

Chemical Analysis Report

NE-DIST-2022-09-02-01

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

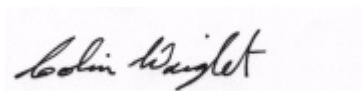
Event Description: **Black creek and makeup**
Request ID: **RQ-2022-08-29-40**
Customer: **NE-DIST**
Project ID: **SMP**

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

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Certified by: Colin Wright, Program Administrator

Date Certified: 21-SEP-2022 08:50

A handwritten signature in black ink, appearing to read "Colin Wright", is displayed on a light pink rectangular 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: PETERS CREEK @ ROSEMARY HILL RD

Collection Date/Time: 09/01/2022 09:25

Field ID: 20030571

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2354061	EPA 8321B	2,4-D	0.0020	U	ug/L	P419218	
		Acesulfame K	0.10	U	ug/L	P418988	
		2,4,5-T	0.0040	U	ug/L	P419218	
		AMPA	0.10	U	ug/L	P418988	
		Acetaminophen	0.0080	U	ug/L	P419218	
		Acetamiprid	0.0020	U	ug/L	P419218	
		Endothall	0.25	U	ug/L	P418988	
		Glufosinate	0.10	U	ug/L	P418988	
		Glyphosate	0.10	U	ug/L	P418988	
		Afidopyropen	0.0046	I	ug/L	P419218	
		Bentazon	8.0E-04	U	ug/L	P419218	
		Sucralose	0.57		ug/L	P418988	
		Benzovindiflupyr	0.0020	U	ug/L	P419218	
		Carbamazepine	8.0E-04	U	ug/L	P419218	
		Clothianidin	0.0020	U	ug/L	P419218	
		Dinotefuran	0.0020	U	ug/L	P419218	
		Diuron	0.0020	U	ug/L	P419218	
		Fenuron	0.032	U	ug/L	P419218	
		Fluridone	8.0E-04	U	ug/L	P419218	
		Imazapyr	0.87		ug/L	P419218	
		Hydrocodone	0.0020	U	ug/L	P419218	
		Ibuprofen	0.38		ug/L	P419218	
		Imidacloprid	0.0020	U	ug/L	P419218	
		Linuron	0.0040	U	ug/L	P419218	
		Mandestrobin	0.0020	U	ug/L	P419218	
		MCPP	0.0040	U	ug/L	P419218	
		Naproxen	0.0080	U	ug/L	P419218	
		Primidone	0.0040	U	ug/L	P419218	
		Pyraclostrobin	0.0020	U	ug/L	P419218	
		Silvex	0.0040	U	ug/L	P419218	
		Thiamethoxam	0.0020	U	ug/L	P419218	
		Tolfenpyrad	0.0020	U	ug/L	P419218	
		Triclopyr	0.0040	U	ug/L	P419218	

Ref. Method and Comment:

EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: Black CR South Fork @ CR218

