	Primidone-d5	40.2	P	30 - 160
EPA 8321B	Sucralose-d6	99.8	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A120926
Included Lab Sample IDs: 2429968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	98.4	97.4	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A120930
Included Lab Sample IDs: 2429968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	99.5	100	P/P	95 - 105

Reference Method: EPA 8321B
Run ID: A121009
Included Lab Sample IDs: 2429974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	74.1	74.7	P/P	60 - 160
Endothall	93.6	87.4	P/P	60 - 160
Glufosinate	90.6	88.6	P/P	60 - 160
Glyphosate	102	99.5	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A121014
Included Lab Sample IDs: 2429969

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	97.1	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A121017
Included Lab Sample IDs: 2429969

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.0	97.8	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A121019
Included Lab Sample IDs: 2429969

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	98.2	98.5	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A121022
Included Lab Sample IDs: 2429974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	109	125	P/P	60 - 160
Sucralose	96.6	94.8	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: SM 2320 B-2011

Run ID: A121026

Included Lab Sample IDs: 2429968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.9	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A121038

Included Lab Sample IDs: 2429974

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	95.8	96.3	P/P	50 - 150
2,4,5-T	90.0	85.0	P/P	50 - 150
Acetaminophen	82.0	85.3	P/P	60 - 160
Acetamiprid	109	91.7	P/P	50 - 150
Afidopyropen	74.5	60.5	P/P	50 - 150
Bentazon	116	92.4	P/P	50 - 160
Benzovindiflupyr	84.4	65.6	P/P	50 - 150
Carbamazepine	96.2	72.9	P/P	60 - 150
Clothianidin	93.6	94.1	P/P	60 - 150
Dinotefuran	127	86.9	P/P	50 - 150
Diuron	84.9	60.1	P/P	60 - 160
Fenuron	104	96.7	P/P	60 - 150
Fluridone	98.3	89.8	P/P	60 - 160
Hydrocodone	115	113	P/P	60 - 150
Ibuprofen	109	127	P/P	50 - 160
Imazapyr	112	89.9	P/P	50 - 150
Imidacloprid	99.2	81.0	P/P	60 - 150
Linuron	115	107	P/P	60 - 150
Mandestrobin	84.8	116	P/P	50 - 150
MCPP	102	86.1	P/P	50 - 150
Naproxen	88.0	61.5	P/P	50 - 160
Primidone	99.1	90.3	P/P	60 - 150
Pyraclostrobin	102	89.9	P/P	60 - 150
Silvex	98.3	90.4	P/P	50 - 150
Thiamethoxam	108	90.9	P/P	50 - 150
Tolfenpyrad	127	82.2	P/P	60 - 150
Triclopyr	99.0	88.2	P/P	50 - 150

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A121050

Included Lab Sample IDs: 2429975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	102	102	P/P	90 - 110
Iron	101	101	P/P	90 - 110
Magnesium	101	100	P/P	90 - 110
Potassium	96.8	97.1	P/P	90 - 110
Sodium	99.0	99.7	P/P	90 - 110
Strontium	98.0	99.3	P/P	90 - 110
Tin	102	102	P/P	90 - 110
Titanium	102	102	P/P	90 - 110
Vanadium	101	101	P/P	90 - 110
Zinc	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121054

Included Lab Sample IDs: 2429975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	101	100	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Arsenic	97.5	98.0	P/P	90 - 110
Barium	101	102	P/P	90 - 110
Beryllium	96.9	95.9	P/P	90 - 110
Boron	99.6	103	P/P	90 - 110
Cadmium	102	101	P/P	90 - 110
Chromium	100	102	P/P	90 - 110
Cobalt	93.2	93.9	P/P	90 - 110
Copper	92.1	93.2	P/P	90 - 110
Lead	93.3	92.9	P/P	90 - 110
Manganese	101	101	P/P	90 - 110
Molybdenum	98.4	98.9	P/P	90 - 110
Selenium	101	100	P/P	90 - 110
Silver	97.0	96.9	P/P	90 - 110
Thallium	99.0	98.3	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A121057

