

Chemical Analysis Report

SW-DIST-2023-12-14-02

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

Event Description: **Run 14 plus some**
Request ID: **RQ-2023-12-11-21**
Customer: **SW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
FL Dept. of Environmental Protection
13051 N. Telecom Parkway
Temple Terrace, FL 33637-0926
Attn: Ben Paswater

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Certified by: Marek Topolski, Environmental Specialist III

Date Certified: 10-JAN-2024 15:08

A handwritten signature in black ink, appearing to read "Marek Topolski", with a stylized, flowing script.

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: WOLF BRANCH AT 19TH AVE NE

Collection Date/Time: 12/13/2023 09:30

Field ID: G1SW0119

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457006	DEP SOP: NU-094-1	Color (true)	74	A	PCU	P439001	
	EPA 180.1 Rev. 2.0	Turbidity	23		NTU	P439002	
	EPA 300.0 Rev. 2.1	Chloride	35		mg Cl/L	P439334	
		Sulfate	100		mg SO4/L	P439337	
	SM 2320 B-2011	Total Alkalinity	75		mg CaCO3/L	P439285	
	SM 2540 C-2015	TDS	283		mg/L	P439432	
	SM 2540 D-2015	TSS	9	I	mg/L	P439347	
	SM 4500-F- C-2011	Fluoride	0.38		mg F/L	P439291	
2457007	EPA 350.1 Rev. 2.0	Ammonia-N	0.29		mg N/L	P439218	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P439109	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.013		mg N/L	P439174	
	EPA 365.1 Rev. 2.0	Total-P	0.19		mg P/L	P439047	
	SM 5310 B-2014	Organic Carbon	14		mg C/L	P439357	

Ref. Method and Comment:

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

Sample Location: WOLF BRANCH CANAL AT MIDDLE OF LAKE Collection Date/Time: 12/13/2023 10:00

Field ID: G1SW0139

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457008	DEP SOP: NU-094-1	Color (true)	15	A	PCU	P438999	
	EPA 180.1 Rev. 2.0	Turbidity	4.3		NTU	P439002	
	EPA 300.0 Rev. 2.1	Chloride	1.2E+04		mg Cl/L	P439405	
		Sulfate	1.8E+03		mg SO4/L	P439408	
	SM 2320 B-2011	Total Alkalinity	118	A	mg CaCO3/L	P439286	
	SM 2540 C-2015	TDS	2.18E+04		mg/L	P439433	
	SM 2540 D-2015	TSS	6	I	mg/L	P439349	
2457009	SM 4500-F- C-2011	Fluoride	1.0		mg F/L	P439292	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.013		mg N/L	P439587	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.2		mg N/L	P439106	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.006	I	mg N/L	P439386	
	EPA 365.1 Rev. 2.0	Total-P	0.12		mg P/L	P439006	
2457031	SM 5310 B-2014	Organic Carbon	11		mg C/L	P439361	
	EPA 8321B	Acesulfame K	0.10	U	ug/L	P439028	
		2,4-D	0.062		ug/L	P439060	
		AMPA	1.0	U	ug/L	P439028	
		2,4,5-T	0.0040	U	ug/L	P439060	
		Acetaminophen	0.0080	U	ug/L	P439060	
		Endothall	0.25	U	ug/L	P439028	
		Acetamiprid	0.0020	U	ug/L	P439060	
		Glufosinate	1.0	U	ug/L	P439028	
		Glyphosate	1.0	U	ug/L	P439028	
		Afidopyropen	0.0020	U	ug/L	P439060	
		Sucralose	0.62		ug/L	P439028	
		Bentazon	0.036		ug/L	P439060	
		Benzovindiflupyr	0.0020	U	ug/L	P439060	
		Carbamazepine	8.0E-04	U	ug/L	P439060	
		Clothianidin	0.0020	U	ug/L	P439060	
		Dinotefuran	0.0020	U	ug/L	P439060	
		Diuron	0.0020	U	ug/L	P439060	
		Fenuron	0.032	U	ug/L	P439060	
		Fluridone	0.14		ug/L	P439060	
		Imazapyr	0.036		ug/L	P439060	
		Hydrocodone	0.0020	U	ug/L	P439060	
		Ibuprofen	0.080	U	ug/L	P439060	
		Imidacloprid	0.0073	I	ug/L	P439060	
		Linuron	0.0040	U	ug/L	P439060	
		Mandestrobin	0.0020	U	ug/L	P439060	
		MCPP	0.014		ug/L	P439060	
		Naproxen	0.0080	U	ug/L	P439060	
		Primidone	0.0059	I	ug/L	P439060	
		Pyraclostrobin	0.0020	U	ug/L	P439060	
		Silvex	0.0040	U	ug/L	P439060	
		Thiamethoxam	0.0020	U	ug/L	P439060	