Collection Date/Time: 09/01/2022 11:05

Field ID: 20030244

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2354054	DEP SOP: NU-094-1	Color (true)	330		PCU	P419198	
	EPA 180.1 Rev. 2.0	Turbidity	4.7		NTU	P419082	
	EPA 300.0 Rev. 2.1	Chloride	10		mg Cl/L	P419739	
		Sulfate	2.9		mg SO4/L	P419742	
	SM 2320 B-2011	Total Alkalinity	2.9		mg CaCO3/L	P419601	
	SM 2540 C-2011	TDS	110		mg/L	P419416	
	SM 2540 D-2011	TSS	2	I	mg/L	P419315	
2354055	SM 4500-F- C-2011	Fluoride	0.062	I	mg F/L	P419604	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.011		mg N/L	P419207	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P419172	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P419365	
	EPA 365.1 Rev. 2.0	Total-P	0.11		mg P/L	P419343	
2354062	SM 5310 B-2011	Organic Carbon	33		mg C/L	P419352	
	EPA 200.7 Rev. 4.4	Calcium	5.95		mg/L	P419409	
		Iron	1.11E+03		ug/L	P419409	
		Magnesium	1.28		mg/L	P419409	
		Potassium	0.31	I	mg/L	P419409	
		Sodium	6.3		mg/L	P419409	
		Strontium	21.7		ug/L	P419409	
		Tin	3.0	U	ug/L	P419409	
		Titanium	3.0	I	ug/L	P419409	
		Vanadium	2.0	U	ug/L	P419409	
		Zinc	5.0	U	ug/L	P419409	
	EPA 200.8 Rev. 5.4	Aluminum	729		ug/L	P419671	
		Antimony	0.057	I	ug/L	P419409	
		Arsenic	0.62		ug/L	P419409	
		Barium	11.9		ug/L	P419409	
		Beryllium	0.066		ug/L	P419409	
		Boron	17.9		ug/L	P419409	
		Cadmium	0.033	I	ug/L	P419409	
		Chromium	1.0	I	ug/L	P419409	
		Cobalt	0.268		ug/L	P419409	
		Copper	0.51	I	ug/L	P419409	
		Lead	0.52		ug/L	P419409	
		Manganese	8.49		ug/L	P419409	
		Molybdenum	0.15	U	ug/L	P419409	
		Nickel	0.83	I	ug/L	P419409	
		Selenium	0.20	U	ug/L	P419409	
		Silver	0.010	U	ug/L	P419409	
		Thallium	0.10	U	ug/L	P419409	
	SM 2340 B-2011	Hardness	20.1		mg/L	P419409	

Field ID: 20030244

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
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Ref. Method and Comment:
SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
SM 4500-F- C-2011: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 351.2 Rev. 2.0: Batch matrix spike recoveries are unavailable because of high analyte concentration in the QC sample.
EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 09/15/2022.

Quality Assurance Report Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P419198

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419082

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419409

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: P419409

Component	Result	Code	Units
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 200.8 Rev. 5.4
Batch ID: P419671

Component	Result	Code	Units
Aluminum	5.0	U	ug/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419739

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419742

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419207

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419172

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419365

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419343

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

Reference Method: EPA 8321B
Batch ID: P418988

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: P419218

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: P419218

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	0.080	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	0.0040	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: P419601

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

Reference Method: SM 2540 C-2011

Batch ID: P419416

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011

Batch ID: P419315

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011

Batch ID: P419604

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011

Batch ID: P419352

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: P419198

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	101		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419082

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Turbidity	97.0		P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419409

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	103		P	85 - 115
Iron	106		P	85 - 115
Magnesium	106		P	85 - 115
Potassium	106		P	85 - 115
Sodium	105		P	85 - 115
Strontium	103		P	85 - 115
Tin	107		P	85 - 115
Titanium	103		P	85 - 115
Vanadium	102		P	85 - 115
Zinc	102		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419409

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Antimony	102		P	85 - 115
Arsenic	102		P	85 - 115
Barium	105		P	85 - 115
Beryllium	100		P	85 - 115
Boron	101		P	85 - 115
Cadmium	98.8		P	85 - 115
Chromium	100		P	85 - 115
Cobalt	96.5		P	85 - 115
Copper	99.4		P	85 - 115
Lead	91.8		P	85 - 115
Manganese	98.9		P	85 - 115
Molybdenum	97.6		P	85 - 115
Nickel	101		P	85 - 115
Selenium	102		P	85 - 115
Silver	88.3		P	85 - 115
Thallium	97.4		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419671

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	99.1		P	85 - 115

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419739

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Chloride	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419742

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419207

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.2		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419172

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419365

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419343

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

Reference Method: EPA 8321B
Batch ID: P418988

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	112		P	40 - 150
AMPA	103		P	40 - 150
Endothall	99.2		P	40 - 150
Glufosinate	85.2		P	40 - 150
Glyphosate	112		P	40 - 150
Sucralose	102		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P419218