Included Lab Sample IDs: 2429968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	96.8	97.5	P/P	90 - 110
Sulfate	96.6	97.6	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A121067

Included Lab Sample IDs: 2429968

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	103	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A121080

Included Lab Sample IDs: 2429975

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	94.1	94.4	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A121131

Included Lab Sample IDs: 2429969

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.1	99.1	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A121245

Included Lab Sample IDs: 2429969

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
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Quality Assurance Report

Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A121245

Included Lab Sample IDs: 2429969

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	98.5	98.0	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			LCS	Precision SMP	MS
DEP SOP: NU-094-1	Color (true)	97.8					1.70	
EPA 180.1 Rev. 2.0	Turbidity	99.7					8.00	
EPA 200.7 Rev. 4.4	Calcium	102	102	104				1.21
	Iron	104	102	103	104			1.24
	Magnesium	104	101	103	102			1.35
	Potassium	94.0	91.4	93.0	98.3			1.26
	Sodium	97.3	98.2	102				0.0302
	Strontium	96.4	94.8	95.5	101			0.713
	Tin	98.6	99.1	97.6	95.9			1.69
	Titanium	101	102	100	103			2.08
	Vanadium	100	102	99.9	104			2.05
	Zinc	101	101	98.9	99.9			1.91
EPA 200.8 Rev. 5.4	Aluminum	101	98.8	97.7	98.5			1.14
	Antimony	103	105	105	106			0.407
	Arsenic	99.5	98.3	99.5	99.3			1.16
	Barium	104	106	105	106			1.13
	Beryllium	96.3	96.2	98.0	98.4			1.89
	Boron	104	102	101	104			0.628
	Cadmium	101	103	104	103			1.04
	Chromium	99.1	97.4	97.4	98.0			0.0312
	Cobalt	96.4	93.8	93.6	91.5			0.120
	Copper	95.2	94.0	94.1	89.0			0.0690
	Lead	93.9	94.2	94.5	93.0			0.344
	Manganese	99.4	97.2	100	99.2			2.49
	Molybdenum	99.6	101	101	103			0.522
	Nickel	96.0	91.7	92.0	89.8			0.306
	Selenium	100	98.4	98.5	97.0			0.112
	Silver	111	110	109	110			1.30
	Thallium	101	105	105	104			0.170
EPA 300.0 Rev. 2.1	Chloride	98.3	98.9	98.1			0.868	
	Sulfate	96.4	97.3	95.8			3.15	
EPA 350.1 Rev. 2.0	Ammonia-N	94.6	98.0	99.8				1.62
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	98.3	97.5				0.478
EPA 353.2 Rev. 2.0	NO2NO3-N	99.5	100	100				0.0
EPA 365.1 Rev. 2.0	Total-P	102	106	104				1.64
EPA 8321B	2,4-D	71.5	88.5	97.5				8.76
	2,4,5-T	70.0	113	109				3.58
	Acesulfame K	101	155	157				0.818
	Acetaminophen	73.7	62.7	64.4				2.78
	Acetamiprid	76.5	29.0	38.9				29.1
	Afidopyropen	46.7	50.0	65.0				26.1
	AMPA	81.6	49.0	51.3				3.01
	Bentazon	146						4.45
	Benzovindiflupyr	63.5	61.7	51.1				18.9
	Carbamazepine	53.7	34.1	37.4				7.87
	Clothianidin	96.0	61.0	57.3				6.20
	Dinotefuran	140	48.1	53.3				10.4
	Diuron	54.7	34.3	32.4				5.87
	Endothall	103	109	103				5.59
	Fenuron	103	41.0	38.6				6.09
	Fluridone	107						27.2
	Glufosinate	98.0	88.1	86.4				1.94
	Glyphosate	114	95.8	121				6.79
	Hydrocodone	92.2	44.5	44.4				0.235