Field ID: G1SW0139

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457031	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P439060	
		Triclopyr	0.0040	U	ug/L	P439060	

Ref. Method and Comment:
EPA 300.0 Rev. 2.1: Sulfate: Batch matrix spike recoveries for one of two spiked samples are unavailable because of high analyte concentration in the QC sample.
SM 2540 D-2015: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.
EPA 8321B: MS accuracy for glyphosate could not be assessed due to high concentration of parameter in the spiked sample. Some MDLs are elevated due to required dilution of sample matrix.
EPA 8321B: MS accuracy for some analytes could not be assessed due to high concentration of parameter in the spiked sample.

Sample Location: WOLF BRANCH CANAL AT MANNS HARBOR **Collection Date/Time: 12/13/2023 11:00**
DR BOATLIFT

Field ID: G1SW0092

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457010	DEP SOP: NU-094-1	Color (true)	11		PCU	P438999	
	EPA 180.1 Rev. 2.0	Turbidity	3.8		NTU	P439002	
	EPA 300.0 Rev. 2.1	Chloride	1.5E+04		mg Cl/L	P439205	
		Sulfate	2.0E+03		mg SO4/L	P439409	
	SM 2320 B-2011	Total Alkalinity	118		mg CaCO3/L	P439286	
	SM 2540 C-2015	TDS	2.43E+04		mg/L	P439433	
	SM 2540 D-2015	TSS	10		mg/L	P439349	
	SM 4500-F- C-2011	Fluoride	1.1		mg F/L	P439292	
2457013	EPA 350.1 Rev. 2.0	Ammonia-N	0.096		mg N/L	P439342	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P439106	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.018		mg N/L	P439386	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P439256	
	SM 5310 B-2014	Organic Carbon	9.0		mg C/L	P439361	

Ref. Method and Comment:

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

Sample Location: BUFFALO CANAL PAST THE WW DISCHARGE Collection Date/Time: 12/13/2023 12:00

Field ID: G1SW0140

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457016	DEP SOP: NU-094-1	Color (true)	24		PCU	P439001	
	EPA 180.1 Rev. 2.0	Turbidity	21		NTU	P439002	
	EPA 300.0 Rev. 2.1	Chloride	76		mg Cl/L	P439205	
		Sulfate	74		mg SO4/L	P439409	
	SM 2320 B-2011	Total Alkalinity	174		mg CaCO3/L	P439285	
	SM 2540 C-2015	TDS	388		mg/L	P439432	
	SM 2540 D-2015	TSS	27		mg/L	P439347	
2457017	SM 4500-F- C-2011	Fluoride	0.77		mg F/L	P439291	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P439218	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.5		mg N/L	P439109	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.096		mg N/L	P439174	
	EPA 365.1 Rev. 2.0	Total-P	0.79		mg P/L	P439047	
2457032	EPA 8321B	SM 5310 B-2014	Organic Carbon	13	mg C/L	P439357	
		Acesulfame K	0.20	I	ug/L	P439028	
		2,4-D	0.040		ug/L	P439060	
		AMPA	3.4		ug/L	P439028	
		2,4,5-T	0.0040	U	ug/L	P439060	
		Acetaminophen	0.0080	U	ug/L	P439060	
		Endothall	0.25	U	ug/L	P439028	
		Acetamiprid	0.0020	U	ug/L	P439060	
		Glufosinate	0.10	U	ug/L	P439028	
		Glyphosate	1.3		ug/L	P439028	
		Afidopyropen	0.0020	U	ug/L	P439060	
		Sucralose	5.2		ug/L	P439028	
		Bentazon	0.18		ug/L	P439060	
		Benzovindiflupyr	0.0020	U	ug/L	P439060	
		Carbamazepine	0.0050		ug/L	P439060	
		Clothianidin	0.0024	I	ug/L	P439060	
		Dinotefuran	0.0021	I	ug/L	P439060	
		Diuron	0.0020	U	ug/L	P439060	
		Fenuron	0.032	U	ug/L	P439060	
		Fluridone	1.1		ug/L	P439060	
		Imazapyr	0.31		ug/L	P439060	
		Hydrocodone	0.0020	U	ug/L	P439060	
		Ibuprofen	0.080	U	ug/L	P439060	
		Imidacloprid	0.052		ug/L	P439060	
		Linuron	0.0040	U	ug/L	P439060	
		Mandestrobin	0.0020	U	ug/L	P439060	
		MCP	0.0020	I	ug/L	P439060	
		Naproxen	0.0080	U	ug/L	P439060	
		Primidone	0.043		ug/L	P439060	
		Pyraclostrobin	0.0020	U	ug/L	P439060	
		Silvex	0.0040	U	ug/L	P439060	
		Thiamethoxam	0.0020	U	ug/L	P439060	