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	110		P	40 - 150
2,4,5-T	120		P	40 - 150
Acetaminophen	86.5		P	30 - 150
Acetamiprid	79.0		P	40 - 150
Afidopyropen	39.1		P	30 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P419218

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bentazon	102		P	30 - 150
Benzovindiflupyr	93.5		P	40 - 150
Carbamazepine	108		P	40 - 150
Clothianidin	113		P	40 - 150
Dinotefuran	78.8		P	40 - 150
Diuron	110		P	40 - 150
Fenuron	96.9		P	40 - 150
Fluridone	103		P	40 - 150
Hydrocodone	98.5		P	40 - 150
Ibuprofen	102		P	40 - 150
Imazapyr	96.7		P	40 - 150
Imidacloprid	93.4		P	40 - 150
Linuron	111		P	40 - 150
Mandestrobin	101		P	40 - 150
MCPP	111		P	40 - 150
Naproxen	118		P	40 - 150
Primidone	97.3		P	40 - 150
Pyraclostrobin	93.7		P	40 - 150
Silvex	109		P	40 - 150
Thiamethoxam	106		P	40 - 150
Tolfenpyrad	60.2		P	30 - 150
Triclopyr	96.3		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P419601

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	94 - 106

Reference Method: SM 4500-F- C-2011

Batch ID: P419604

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.3		P	96 - 104

Reference Method: SM 5310 B-2011

Batch ID: P419352

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P419409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355246	Calcium	109	85.0	P/P	80 - 120
2355246	Iron	108	106	P/P	80 - 120
2355246	Magnesium	107	102	P/P	80 - 120
2355246	Potassium	106	102	P/P	80 - 120
2355246	Sodium	102		P	80 - 120
2355246	Strontium	103	101	P/P	80 - 120
2355246	Tin	107	104	P/P	80 - 120
2355246	Titanium	105	102	P/P	80 - 120
2355246	Vanadium	104	100	P/P	80 - 120
2355246	Zinc	101	98.9	P/P	80 - 120
2355260	Calcium	107		P	80 - 120
2355260	Iron	107		P	80 - 120
2355260	Magnesium	108		P	80 - 120
2355260	Potassium	108		P	80 - 120
2355260	Sodium	104		P	80 - 120
2355260	Strontium	103		P	80 - 120
2355260	Tin	106		P	80 - 120
2355260	Titanium	102		P	80 - 120
2355260	Vanadium	101		P	80 - 120
2355260	Zinc	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P419409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355246	Antimony	104	102	P/P	80 - 120
2355246	Arsenic	102	101	P/P	80 - 120
2355246	Barium	105	104	P/P	80 - 120
2355246	Beryllium	98.4	96.8	P/P	80 - 120
2355246	Boron	105	103	P/P	80 - 120
2355246	Cadmium	99.8	98.3	P/P	80 - 120
2355246	Chromium	106	105	P/P	80 - 120
2355246	Cobalt	97.3	95.0	P/P	80 - 120
2355246	Copper	98.5	97.2	P/P	80 - 120
2355246	Lead	93.8	92.8	P/P	80 - 120
2355246	Manganese	104	100	P/P	80 - 120
2355246	Molybdenum	100	98.0	P/P	80 - 120
2355246	Nickel	101	99.0	P/P	80 - 120
2355246	Selenium	102	99.2	P/P	80 - 120
2355246	Silver	88.3	86.8	P/P	80 - 120
2355246	Thallium	99.5	99.8	P/P	80 - 120
2355260	Antimony	107		P	80 - 120
2355260	Arsenic	104		P	80 - 120
2355260	Barium	109		P	80 - 120
2355260	Beryllium	98.4		P	80 - 120
2355260	Boron	105		P	80 - 120
2355260	Cadmium	103		P	80 - 120
2355260	Chromium	106		P	80 - 120
2355260	Cobalt	98.7		P	80 - 120
2355260	Copper	102		P	80 - 120
2355260	Lead	95.5		P	80 - 120
2355260	Manganese	104		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2355260	Molybdenum	101		P	80 - 120
2355260	Nickel	101		P	80 - 120
2355260	Selenium	104		P	80 - 120
2355260	Silver	90.8		P	80 - 120
2355260	Thallium	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419671

