

Chemical Analysis Report

TLH-ROC-2022-05-04-03

Florida Department of Environmental Protection
Central Laboratory
2600 Blair Stone Road
Tallahassee, FL 32399-2400
DOH Accreditation E31780

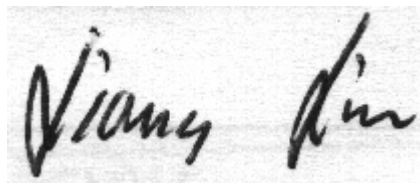
Event Description: **Run 15**
Request ID: **RQ-2022-02-21-76**
Customer: **TLH-ROC**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
2600 Blair Stone Rd
Tallahassee, FL 32399
Attn: Michael Eckles

For additional information please contact
Colin Wright, Ph.D.
Liang-Tsair Lin, Ph.D.
Kerry Tate, Ph.D.
Dr. rer. nat. Bettina Steinbock
Thekkekalathil Chandrasekhar, Ph.D, QA Officer
Phone (850) 245-8085

Certified by: Liang Lin, Environmental Administrator

Date Certified: 26-MAY-2022 10:30

A handwritten signature in black ink, appearing to read "Liang Lin", on a light-colored background.

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: Beaver Creek

Collection Date/Time: 05/04/2022 12:10

Field ID: G1TLHR0165

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324756	DEP SOP: NU-094-1	Color (true)**	65		PCU	P413448	
	EPA 180.1 Rev. 2.0	Turbidity	7.6		NTU	P413437	
	EPA 300.0 Rev. 2.1	Chloride	9.1		mg Cl/L	P413635	
		Sulfate	1.9		mg SO4/L	P413637	
	SM 2320 B-2011	Total Alkalinity	17		mg CaCO3/L	P413845	
	SM 2540 C-2011	TDS	57		mg/L	P413945	
	SM 2540 D-2011	TSS	8	I	mg/L	P413947	
	SM 4500-F- C-2011	Fluoride	0.060	I	mg F/L	P413847	
2324757	EPA 350.1 Rev. 2.0	Ammonia-N	0.012		mg N/L	P413703	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31		mg N/L	P413874	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.29		mg N/L	P413633	
	EPA 365.1 Rev. 2.0	Total-P	0.063		mg P/L	P413894	
	SM 5310 B-2011	Organic Carbon	5.2		mg C/L	P413752	
2324758	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.030		mg P/L	P413429	
2324762	EPA 8321B	2,4-D	0.0036	I	ug/L	P413414	
		Acesulfame K	0.10	U	ug/L	P413320	
		2,4,5-T	0.0040	U	ug/L	P413414	
		AMPA	0.10	U	ug/L	P413320	
		Acetaminophen	0.0080	U	ug/L	P413414	
		Acetamiprid	0.0020	U	ug/L	P413414	
		Endothall	0.25	U	ug/L	P413320	
		Glufosinate	0.10	U	ug/L	P413320	
		Glyphosate	0.10	U	ug/L	P413320	
		Afidopyropen	0.0020	U	ug/L	P413414	
		Bentazon	8.0E-04	U	ug/L	P413414	
		Sucralose	0.29		ug/L	P413320	
		Benzovindiflupyr	0.0020	U	ug/L	P413414	
		Carbamazepine	8.0E-04	U	ug/L	P413414	
		Clothianidin	0.0020	U	ug/L	P413414	
		Dinotefuran	0.0020	U	ug/L	P413414	
		Diuron	0.0020	U	ug/L	P413414	
		Fenuron	0.032	U	ug/L	P413414	
		Fluridone	0.0014	I	ug/L	P413414	
		Imazapyr	0.0040	U	ug/L	P413414	
		Hydrocodone	0.0020	U	ug/L	P413414	
		Ibuprofen	0.020	U	ug/L	P413414	
		Imidacloprid	0.0020	U	ug/L	P413414	
		Linuron	0.0040	U	ug/L	P413414	
		Mandestrobin	0.0020	U	ug/L	P413414	
		MCP	0.0040	U	ug/L	P413414	
		Naproxen	0.0080	U	ug/L	P413414	
		Primidone	0.0040	U	ug/L	P413414	
		Pyraclostrobin	0.0020	U	ug/L	P413414	