Field ID: G1SW0140

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457032	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P439060	
		Triclopyr	0.0040	U	ug/L	P439060	
2457033	EPA 200.7 Rev. 4.4	Calcium	73.4		mg/L	P439098	
		Iron	2.53E+03		ug/L	P439098	
		Magnesium	25.4		mg/L	P439098	
		Potassium	8.5		mg/L	P439098	
		Sodium	41.9		mg/L	P439098	
		Strontium	728		ug/L	P439098	
		Tin	3.0	U	ug/L	P439098	
		Titanium	17.2		ug/L	P439098	
		Vanadium	7.6	I	ug/L	P439098	
		Zinc	5.2	I	ug/L	P439098	
	EPA 200.8 Rev. 5.4	Aluminum	2.10E+03		ug/L	P439098	
		Antimony	0.40		ug/L	P439098	
		Arsenic	4.79		ug/L	P439098	
		Barium	35.9		ug/L	P439098	
		Beryllium	0.113		ug/L	P439098	
		Boron	114		ug/L	P439098	
		Cadmium	0.039	I	ug/L	P439098	
		Chromium	4.2		ug/L	P439098	
		Cobalt	0.647		ug/L	P439098	
		Copper	4.17		ug/L	P439098	
		Lead	2.20		ug/L	P439098	
		Manganese	120		ug/L	P439098	
		Molybdenum	3.79		ug/L	P439098	
		Nickel	3.3		ug/L	P439098	
		Selenium	0.32	I	ug/L	P439098	
		Silver	0.010	U	ug/L	P439098	
		Thallium	0.10	U	ug/L	P439098	
	SM 2340 B-2011	Hardness	288		mg/L	P439098	

Ref. Method and Comment:

SM 2540 C-2015: The reported result is consistent with the conductivity measured in the laboratory, 714 umhos/cm.

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

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

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

Sample Location: ST JOE TIDAL BY WESTCHESTER BLVD

Collection Date/Time: 12/13/2023 13:50

Field ID: G5SW0169

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457011	DEP SOP: NU-094-1	Color (true)	12		PCU	P438999	
	EPA 180.1 Rev. 2.0	Turbidity	1.4		NTU	P439002	
	EPA 300.0 Rev. 2.1	Chloride	590		mg Cl/L	P439205	
		Sulfate	170		mg SO4/L	P439409	
	SM 2320 B-2011	Total Alkalinity	199		mg CaCO3/L	P439286	
	SM 2540 C-2015	TDS	1.37E+03		mg/L	P439433	
	SM 2540 D-2015	TSS	6	I	mg/L	P439349	
	SM 4500-F- C-2011	Fluoride	0.59		mg F/L	P439422	
2457014	EPA 350.1 Rev. 2.0	Ammonia-N	0.056		mg N/L	P439342	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.84		mg N/L	P439244	
	EPA 353.2 Rev. 2.0	NO2NO3-N	2.8		mg N/L	P439610	
	EPA 365.1 Rev. 2.0	Total-P	0.78		mg P/L	P439256	
	SM 5310 B-2014	Organic Carbon	8.0		mg C/L	P439361	

Ref. Method and Comment:

SM 2540 C-2015: The reported result is consistent with the conductivity measured in the laboratory, 2560 umhos/cm.