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2354242	Aluminum	97.8	98.9	P/P	80 - 120
2355245	Aluminum	99.1		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419739

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353690	Chloride	98.2		P	90 - 110
2354011	Chloride	98.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419742

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353690	Sulfate	95.1		P	90 - 110
2354011	Sulfate	97.6		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419207

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2354141	Ammonia-N	97.0	97.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419365

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2354014	NO2NO3-N	96.5	97.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419343

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2354141	Total-P	105	108	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P418988

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353620	Acesulfame K	111	111	P/P	40 - 150
2353620	AMPA	101	105	P/P	40 - 150
2353620	Endothall	91.4	91.8	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P418988

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2353620	Glufosinate	71.2	73.3	P/P	40 - 150
2353620	Glyphosate	93.0	95.9	P/P	40 - 150
2353620	Sucralose	98.2	101	P/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P419218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2354048	2,4-D	112	112	P/P	40 - 150
2354048	2,4,5-T	130	123	P/P	40 - 150
2354048	Acetaminophen	60.9	61.9	P/P	30 - 150
2354048	Acetamiprid	51.8	56.1	P/P	40 - 150
2354048	Afidopyropen	34.8	32.0	P/P	30 - 150
2354048	Bentazon	138	132	P/P	30 - 150
2354048	Benzovindiflupyr	105	97.5	P/P	40 - 150
2354048	Carbamazepine	82.6	83.7	P/P	40 - 150
2354048	Clothianidin	57.9	62.2	P/P	40 - 150
2354048	Dinotefuran	84.4	78.3	P/P	40 - 150
2354048	Diuron	99.1	101	P/P	40 - 150
2354048	Fenuron	74.8	78.9	P/P	40 - 150
2354048	Fluridone	99.0	101	P/P	40 - 150
2354048	Hydrocodone	111	105	P/P	40 - 150
2354048	Ibuprofen	114	117	P/P	40 - 150
2354048	Imidacloprid	69.9	62.9	P/P	40 - 150
2354048	Linuron	102	112	P/P	40 - 150
2354048	Mandestrobin	94.6	98.7	P/P	40 - 150
2354048	MCP	127	121	P/P	40 - 150
2354048	Naproxen	143	149	P/P	40 - 150
2354048	Primidone	46.1	44.9	P/P	40 - 150
2354048	Pyraclostrobin	94.6	102	P/P	40 - 150
2354048	Silvex	114	102	P/P	40 - 150
2354048	Thiamethoxam	76.3	84.5	P/P	40 - 150
2354048	Tolfenpyrad	61.8	65.7	P/P	30 - 150
2354048	Triclopyr	108	102	P/P	40 - 150

Reference Method: SM 5310 B-2011

Batch ID: P419352

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2354070	Organic Carbon	97.1	98.7	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P419198

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353863	Color (true)	0.336	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P419082

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354010	Turbidity	1.08	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P419409

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355246	Calcium	4.90	Spike	P	0 - 20
2355246	Iron	2.43	Spike	P	0 - 20
2355246	Magnesium	2.84	Spike	P	0 - 20
2355246	Potassium	2.29	Spike	P	0 - 20
2355246	Sodium	2.44	Spike	P	0 - 20
2355246	Strontium	2.08	Spike	P	0 - 20
2355246	Tin	2.23	Spike	P	0 - 20
2355246	Titanium	2.84	Spike	P	0 - 20
2355246	Vanadium	3.33	Spike	P	0 - 20
2355246	Zinc	2.52	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419409