Field ID: G1TLHR0165

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2324762	EPA 8321B	Silvex	0.0040	U	ug/L	P413414	
		Thiamethoxam	0.0020	U	ug/L	P413414	
		Tolfenpyrad	0.0020	U	ug/L	P413414	
		Triclopyr	0.0040	U	ug/L	P413414	
2324763	EPA 200.7 Rev. 4.4	Calcium	7.30		mg/L	P413453	
		Iron	700		ug/L	P413453	
		Magnesium	2.03		mg/L	P413453	
		Potassium	0.49	I	mg/L	P413453	
		Sodium	5.4		mg/L	P413453	
		Strontium	19.5		ug/L	P413453	
		Tin	3.0	U	ug/L	P413453	
		Titanium	10.6		ug/L	P413453	
		Vanadium	2.0	U	ug/L	P413453	
		Zinc	5.0	U	ug/L	P413453	
	EPA 200.8 Rev. 5.4	Aluminum	217		ug/L	P413453	
		Antimony	0.050	U	ug/L	P413453	
		Arsenic	0.79		ug/L	P413453	
		Barium	14.4		ug/L	P413453	
		Beryllium	0.020	I	ug/L	P413453	
		Boron**	12.6		ug/L	P413453	
		Cadmium	0.020	U	ug/L	P413453	
		Chromium	0.56	I	ug/L	P413453	
		Cobalt	0.063	I	ug/L	P413453	
		Copper	0.40	U	ug/L	P413453	
		Lead	0.22	I	ug/L	P413453	
		Manganese	10.8		ug/L	P413453	
		Molybdenum	0.15	U	ug/L	P413453	
		Nickel	0.50	U	ug/L	P413453	
		Selenium	0.20	U	ug/L	P413453	
		Silver	0.010	U	ug/L	P413453	
		Thallium	0.10	U	ug/L	P413453	
	SM 2340 B-2011	Hardness	26.6		mg/L	P413453	

Ref. Method and Comment:

SM 2540 D-2011: 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: P413448

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413437

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413453

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: P413453

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: P413635

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: P413637

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413703

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413874

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413894

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413429

Component	Result	Code	Units
O-Phosphate-P	0.004	U	mg P/L

Reference Method: EPA 8321B
Batch ID: P413320

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: P413414

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P413414

Component	Result	Code	Units
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	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	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	0.0040	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: P413845

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

Reference Method: SM 2540 C-2011

Batch ID: P413945

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P413947

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P413847

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P413752

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: P413448

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	85 - 115

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413437

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	95.3		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413453

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	104		P	85 - 115
Magnesium	104		P	85 - 115
Potassium	102		P	85 - 115
Sodium	102		P	85 - 115
Strontium	103		P	85 - 115
Tin	104		P	85 - 115
Titanium	104		P	85 - 115
Vanadium	98.6		P	85 - 115
Zinc	107		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413453

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	104		P	80 - 120
Antimony	101		P	80 - 120
Arsenic	99.4		P	80 - 120
Barium	105		P	80 - 120
Beryllium	101		P	80 - 120
Boron	105		P	80 - 120
Cadmium	99.9		P	80 - 120
Chromium	99.8		P	80 - 120
Cobalt	98.6		P	80 - 120
Copper	98.0		P	80 - 120
Lead	102		P	80 - 120
Manganese	99.8		P	80 - 120
Molybdenum	99.1		P	80 - 120
Nickel	99.2		P	80 - 120
Selenium	101		P	80 - 120
Silver	96.6		P	80 - 120
Thallium	102		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413635

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.7		P	90 - 110

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413637

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413703

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413874

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	99.0		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413894

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413429

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.7		P	90 - 110

Reference Method: EPA 8321B
Batch ID: P413320

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	112		P	40 - 150
AMPA	90.6		P	40 - 150
Endothall	102		P	40 - 150
Glufosinate	93.5		P	40 - 150
Glyphosate	92.3		P	40 - 150
Sucralose	100		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P413414