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

Sample Location: ST JOE TIDAL AT 54TH AVE

Collection Date/Time: 12/13/2023 14:20

Field ID: G5SW0170

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2457012	DEP SOP: NU-094-1	Color (true)	39		PCU	P438999	
	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P439002	
	EPA 300.0 Rev. 2.1	Chloride	1.6E+03		mg Cl/L	P439205	
		Sulfate	220		mg SO4/L	P439409	
	SM 2320 B-2011	Total Alkalinity	128		mg CaCO3/L	P439286	
	SM 2540 C-2015	TDS	2.77E+03		mg/L	P439433	
	SM 2540 D-2015	TSS	4	IA	mg/L	P439349	
	SM 4500-F- C-2011	Fluoride	0.31		mg F/L	P439422	
2457015	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P439342	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.77		mg N/L	P439244	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.13		mg N/L	P439386	
	EPA 365.1 Rev. 2.0	Total-P	0.14		mg P/L	P439256	
	SM 5310 B-2014	Organic Carbon	9.8		mg C/L	P439361	

Ref. Method and Comment:

SM 2540 C-2015: The reported result is consistent with the conductivity measured in the laboratory, 5390 umhos/cm.

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: P438999

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: DEP SOP: NU-094-1
Batch ID: P439001

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P439002

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P439098

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: P439098

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439205

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439334

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439337

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439405

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439408

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439409

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439218

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439342

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439587

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

Quality Assurance Report Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439106

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439109

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439244

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439174

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439386

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439610

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439006

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439047

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439256

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 8321B

Batch ID: P439028

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: P439060

Component	Result	Code	Units
2,4-D	0.0020	U	ug/L
2,4,5-T	0.0040	U	ug/L
Acetaminophen	0.0080	U	ug/L
Acetamiprid	0.0020	U	ug/L
Afidopyropen	0.0020	U	ug/L
Bentazon	8.0E-04	U	ug/L
Benzovindiflupyr	0.0020	U	ug/L
Carbamazepine	8.0E-04	U	ug/L
Clothianidin	0.0020	U	ug/L
Dinotefuran	0.0020	U	ug/L
Diuron	0.0020	U	ug/L
Fenuron	0.032	U	ug/L
Fluridone	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: P439285

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

Reference Method: SM 2320 B-2011

Batch ID: P439286

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

Quality Assurance Report Method Blank Results

Reference Method: SM 2540 C-2015
Batch ID: P439432

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015
Batch ID: P439433

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P439347

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P439349

Component	Result	Code	Units
TSS	3	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P439291

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P439292

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 4500-F- C-2011
Batch ID: P439422

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2014
Batch ID: P439357

Component	Result	Code	Units
Organic Carbon	0.50	U	mg C/L

Reference Method: SM 5310 B-2014
Batch ID: P439361

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: P438999

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	100		P	90 - 110

Reference Method: DEP SOP: NU-094-1
Batch ID: P439001

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P439002

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P439098

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	104		P	85 - 115
Iron	103		P	85 - 115
Magnesium	105		P	85 - 115
Potassium	98.4		P	85 - 115
Sodium	99.3		P	85 - 115
Strontium	96.5		P	85 - 115
Tin	96.4		P	85 - 115
Titanium	98.6		P	85 - 115
Vanadium	98.5		P	85 - 115
Zinc	95.5		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P439098

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	103		P	85 - 115
Antimony	103		P	85 - 115
Arsenic	103		P	85 - 115
Barium	103		P	85 - 115
Beryllium	97.2		P	85 - 115
Boron	105		P	85 - 115
Cadmium	102		P	85 - 115
Chromium	106		P	85 - 115
Cobalt	102		P	85 - 115
Copper	101		P	85 - 115
Lead	97.9		P	85 - 115
Manganese	104		P	85 - 115
Molybdenum	100		P	85 - 115
Nickel	102		P	85 - 115
Selenium	101		P	85 - 115
Silver	103		P	85 - 115
Thallium	102		P	85 - 115

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439205

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439334

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439337

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439405

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439408

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439409

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439218

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	93.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439342