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2355246	Antimony	2.11	Spike	P	0 - 20
2355246	Arsenic	1.45	Spike	P	0 - 20
2355246	Barium	1.08	Spike	P	0 - 20
2355246	Beryllium	1.58	Spike	P	0 - 20
2355246	Boron	1.02	Spike	P	0 - 20
2355246	Cadmium	1.50	Spike	P	0 - 20
2355246	Chromium	0.819	Spike	P	0 - 20
2355246	Cobalt	2.31	Spike	P	0 - 20
2355246	Copper	1.37	Spike	P	0 - 20
2355246	Lead	1.11	Spike	P	0 - 20
2355246	Manganese	1.14	Spike	P	0 - 20
2355246	Molybdenum	2.07	Spike	P	0 - 20
2355246	Nickel	1.95	Spike	P	0 - 20
2355246	Selenium	2.79	Spike	P	0 - 20
2355246	Silver	1.71	Spike	P	0 - 20
2355246	Thallium	0.302	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P419671

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354242	Aluminum	0.856	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419739

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353690	Chloride	0.00596	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P419742

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353690	Sulfate	0.105	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P419207

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354141	Ammonia-N	0.0	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P419172

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353960	Kjeldahl Nitrogen	2.09	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P419365

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354014	NO2NO3-N	0.505	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P419343

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354141	Total-P	1.59	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P418988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353620	Acesulfame K	0.483	Spike	P	0 - 30
2353620	AMPA	3.86	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P418988

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2353620	Endothall	0.349	Spike	P	0 - 30
2353620	Glufosinate	2.88	Spike	P	0 - 30
2353620	Glyphosate	3.06	Spike	P	0 - 30
2353620	Sucralose	2.04	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P419218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354048	2,4-D	0.602	Spike	P	0 - 30
2354048	2,4,5-T	5.08	Spike	P	0 - 30
2354048	Acetaminophen	1.72	Spike	P	0 - 30
2354048	Acetamiprid	7.88	Spike	P	0 - 30
2354048	Afidopyropen	8.28	Spike	P	0 - 30
2354048	Bentazon	4.11	Spike	P	0 - 30
2354048	Benzovindiflupyr	7.12	Spike	P	0 - 30
2354048	Carbamazepine	1.34	Spike	P	0 - 30
2354048	Clothianidin	7.12	Spike	P	0 - 30
2354048	Dinotefuran	7.51	Spike	P	0 - 30
2354048	Diuron	2.08	Spike	P	0 - 30
2354048	Fenuron	5.36	Spike	P	0 - 30
2354048	Fluridone	1.63	Spike	P	0 - 30
2354048	Hydrocodone	6.01	Spike	P	0 - 30
2354048	Ibuprofen	2.14	Spike	P	0 - 30
2354048	Imazapyr	3.06	Spike	P	0 - 30
2354048	Imidacloprid	10.5	Spike	P	0 - 30
2354048	Linuron	8.69	Spike	P	0 - 30
2354048	Mandestrobin	4.33	Spike	P	0 - 30
2354048	MCPP	4.65	Spike	P	0 - 30
2354048	Naproxen	4.10	Spike	P	0 - 30
2354048	Primidone	2.75	Spike	P	0 - 30
2354048	Pyraclostrobin	7.17	Spike	P	0 - 30
2354048	Silvex	10.5	Spike	P	0 - 30
2354048	Thiamethoxam	10.2	Spike	P	0 - 30
2354048	Tolfenpyrad	6.23	Spike	P	0 - 30
2354048	Triclopyr	5.90	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P419601

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354534	Total Alkalinity	0.353	Sample	P	0 - 3.8

Reference Method: SM 2540 C-2011
Batch ID: P419416

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354066	TDS	7.00	Sample	P	0 - 10

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P419604

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354534	Fluoride	0.0	Spike	P	0 - 1.6

Reference Method: SM 5310 B-2011
Batch ID: P419352

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2354070	Organic Carbon	1.21	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2354061