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	92.4		P	40 - 150
2,4,5-T	90.3		P	40 - 150
Acetaminophen	82.1		P	30 - 150
Acetamiprid	77.2		P	40 - 150
Afidopyropen	68.5		P	30 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P413414

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	106		P	30 - 150
Benzovindiflupyr	82.5		P	40 - 150
Carbamazepine	79.2		P	40 - 150
Clothianidin	111		P	40 - 150
Dinotefuran	115		P	40 - 150
Diuron	89.4		P	40 - 150
Fenuron	112		P	40 - 150
Fluridone	81.2		P	40 - 150
Hydrocodone	99.8		P	40 - 150
Ibuprofen	78.3		P	40 - 150
Imazapyr	111		P	40 - 150
Imidacloprid	96.8		P	40 - 150
Linuron	73.6		P	40 - 150
Mandestrobin	79.2		P	40 - 150
MCPP	135		P	40 - 150
Naproxen	61.1		P	40 - 150
Primidone	108		P	40 - 150
Pyraclostrobin	73.5		P	40 - 150
Silvex	105		P	40 - 150
Thiamethoxam	100		P	40 - 150
Tolfenpyrad	57.2		P	30 - 150
Triclopyr	94.9		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P413845

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	97.9		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P413847

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.9		P	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P413752

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	94.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P413453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324875	Calcium	107		P	80 - 120
2324875	Iron	112	110	P/P	80 - 120
2324875	Magnesium	113	110	P/P	80 - 120
2324875	Potassium	107	107	P/P	80 - 120
2324875	Sodium	110	108	P/P	80 - 120
2324875	Strontium	109	107	P/P	80 - 120
2324875	Tin	113	108	P/P	80 - 120
2324875	Titanium	111	108	P/P	80 - 120
2324875	Vanadium	107	103	P/P	80 - 120
2324875	Zinc	104	99.5	P/P	80 - 120
2324891	Calcium	111		P	80 - 120
2324891	Iron	111		P	80 - 120
2324891	Magnesium	112		P	80 - 120
2324891	Potassium	110		P	80 - 120
2324891	Sodium	112		P	80 - 120
2324891	Strontium	109		P	80 - 120
2324891	Tin	110		P	80 - 120
2324891	Titanium	110		P	80 - 120
2324891	Vanadium	103		P	80 - 120
2324891	Zinc	110		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P413453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324875	Aluminum	94.7	113	P/P	80 - 120
2324875	Antimony	99.6	101	P/P	80 - 120
2324875	Arsenic	96.1	99.0	P/P	80 - 120
2324875	Barium	103	109	P/P	80 - 120
2324875	Beryllium	94.6	96.4	P/P	80 - 120
2324875	Boron	102	108	P/P	80 - 120
2324875	Cadmium	98.8	102	P/P	80 - 120
2324875	Chromium	102	106	P/P	80 - 120
2324875	Cobalt	95.9	99.3	P/P	80 - 120
2324875	Copper	96.3	98.8	P/P	80 - 120
2324875	Lead	99.5	105	P/P	80 - 120
2324875	Manganese	101	110	P/P	80 - 120
2324875	Molybdenum	98.8	102	P/P	80 - 120
2324875	Nickel	97.4	100	P/P	80 - 120
2324875	Selenium	96.2	97.8	P/P	80 - 120
2324875	Silver	96.6	99.1	P/P	80 - 120
2324875	Thallium	99.6	106	P/P	80 - 120
2324891	Aluminum	99.7		P	80 - 120
2324891	Antimony	98.8		P	80 - 120
2324891	Arsenic	98.0		P	80 - 120
2324891	Barium	103		P	80 - 120
2324891	Beryllium	97.6		P	80 - 120
2324891	Boron	99.2		P	80 - 120
2324891	Cadmium	96.7		P	80 - 120
2324891	Chromium	98.4		P	80 - 120
2324891	Cobalt	96.1		P	80 - 120
2324891	Copper	96.4		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413453