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	90.8		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439587

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439106

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439109

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439244

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	108		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439174

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439386

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439610

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: P439006

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439047

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439256

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B

Batch ID: P439028

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	133		P	40 - 150
AMPA	58.3		P	40 - 160
Endothall	45.4		P	40 - 160
Glufosinate	59.2		P	40 - 160
Glyphosate	47.4		P	40 - 160
Sucralose	83.5		P	40 - 150

Reference Method: EPA 8321B

Batch ID: P439060

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	109		P	40 - 150
2,4,5-T	105		P	40 - 150
Acetaminophen	76.3		P	30 - 150
Acetamiprid	82.4		P	40 - 150
Afidopyropen	68.6		P	30 - 150
Bentazon	56.0		P	30 - 150
Benzovindiflupyr	78.4		P	40 - 150
Carbamazepine	70.7		P	40 - 150
Clothianidin	89.6		P	40 - 150
Dinotefuran	92.9		P	40 - 150
Diuron	66.7		P	40 - 150
Fenuron	140		P	40 - 150
Fluridone	82.1		P	40 - 150
Hydrocodone	89.3		P	40 - 150
Ibuprofen	68.4		P	40 - 150
Imazapyr	90.1		P	40 - 150
Imidacloprid	86.9		P	40 - 150
Linuron	66.5		P	40 - 150
Mandestrobin	84.5		P	40 - 150
MCPP	96.3		P	40 - 150
Naproxen	66.0		P	40 - 150
Primidone	85.0		P	40 - 150
Pyraclostrobin	71.9		P	40 - 150
Silvex	84.7		P	40 - 150
Thiamethoxam	86.7		P	40 - 150
Tolfenpyrad	43.5		P	30 - 150
Triclopyr	121		P	40 - 150

Reference Method: SM 2320 B-2011

Batch ID: P439285

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	100		P	92 - 105

Reference Method: SM 2320 B-2011

Batch ID: P439286

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	99.9		P	92 - 105

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2540 C-2015
Batch ID: P439432

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	96.4		P	85 - 115

Reference Method: SM 2540 C-2015
Batch ID: P439433

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	94.4		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P439347

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	95.2		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P439349

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	97.6		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P439291

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	102		P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P439292

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

Reference Method: SM 4500-F- C-2011
Batch ID: P439422

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

Reference Method: SM 5310 B-2014
Batch ID: P439357

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	98.9		P	85 - 115

Reference Method: SM 5310 B-2014
Batch ID: P439361

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	97.8		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P439098

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456988	Calcium	103		P	80 - 120
2456988	Iron	109	105	P/P	80 - 120
2456988	Magnesium	109	104	P/P	80 - 120
2456988	Potassium	104	100	P/P	80 - 120
2456988	Sodium	98.2		P	80 - 120
2456988	Strontium	97.8	97.9	P/P	80 - 120
2456988	Tin	99.9	99.4	P/P	80 - 120
2456988	Titanium	103	102	P/P	80 - 120
2456988	Vanadium	103	102	P/P	80 - 120
2456988	Zinc	99.4	98.9	P/P	80 - 120
2457243	Calcium	110		P	80 - 120
2457243	Iron	109		P	80 - 120
2457243	Magnesium	112		P	80 - 120
2457243	Potassium	101		P	80 - 120
2457243	Sodium	100		P	80 - 120
2457243	Strontium	99.1		P	80 - 120
2457243	Tin	101		P	80 - 120
2457243	Titanium	104		P	80 - 120
2457243	Vanadium	103		P	80 - 120
2457243	Zinc	101		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P439098