Field Sample ID: 20030571

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	114	P	30 - 160
EPA 8321B	Acetaminophen-d4	46.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.2	P	30 - 160
EPA 8321B	Diuron-d6	92.8	P	30 - 160
EPA 8321B	Endothall-d6	130	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	89.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	77.3	P	30 - 160
EPA 8321B	Primidone-d5	39.6	P	30 - 160
EPA 8321B	Sucralose-d6	102	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A114527

Included Lab Sample IDs: 2354054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	100	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A114565

Included Lab Sample IDs: 2354061

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	114	111	P/P	60 - 160
Sucralose	106	101	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A114567

Included Lab Sample IDs: 2354061

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	102	110	P/P	60 - 160
Endothall	87.1	81.6	P/P	60 - 160
Glufosinate	78.7	94.1	P/P	60 - 160
Glyphosate	102	114	P/P	60 - 160

Reference Method: DEP SOP: NU-094-1

Run ID: A114577

Included Lab Sample IDs: 2354054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A114579

Included Lab Sample IDs: 2354055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.5	99.0	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A114605

Included Lab Sample IDs: 2354061

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	113	99.0	P/P	50 - 150
2,4,5-T	113	123	P/P	50 - 150
Acetaminophen	85.8	95.9	P/P	60 - 160
Acetamiprid	90.8	109	P/P	50 - 150
Afidopyropen	123	124	P/P	50 - 150
Bentazon	109	89.8	P/P	50 - 160
Benzovindiflupyr	107	108	P/P	50 - 150
Carbamazepine	128	110	P/P	60 - 150
Clothianidin	117	131	P/P	60 - 150
Dinotefuran	98.8	98.1	P/P	50 - 150
Diuron	130	134	P/P	60 - 160
Fenuron	106	105	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B
Run ID: A114605
Included Lab Sample IDs: 2354061

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	106	113	P/P	60 - 160
Hydrocodone	95.3	104	P/P	60 - 150
Ibuprofen	121	91.7	P/P	50 - 160
Imazapyr	97.7	103	P/P	50 - 150
Imidacloprid	110	129	P/P	60 - 150
Linuron	123	112	P/P	60 - 150
Mandestrobin	104	103	P/P	50 - 150
MCPP	109	114	P/P	50 - 150
Naproxen	112	121	P/P	50 - 160
Primidone	134	136	P/P	60 - 150
Pyraclostrobin	105	108	P/P	60 - 150
Silvex	102	108	P/P	50 - 150
Thiamethoxam	106	121	P/P	50 - 150
Tolfenpyrad	108	103	P/P	60 - 150
Triclopyr	90.5	101	P/P	50 - 150

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A114608
Included Lab Sample IDs: 2354055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	104	P/P	90 - 110

Reference Method: SM 5310 B-2011
Run ID: A114631
Included Lab Sample IDs: 2354055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.5	96.6	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A114640
Included Lab Sample IDs: 2354055

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A114672
Included Lab Sample IDs: 2354055

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

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A114704
Included Lab Sample IDs: 2354062

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Antimony	100	100	P/P	90 - 110
Arsenic	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A114704

Included Lab Sample IDs: 2354062

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	100	99.2	P/P	90 - 110
Beryllium	99.6	99.3	P/P	90 - 110
Boron	98.7	97.1	P/P	90 - 110
Cadmium	103	102	P/P	90 - 110
Chromium	104	103	P/P	90 - 110
Cobalt	97.8	96.8	P/P	90 - 110
Copper	101	99.9	P/P	90 - 110
Lead	90.7	90.2	P/P	90 - 110
Manganese	101	102	P/P	90 - 110
Molybdenum	98.0	97.4	P/P	90 - 110
Nickel	101	99.8	P/P	90 - 110
Selenium	103	101	P/P	90 - 110
Silver	96.3	95.5	P/P	90 - 110
Thallium	102	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A114728