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324891	Lead	101		P	80 - 120
2324891	Manganese	97.9		P	80 - 120
2324891	Molybdenum	97.6		P	80 - 120
2324891	Nickel	94.9		P	80 - 120
2324891	Selenium	97.1		P	80 - 120
2324891	Silver	95.0		P	80 - 120
2324891	Thallium	100		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413635

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324263	Chloride	97.1		P	90 - 110
2324445	Chloride	95.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413637

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324263	Sulfate	98.4		P	90 - 110
2324445	Sulfate	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413703

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324926	Ammonia-N	97.6	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413874

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324757	Kjeldahl Nitrogen	101	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324757	NO2NO3-N	97.5		P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413894

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324661	Total-P	102	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413429

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324749	O-Phosphate-P	97.2	98.2	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P413320

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2323843	Acesulfame K	90.5	90.4	P/P	40 - 150
2323843	AMPA	67.5	65.9	P/P	40 - 150
2323843	Endothall	89.8	91.7	P/P	40 - 150
2323843	Glufosinate	71.3	76.7	P/P	40 - 150
2323843	Glyphosate	61.3	69.4	P/P	40 - 150
2323843	Sucralose	86.2	92.9	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P413414

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324068	2,4-D	84.2	96.0	P/P	40 - 150
2324068	2,4,5-T	68.8	91.7	P/P	40 - 150
2324068	Acetaminophen	102	103	P/P	30 - 150
2324068	Acetamiprid	62.2	71.7	P/P	40 - 150
2324068	Afidopyropen	60.6	68.9	P/P	30 - 150
2324068	Bentazon	109	126	P/P	30 - 150
2324068	Benzovindiflupyr	79.4	78.6	P/P	40 - 150
2324068	Carbamazepine	82.3	86.6	P/P	40 - 150
2324068	Clothianidin	105	112	P/P	40 - 150
2324068	Dinotefuran	115	121	P/P	40 - 150
2324068	Diuron	79.9	85.8	P/P	40 - 150
2324068	Fenuron	106	101	P/P	40 - 150
2324068	Fluridone	73.7	82.0	P/P	40 - 150
2324068	Hydrocodone	96.3	99.3	P/P	40 - 150
2324068	Ibuprofen	63.8	62.5	P/P	40 - 150
2324068	Imazapyr	128	132	P/P	40 - 150
2324068	Imidacloprid	92.5	102	P/P	40 - 150
2324068	Linuron	64.9	77.2	P/P	40 - 150
2324068	Mandestrobin	72.4	77.1	P/P	40 - 150
2324068	MCPP	121	145	P/P	40 - 150
2324068	Naproxen	53.8	70.7	P/P	40 - 150
2324068	Primidone	105	119	P/P	40 - 150
2324068	Pyraclostrobin	74.1	70.8	P/P	40 - 150
2324068	Silvex	83.0	92.9	P/P	40 - 150
2324068	Thiamethoxam	91.1	96.8	P/P	40 - 150
2324068	Tolfenpyrad	60.8	55.8	P/P	30 - 150
2324068	Triclopyr	79.9	96.2	P/P	40 - 150

Reference Method: SM 4500-F- C-2011

Batch ID: P413847

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324917	Fluoride	98.0	97.4	P/P	94 - 104

Reference Method: SM 5310 B-2011

Batch ID: P413752

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2324264	Organic Carbon	95.1	95.5	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P413448

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324849	Color (true)	3.81	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P413437

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324870	Turbidity	5.21	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P413453

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324875	Calcium	1.52	Spike	P	0 - 20
2324875	Iron	1.45	Spike	P	0 - 20
2324875	Magnesium	1.53	Spike	P	0 - 20
2324875	Potassium	0.279	Spike	P	0 - 20
2324875	Sodium	0.874	Spike	P	0 - 20
2324875	Strontium	1.89	Spike	P	0 - 20
2324875	Tin	4.64	Spike	P	0 - 20
2324875	Titanium	2.74	Spike	P	0 - 20
2324875	Vanadium	3.09	Spike	P	0 - 20
2324875	Zinc	4.69	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P413453