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456988	Aluminum	102	102	P/P	80 - 120
2456988	Antimony	106	106	P/P	80 - 120
2456988	Arsenic	104	105	P/P	80 - 120
2456988	Barium	104	105	P/P	80 - 120
2456988	Beryllium	98.5	98.8	P/P	80 - 120
2456988	Boron	105	106	P/P	80 - 120
2456988	Cadmium	107	104	P/P	80 - 120
2456988	Chromium	104	104	P/P	80 - 120
2456988	Cobalt	101	100	P/P	80 - 120
2456988	Copper	99.7	99.5	P/P	80 - 120
2456988	Lead	100	99.6	P/P	80 - 120
2456988	Manganese	101	101	P/P	80 - 120
2456988	Molybdenum	105	104	P/P	80 - 120
2456988	Nickel	101	101	P/P	80 - 120
2456988	Selenium	89.3	87.9	P/P	80 - 120
2456988	Silver	104	104	P/P	80 - 120
2456988	Thallium	106	106	P/P	80 - 120
2457243	Aluminum	102		P	80 - 120
2457243	Antimony	104		P	80 - 120
2457243	Arsenic	101		P	80 - 120
2457243	Barium	104		P	80 - 120
2457243	Beryllium	95.1		P	80 - 120
2457243	Boron	107		P	80 - 120
2457243	Cadmium	101		P	80 - 120
2457243	Chromium	106		P	80 - 120
2457243	Cobalt	99.9		P	80 - 120
2457243	Copper	99.2		P	80 - 120

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P439098

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457243	Lead	98.8		P	80 - 120
2457243	Manganese	102		P	80 - 120
2457243	Molybdenum	101		P	80 - 120
2457243	Nickel	99.7		P	80 - 120
2457243	Selenium	101		P	80 - 120
2457243	Silver	103		P	80 - 120
2457243	Thallium	104		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P439205

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457093	Chloride	100		P	90 - 110
2457262	Chloride	106		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P439334

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456443	Chloride	101		P	90 - 110
2456503	Chloride	99.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P439337

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456443	Sulfate	98.6		P	90 - 110
2456503	Sulfate	98.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P439405

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456614	Chloride	99.8		P	90 - 110
2456615	Chloride	99.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P439408

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456614	Sulfate	98.5		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P439409

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457040	Sulfate	100		P	90 - 110
2457220	Sulfate	99.7		P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439218

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456985	Ammonia-N	99.0	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439342

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457009	Ammonia-N	97.6	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439587

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457959	Ammonia-N	99.6	98.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439106

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457013	Kjeldahl Nitrogen	97.2	95.7	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439109

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456985	Kjeldahl Nitrogen	101	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439244

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457966	Kjeldahl Nitrogen	102	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439174

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456923	NO2NO3-N	99.2		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439386

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457013	NO2NO3-N	98.4	98.9	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439610

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456360	NO2NO3-N	97.2	97.0	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439006

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456140	Total-P	102	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457042	Total-P	109	108	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P439256

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456770	Total-P	96.6	98.5	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P439028

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456963	Acesulfame K	123	126	P/P	40 - 150
2456963	AMPA	72.3	45.4	P/P	40 - 160
2456963	Endothall	65.0	50.4	P/P	40 - 160
2456963	Glufosinate	74.6	64.9	P/P	40 - 160
2456963	Sucralose	64.6	65.5	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P439060

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456963	2,4-D	93.2	94.3	P/P	40 - 150
2456963	2,4,5-T	72.0	76.3	P/P	40 - 150
2456963	Acetaminophen	84.1	95.8	P/P	30 - 150
2456963	Acetamiprid	63.5	69.2	P/P	40 - 150
2456963	Afidopyropen	66.6	73.5	P/P	30 - 150
2456963	Benzovindiflupyr	75.8	82.6	P/P	40 - 150
2456963	Carbamazepine	57.1	62.9	P/P	40 - 150
2456963	Clothianidin	88.7	98.1	P/P	40 - 150
2456963	Dinotefuran	77.8	81.7	P/P	40 - 150
2456963	Diuron	54.6	58.6	P/P	40 - 150
2456963	Fenuron	91.4	94.1	P/P	40 - 150
2456963	Fluridone	55.0	78.2	P/P	40 - 150
2456963	Hydrocodone	72.3	75.5	P/P	40 - 150
2456963	Ibuprofen	59.9	62.3	P/P	40 - 150
2456963	Imidacloprid	104	115	P/P	40 - 150
2456963	Linuron	59.4	63.3	P/P	40 - 150
2456963	Mandestrobin	77.4	85.4	P/P	40 - 150
2456963	MCPP	84.5	88.6	P/P	40 - 150
2456963	Naproxen	59.4	78.2	P/P	40 - 150
2456963	Primidone	88.8	100	P/P	40 - 150
2456963	Pyraclostrobin	72.3	80.0	P/P	40 - 150
2456963	Silvex	83.0	87.7	P/P	40 - 150
2456963	Thiamethoxam	74.8	82.3	P/P	40 - 150
2456963	Tolfenpyrad	46.6	54.5	P/P	30 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P439060