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision LCS	SMP	MS
EPA 8321B	Ibuprofen	60.5	59.5	73.8			21.5
	Imazapyr	96.2	104	97.6			4.61
	Imidacloprid	78.3	80.1	86.8			7.98
	Linuron	92.0	59.5	57.4			3.64
	Mandestrobin	83.7	92.2	80.6			13.4
	MCPP	84.7	115	105			8.32
	Naproxen	54.8	73.0	55.3			27.6
	Primidone	97.6	64.1	64.0			0.0428
	Pyraclostrobin	64.4	62.1	65.7			5.58
	Silvex	81.1	105	107			2.28
	Sucralose	93.2	95.0	102			6.38
	Thiamethoxam	90.8	58.3	55.8			4.32
	Tolfenpyrad	50.5	64.8	54.8			16.7
	Triclopyr	70.2	101	98.5			2.75
SM 2320 B-2011	Total Alkalinity	98.2				3.31	
SM 2540 C-2015	TDS	99.1				5.94	
SM 2540 D-2015	TSS	91.4					
SM 4500-F- C-2011	Fluoride	98.7	98.4	98.9			0.495
SM 5310 B-2011	Organic Carbon	92.8	93.9	96.8			2.42

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2429968
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2429968
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2429975
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2429975
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2429968
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2429968
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2429969
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2429969
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2429969
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2429969
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2429974
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2429968
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2429975
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2429968
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2429968
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2429968
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2429969

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	08/09/2023			08/09/2023 15:34	Alexis Price	2429968
EPA 180.1 Rev. 2.0	08/09/2023			08/09/2023 16:56	Alexis Price	2429968
EPA 200.7 Rev. 4.4	08/09/2023	08/14/2023 14:30	George D Taylor	08/15/2023 18:42	Chase Roberts	2429975
EPA 200.8 Rev. 5.4	08/09/2023	08/14/2023 14:30	George D Taylor	08/15/2023 18:06	Emily M Philpot	2429975
	08/09/2023	08/14/2023 14:30	George D Taylor	08/16/2023 15:43	Emily M Philpot	2429975
EPA 300.0 Rev. 2.1	08/09/2023			08/19/2023 00:17	James L Waggeberby	2429968
EPA 350.1 Rev. 2.0	08/09/2023			08/18/2023 15:36	Khloe J Berg	2429969
EPA 351.2 Rev. 2.0	08/09/2023	08/11/2023 14:29	Simonne.V. Calhoun	08/14/2023 11:21	Samantha L Bates	2429969
EPA 353.2 Rev. 2.0	08/09/2023			08/25/2023 10:03	Beverly Y. Sanders	2429969
EPA 365.1 Rev. 2.0	08/09/2023	08/11/2023 14:24	Alexis Price	08/14/2023 13:20	Simonne.V. Calhoun	2429969
EPA 8321B	08/09/2023	08/10/2023 11:00	Hana Lee	08/10/2023 16:09	Tae K Lee	2429974
	08/09/2023	08/10/2023 11:00	Hana Lee	08/11/2023 23:37	Tae K Lee	2429974
	08/09/2023	08/11/2023 09:00	Hoor Shaik	08/15/2023 10:54	Juyoung Kim	2429974
SM 2320 B-2011	08/09/2023			08/15/2023 03:14	Chandler E Cox	2429968
SM 2340 B-2011	08/09/2023			08/15/2023 18:42	Chase Roberts	2429975
SM 2540 C-2015	08/09/2023			08/11/2023 15:21	Yijie Li	2429968
SM 2540 D-2015	08/09/2023			08/11/2023 15:21	Yijie Li	2429968
SM 4500-F- C-2011	08/09/2023			08/15/2023 18:39	Dale L. Simmons	2429968
SM 5310 B-2011	08/09/2023			08/11/2023 22:45	Elise M. Gillis	2429969