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324875	Aluminum	15.8	Spike	P	0 - 20
2324875	Antimony	1.38	Spike	P	0 - 20
2324875	Arsenic	2.92	Spike	P	0 - 20
2324875	Barium	4.64	Spike	P	0 - 20
2324875	Beryllium	1.73	Spike	P	0 - 20
2324875	Boron	4.75	Spike	P	0 - 20
2324875	Cadmium	2.78	Spike	P	0 - 20
2324875	Chromium	3.96	Spike	P	0 - 20
2324875	Cobalt	3.42	Spike	P	0 - 20
2324875	Copper	2.55	Spike	P	0 - 20
2324875	Lead	5.29	Spike	P	0 - 20
2324875	Manganese	3.68	Spike	P	0 - 20
2324875	Molybdenum	3.21	Spike	P	0 - 20
2324875	Nickel	3.03	Spike	P	0 - 20
2324875	Selenium	1.64	Spike	P	0 - 20
2324875	Silver	2.60	Spike	P	0 - 20
2324875	Thallium	6.13	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324263	Chloride	0.116	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P413637

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324263	Sulfate	0.0768	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P413703

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324926	Ammonia-N	0.588	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P413874

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324757	Kjeldahl Nitrogen	2.58	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P413633

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324757	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P413894

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324661	Total-P	0.732	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P413429

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324749	O-Phosphate-P	0.762	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P413320

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323843	Acesulfame K	0.121	Spike	P	0 - 30
2323843	AMPA	1.75	Spike	P	0 - 30

Quality Assurance Report

Precision

Reference Method: EPA 8321B

Batch ID: P413320

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2323843	Endothall	2.12	Spike	P	0 - 30
2323843	Glufosinate	7.35	Spike	P	0 - 30
2323843	Glyphosate	6.14	Spike	P	0 - 30
2323843	Sucralose	3.19	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P413414

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324068	2,4-D	13.0	Spike	P	0 - 30
2324068	2,4,5-T	28.6	Spike	P	0 - 30
2324068	Acetaminophen	1.40	Spike	P	0 - 30
2324068	Acetamiprid	14.2	Spike	P	0 - 30
2324068	Afidopyropen	12.9	Spike	P	0 - 30
2324068	Bentazon	14.7	Spike	P	0 - 30
2324068	Benzovindiflupyr	0.962	Spike	P	0 - 30
2324068	Carbamazepine	5.08	Spike	P	0 - 30
2324068	Clothianidin	6.83	Spike	P	0 - 30
2324068	Dinotefuran	4.96	Spike	P	0 - 30
2324068	Diuron	7.12	Spike	P	0 - 30
2324068	Fenuron	4.80	Spike	P	0 - 30
2324068	Fluridone	10.6	Spike	P	0 - 30
2324068	Hydrocodone	3.10	Spike	P	0 - 30
2324068	Ibuprofen	2.02	Spike	P	0 - 30
2324068	Imazapyr	3.26	Spike	P	0 - 30
2324068	Imidacloprid	10.2	Spike	P	0 - 30
2324068	Linuron	17.2	Spike	P	0 - 30
2324068	Mandestrobin	6.28	Spike	P	0 - 30
2324068	MCPP	18.2	Spike	P	0 - 30
2324068	Naproxen	27.1	Spike	P	0 - 30
2324068	Primidone	12.2	Spike	P	0 - 30
2324068	Pyraclostrobin	4.52	Spike	P	0 - 30
2324068	Silvex	11.2	Spike	P	0 - 30
2324068	Thiamethoxam	6.03	Spike	P	0 - 30
2324068	Tolfenpyrad	8.45	Spike	P	0 - 30
2324068	Triclopyr	18.6	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P413845

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324917	Total Alkalinity	0.764	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011

Batch ID: P413945

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324923	TDS	2.67	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P413847

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324917	Fluoride	0.480	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P413752

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2324264	Organic Carbon	0.311	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2324762