Included Lab Sample IDs: 2354062

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Iron	101	100	P/P	90 - 110
Potassium	103	102	P/P	90 - 110
Sodium	100	100	P/P	90 - 110
Strontium	99.5	99.2	P/P	90 - 110
Tin	102	101	P/P	90 - 110
Titanium	97.4	98.3	P/P	90 - 110
Vanadium	98.2	97.9	P/P	90 - 110
Zinc	98.4	97.5	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A114732

Included Lab Sample IDs: 2354054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	98.2	102	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A114732

Included Lab Sample IDs: 2354054

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	102	101	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A114771

Included Lab Sample IDs: 2354062

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	101	102	P/P	90 - 110
Magnesium	98.9	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A114789

Included Lab Sample IDs: 2354054

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

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A114798

Included Lab Sample IDs: 2354062

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	97.3	96.2	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)	101					0.336	
EPA 180.1 Rev. 2.0	Turbidity	97.0					1.08	
EPA 200.7 Rev. 4.4	Calcium	103	109	85.0	107			4.90
	Iron	106	108	106	107			2.43
	Magnesium	106	107	102	108			2.84
	Potassium	106	106	102	108			2.29
	Sodium	105	102	104				2.44
	Strontium	103	103	101	103			2.08
	Tin	107	107	104	106			2.23
	Titanium	103	105	102	102			2.84
	Vanadium	102	104	100	101			3.33
	Zinc	102	101	98.9	101			2.52
EPA 200.8 Rev. 5.4	Aluminum	99.1	97.8	98.9	99.1			0.856
	Antimony	102	104	102	107			2.11
	Arsenic	102	102	101	104			1.45
	Barium	105	105	104	109			1.08
	Beryllium	100	98.4	96.8	98.4			1.58
	Boron	101	105	105	103			1.02
	Cadmium	98.8	99.8	98.3	103			1.50
	Chromium	100	106	105	106			0.819
	Cobalt	96.5	97.3	95.0	98.7			2.31
	Copper	99.4	98.5	97.2	102			1.37
	Lead	91.8	93.8	92.8	95.5			1.11
	Manganese	98.9	104	100	104			1.14
	Molybdenum	97.6	100	98.0	101			2.07
	Nickel	101	101	99.0	101			1.95
	Selenium	102	102	99.2	104			2.79
	Silver	88.3	88.3	86.8	90.8			1.71
	Thallium	97.4	99.5	99.8	101			0.302
EPA 300.0 Rev. 2.1	Chloride	98.8	98.2	98.4			0.0059	
	Sulfate	98.2	95.1	97.6			0.105	
EPA 350.1 Rev. 2.0	Ammonia-N	99.2	97.0	97.0				0.0
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100						2.09
EPA 353.2 Rev. 2.0	NO2NO3-N	100	96.5	97.5				0.505
EPA 365.1 Rev. 2.0	Total-P	104	105	108				1.59
EPA 8321B	2,4-D	110	112	112				0.602
	2,4,5-T	120	130	123				5.08
	Acesulfame K	112	111	111				0.483
	Acetaminophen	86.5	60.9	61.9				1.72
	Acetamiprid	79.0	51.8	56.1				7.88
	Afidopyropen	39.1	34.8	32.0				8.28
	AMPA	103	101	105				3.86
	Bentazon	102	138	132				4.11
	Benzovindiflupyr	93.5	105	97.5				7.12
	Carbamazepine	108	82.6	83.7				1.34
	Clothianidin	113	57.9	62.2				7.12
	Dinotefuran	78.8	84.4	78.3				7.51
	Diuron	110	99.1	101				2.08
	Endothall	99.2	91.4	91.8				0.349
	Fenuron	96.9	74.8	78.9				5.36
	Fluridone	103	99.0	101				1.63
	Glufosinate	85.2	71.2	73.3				2.88
	Glyphosate	112	93.0	95.9				3.06
	Hydrocodone	98.5	111	105				6.01