Field Sample ID: G1TLHR0165

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.1	P	30 - 160
EPA 8321B	Acetaminophen-d4	140	P	30 - 160
EPA 8321B	Carbamazepine-d10	51.1	P	30 - 160
EPA 8321B	Diuron-d6	43.5	P	30 - 160
EPA 8321B	Endothall-d6	99.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	79.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.3	P	30 - 160
EPA 8321B	Primidone-d5	93.0	P	30 - 160
EPA 8321B	Sucralose-d6	104	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A111942

Included Lab Sample IDs: 2324758

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	99.7	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A111945

Included Lab Sample IDs: 2324756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.0	P/P	95 - 105

Reference Method: DEP SOP: NU-094-1

Run ID: A111950

Included Lab Sample IDs: 2324756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.3	101	P/P	85 - 115

Reference Method: EPA 8321B

Run ID: A111975

Included Lab Sample IDs: 2324762

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	109	112	P/P	60 - 160
Sucralose	98.3	99.7	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A111978

Included Lab Sample IDs: 2324762

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	88.0	92.2	P/P	60 - 160
Endothall	96.3	94.8	P/P	60 - 160
Glufosinate	95.2	91.7	P/P	60 - 160
Glyphosate	95.3	93.6	P/P	60 - 160

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A111983

Included Lab Sample IDs: 2324763

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	99.7	103	P/P	90 - 110
Iron	99.4	103	P/P	90 - 110
Magnesium	99.6	103	P/P	90 - 110
Potassium	98.6	102	P/P	90 - 110
Sodium	98.1	101	P/P	90 - 110
Strontium	107	108	P/P	90 - 110
Tin	107	105	P/P	90 - 110
Titanium	108	105	P/P	90 - 110
Vanadium	109	105	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A112012

Included Lab Sample IDs: 2324763

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Zinc	102	99.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A112014

Included Lab Sample IDs: 2324763

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	99.1	98.0	P/P	90 - 110
Antimony	97.8	98.4	P/P	90 - 110
Arsenic	94.1	96.5	P/P	90 - 110
Barium	99.0	98.5	P/P	90 - 110
Beryllium	96.6	97.4	P/P	90 - 110
Boron	97.4	94.3	P/P	90 - 110
Cadmium	96.9	97.3	P/P	90 - 110
Chromium	96.7	97.4	P/P	90 - 110
Cobalt	94.6	94.9	P/P	90 - 110
Copper	95.3	95.1	P/P	90 - 110
Lead	97.3	97.3	P/P	90 - 110
Manganese	96.0	97.2	P/P	90 - 110
Molybdenum	95.6	96.0	P/P	90 - 110
Nickel	94.9	95.7	P/P	90 - 110
Selenium	96.0	96.5	P/P	90 - 110
Silver	97.1	97.4	P/P	90 - 110
Thallium	95.0	95.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A112023

Included Lab Sample IDs: 2324757

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A112033

Included Lab Sample IDs: 2324756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.4	96.4	P/P	90 - 110
Sulfate	100	100	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A112066

Included Lab Sample IDs: 2324757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	97.6	97.0	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-2011

Run ID: A112089

Included Lab Sample IDs: 2324757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	97.9	97.9	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A112154

Included Lab Sample IDs: 2324756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	96.3	96.7	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A112154

Included Lab Sample IDs: 2324756

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	100	99.5	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A112172

Included Lab Sample IDs: 2324762

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	113	118	P/P	50 - 150
2,4,5-T	122	125	P/P	50 - 150
Acetaminophen	128	129	P/P	60 - 160
Acetamiprid	123	121	P/P	50 - 150
Afidopyropen	106	105	P/P	50 - 150
Bentazon	135	118	P/P	50 - 160
Benzovindiflupyr	125	121	P/P	50 - 150
Carbamazepine	121	126	P/P	60 - 150
Clothianidin	133	130	P/P	60 - 150
Dinotefuran	119	119	P/P	50 - 150
Diuron	127	130	P/P	60 - 160
Fenuron	114	121	P/P	60 - 150
Fluridone	111	111	P/P	60 - 160
Hydrocodone	117	120	P/P	60 - 150
Ibuprofen	97.2	94.9	P/P	50 - 160
Imazapyr	120	132	P/P	50 - 150
Imidacloprid	142	140	P/P	60 - 150
Linuron	111	121	P/P	60 - 150
Mandestrobin	110	109	P/P	50 - 150
MCPP	124	127	P/P	50 - 150
Naproxen	108	95.2	P/P	50 - 160
Primidone	122	122	P/P	60 - 150
Pyraclostrobin	110	105	P/P	60 - 150
Silvex	139	139	P/P	50 - 150
Thiamethoxam	128	136	P/P	50 - 150
Tolfenpyrad	133	124	P/P	60 - 150
Triclopyr	117	145	P/P	50 - 150

Quality Assurance Report

Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A112260

Included Lab Sample IDs: 2324757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	103	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A112278

Included Lab Sample IDs: 2324757

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	97.8	99.3	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)	101				3.81	
EPA 180.1 Rev. 2.0	Turbidity	95.3				5.21	
EPA 200.7 Rev. 4.4	Calcium	107	107	111			1.52
	Iron	104	112	110	111		1.45
	Magnesium	104	113	110	112		1.53
	Potassium	102	107	107	110		0.279
	Sodium	102	110	108	112		0.874
	Strontium	103	109	107	109		1.89
	Tin	104	113	108	110		4.64
	Titanium	104	111	108	110		2.74
	Vanadium	98.6	107	103	103		3.09
	Zinc	107	104	99.5	110		4.69
EPA 200.8 Rev. 5.4	Aluminum	104	94.7	113	99.7		15.8
	Antimony	101	99.6	101	98.8		1.38
	Arsenic	99.4	96.1	99.0	98.0		2.92
	Barium	105	103	109	103		4.64
	Beryllium	101	94.6	96.4	97.6		1.73
	Boron	105	102	108	99.2		4.75
	Cadmium	99.9	98.8	102	96.7		2.78
	Chromium	99.8	102	106	98.4		3.96
	Cobalt	98.6	95.9	99.3	96.1		3.42
	Copper	98.0	96.3	98.8	96.4		2.55
	Lead	102	99.5	105	101		5.29
	Manganese	99.8	101	110	97.9		3.68
	Molybdenum	99.1	98.8	102	97.6		3.21
	Nickel	99.2	97.4	100	94.9		3.03
	Selenium	101	96.2	97.8	97.1		1.64
	Silver	96.6	96.6	99.1	95.0		2.60
	Thallium	102	99.6	106	100		6.13
EPA 300.0 Rev. 2.1	Chloride	98.7	97.1	95.0		0.116	
	Sulfate	102	98.4	99.1		0.0768	
EPA 350.1 Rev. 2.0	Ammonia-N	96.4	97.6	98.2			0.588
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	105	101	104			2.58
EPA 353.2 Rev. 2.0	NO2NO3-N	99.0	97.5				0.0
EPA 365.1 Rev. 2.0	Total-P	102	102	103			0.732
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.7	97.2	98.2			0.762
EPA 8321B	2,4-D	92.4	84.2	96.0			13.0
	2,4,5-T	90.3	68.8	91.7			28.6
	Acesulfame K	112	90.5	90.4			0.121
	Acetaminophen	82.1	102	103			1.40
	Acetamiprid	77.2	62.2	71.7			14.2
	Afidopyropen	68.5	60.6	68.9			12.9
	AMPA	90.6	67.5	65.9			1.75
	Bentazon	106	109	126			14.7
	Benzovindiflupyr	82.5	79.4	78.6			0.962
	Carbamazepine	79.2	82.3	86.6			5.08
	Clothianidin	111	105	112			6.83
	Dinotefuran	115	115	121			4.96
	Diuron	89.4	79.9	85.8			7.12
	Endothall	102	89.8	91.7			2.12
	Fenuron	112	106	101			4.80
	Fluridone	81.2	73.7	82.0			10.6
	Glufosinate	93.5	71.3	76.7			7.35
	Glyphosate	92.3	61.3	69.4			6.14