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision SMP	MS
			LCS			
EPA 8321B	Ibuprofen	102	114	117		2.14
	Imazapyr	96.7				3.06
	Imidacloprid	93.4	69.9	62.9		10.5
	Linuron	111	102	112		8.69
	Mandestrobin	101	94.6	98.7		4.33
	MCPP	111	127	121		4.65
	Naproxen	118	143	149		4.10
	Primidone	97.3	46.1	44.9		2.75
	Pyraclostrobin	93.7	94.6	102		7.17
	Silvex	109	114	102		10.5
	Sucralose	102	98.2	101		2.04
	Thiamethoxam	106	76.3	84.5		10.2
	Tolfenpyrad	60.2	61.8	65.7		6.23
	Triclopyr	96.3	108	102		5.90
SM 2320 B-2011	Total Alkalinity	101			0.353	
SM 2540 C-2011	TDS				7.00	
SM 4500-F- C-2011	Fluoride	99.3				0.0
SM 5310 B-2011	Organic Carbon	96.0	97.1	98.7		1.21

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2354054
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2354054
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2354062
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2354062
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2354054
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2354054
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2354055
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2354055
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2354055
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2354055
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2354061
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2354054
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2354062
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2354054
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2354054
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2354054
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2354055

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	09/02/2022			09/02/2022 14:50	Blanca Fach	2354054
EPA 180.1 Rev. 2.0	09/02/2022			09/02/2022 13:13	Chandler E Cox	2354054
EPA 200.7 Rev. 4.4	09/02/2022	09/12/2022 10:30	Megan Whitefoot	09/14/2022 21:43	McKinley C Carter	2354062
	09/02/2022	09/12/2022 10:30	Megan Whitefoot	09/15/2022 21:01	McKinley C Carter	2354062
EPA 200.8 Rev. 5.4	09/02/2022	09/12/2022 10:30	Megan Whitefoot	09/13/2022 17:06	Megan Whitefoot	2354062
	09/02/2022	09/16/2022 09:25	Megan Whitefoot	09/17/2022 00:46	Emily M Philpot	2354062
EPA 300.0 Rev. 2.1	09/02/2022			09/14/2022 22:54	Anna M. Plaviak	2354054
EPA 350.1 Rev. 2.0	09/02/2022			09/07/2022 12:43	Ping Hua	2354055
EPA 351.2 Rev. 2.0	09/02/2022	09/07/2022 13:36	Samantha L Bates	09/08/2022 11:17	Samantha L Bates	2354055
EPA 353.2 Rev. 2.0	09/02/2022			09/09/2022 10:15	Beverly Y. Sanders	2354055
EPA 365.1 Rev. 2.0	09/02/2022	09/09/2022 16:30	Adam P Silver	09/12/2022 10:48	James L Waggeberby	2354055
EPA 8321B	09/02/2022	09/06/2022 12:30	Umesh Chiluwal	09/06/2022 17:29	Umesh Chiluwal	2354061
	09/02/2022	09/06/2022 12:30	Umesh Chiluwal	09/07/2022 03:40	Umesh Chiluwal	2354061
	09/02/2022	09/08/2022 09:00	Hoor Shaik	09/09/2022 07:15	Juyoung Kim	2354061
SM 2320 B-2011	09/02/2022			09/13/2022 23:59	Dale L. Simmons	2354054
SM 2340 B-2011	09/02/2022			09/15/2022 21:01	McKinley C Carter	2354062
SM 2540 C-2011	09/02/2022			09/07/2022 13:56	Yijie Li	2354054
SM 2540 D-2011	09/02/2022			09/07/2022 13:56	Yijie Li	2354054
SM 4500-F- C-2011	09/02/2022			09/13/2022 23:59	Dale L. Simmons	2354054
SM 5310 B-2011	09/02/2022			09/08/2022 18:47	Khloe J Berg	2354055