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Hydrocodone	99.8	96.3	99.3		3.10
	Ibuprofen	78.3	62.5	63.8		2.02
	Imazapyr	111	128	132		3.26
	Imidacloprid	96.8	92.5	102		10.2
	Linuron	73.6	64.9	77.2		17.2
	Mandestrobin	79.2	72.4	77.1		6.28
	MCCP	135	121	145		18.2
	Naproxen	61.1	53.8	70.7		27.1
	Primidone	108	105	119		12.2
	Pyraclostrobin	73.5	74.1	70.8		4.52
	Silvex	105	83.0	92.9		11.2
	Sucralose	100	86.2	92.9		3.19
	Thiamethoxam	100	91.1	96.8		6.03
	Tolfenpyrad	57.2	60.8	55.8		8.45
	Triclopyr	94.9	79.9	96.2		18.6
SM 2320 B-2011	Total Alkalinity	97.9			0.764	
SM 2540 C-2011	TDS				2.67	
SM 4500-F- C-2011	Fluoride	97.9	98.0	97.4		0.480
SM 5310 B-2011	Organic Carbon	94.8	95.1	95.5		0.311

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2324756
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2324756
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2324763
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2324763
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2324756
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2324756
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2324757
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2324757
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2324757
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2324757
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2324758
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2324762
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2324756
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2324763
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2324756
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2324756
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2324756
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2324757

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	05/04/2022			05/05/2022 11:49	Blanca Fach	2324756
EPA 180.1 Rev. 2.0	05/04/2022			05/05/2022 10:49	Anna M. Plaviak	2324756
EPA 200.7 Rev. 4.4	05/04/2022	05/06/2022 10:30	Megan Whitefoot	05/06/2022 23:01	McKinley C Carter	2324763
	05/04/2022	05/06/2022 10:30	Megan Whitefoot	05/09/2022 22:03	McKinley C Carter	2324763
EPA 200.8 Rev. 5.4	05/04/2022	05/06/2022 10:30	Megan Whitefoot	05/09/2022 18:09	Alexander Thompson	2324763
EPA 300.0 Rev. 2.1	05/04/2022			05/10/2022 08:56	Anna M. Plaviak	2324756
EPA 350.1 Rev. 2.0	05/04/2022			05/11/2022 10:52	Ping Hua	2324757
EPA 351.2 Rev. 2.0	05/04/2022	05/18/2022 12:24	Samantha L Bates	05/19/2022 16:40	Samantha L Bates	2324757
EPA 353.2 Rev. 2.0	05/04/2022			05/10/2022 11:33	Beverly Y. Sanders	2324757
EPA 365.1 Rev. 2.0	05/04/2022	05/17/2022 14:42	Simonne.V. Calhoun	05/18/2022 19:08	Sarah A Nixon	2324757
EPA 365.1 Rev. 2.0 dissolved	05/04/2022			05/05/2022 15:42	Nathaniel J Jones	2324758
EPA 8321B	05/04/2022	05/05/2022 13:00	Umesh Chiluwal	05/05/2022 23:04	Umesh Chiluwal	2324762
	05/04/2022	05/05/2022 13:00	Umesh Chiluwal	05/06/2022 13:16	Umesh Chiluwal	2324762
	05/04/2022	05/06/2022 10:30	June Rhew	05/09/2022 21:18	Juyoung Kim	2324762
SM 2320 B-2011	05/04/2022			05/12/2022 20:01	Dale L. Simmons	2324756
SM 2340 B-2011	05/04/2022			05/06/2022 23:01	McKinley C Carter	2324763
SM 2540 C-2011	05/04/2022			05/09/2022 15:28	Yijie Li	2324756
SM 2540 D-2011	05/04/2022			05/09/2022 13:28	Yijie Li	2324756
SM 4500-F- C-2011	05/04/2022			05/12/2022 20:01	Dale L. Simmons	2324756
SM 5310 B-2011	05/04/2022			05/12/2022 03:44	Judith K. Clark	2324757