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2456963	Triclopyr	76.2	79.6	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P439291

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457220	Fluoride	101	102	P/P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P439292

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457008	Fluoride	102	102	P/P	94 - 106

Reference Method: SM 4500-F- C-2011
Batch ID: P439422

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2458034	Fluoride	101	100	P/P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P439357

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457007	Organic Carbon	101	100	P/P	85 - 115

Reference Method: SM 5310 B-2014
Batch ID: P439361

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2457014	Organic Carbon	96.1	98.3	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P438999

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457008	Color (true)	5.87	Sample	P	0 - 20

Reference Method: DEP SOP: NU-094-1
Batch ID: P439001

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457006	Color (true)	0.669	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P439002

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456913	Turbidity	2.12	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P439098

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456988	Calcium	1.03	Spike	P	0 - 20
2456988	Iron	2.97	Spike	P	0 - 20
2456988	Magnesium	2.64	Spike	P	0 - 20
2456988	Potassium	3.28	Spike	P	0 - 20
2456988	Sodium	0.517	Spike	P	0 - 20
2456988	Strontium	0.151	Spike	P	0 - 20
2456988	Tin	0.523	Spike	P	0 - 20
2456988	Titanium	0.650	Spike	P	0 - 20
2456988	Vanadium	0.876	Spike	P	0 - 20
2456988	Zinc	0.453	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P439098

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456988	Aluminum	0.0377	Spike	P	0 - 20
2456988	Antimony	0.0544	Spike	P	0 - 20
2456988	Arsenic	1.42	Spike	P	0 - 20
2456988	Barium	0.537	Spike	P	0 - 20
2456988	Beryllium	0.269	Spike	P	0 - 20
2456988	Boron	0.752	Spike	P	0 - 20
2456988	Cadmium	2.79	Spike	P	0 - 20
2456988	Chromium	0.239	Spike	P	0 - 20
2456988	Cobalt	0.819	Spike	P	0 - 20
2456988	Copper	0.123	Spike	P	0 - 20
2456988	Lead	0.718	Spike	P	0 - 20
2456988	Manganese	0.262	Spike	P	0 - 20
2456988	Molybdenum	0.217	Spike	P	0 - 20
2456988	Nickel	0.549	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P439098

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456988	Selenium	1.58	Spike	P	0 - 20
2456988	Silver	0.480	Spike	P	0 - 20
2456988	Thallium	0.0550	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439205

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457093	Chloride	0.908	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439334

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456443	Chloride	2.17	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439337

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456443	Sulfate	1.56	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439405

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456614	Chloride	3.17	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439408

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456614	Sulfate	2.89	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P439409

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457040	Sulfate	1.17	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
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Quality Assurance Report Precision

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439218

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456985	Ammonia-N	0.697	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439342

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457009	Ammonia-N	1.93	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P439587

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457959	Ammonia-N	0.913	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439106

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457013	Kjeldahl Nitrogen	1.22	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439109

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456985	Kjeldahl Nitrogen	0.185	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P439244

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457966	Kjeldahl Nitrogen	1.39	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439174

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456923	NO2NO3-N	0.875	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P439386

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457013	NO2NO3-N	0.464	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 353.2 Rev. 2.0

Batch ID: P439610

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456360	NO2NO3-N	0.156	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P439006

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456140	Total-P	1.03	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P439047

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457042	Total-P	1.08	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P439256

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456770	Total-P	1.87	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P439028

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456963	Acesulfame K	2.29	Spike	P	0 - 30
2456963	AMPA	24.3	Spike	P	0 - 30
2456963	Endothall	25.2	Spike	P	0 - 30
2456963	Glufosinate	13.9	Spike	P	0 - 30
2456963	Glyphosate	17.3	Spike	P	0 - 30
2456963	Sucralose	1.15	Spike	P	0 - 30

Reference Method: EPA 8321B

Batch ID: P439060

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456963	2,4-D	0.986	Spike	P	0 - 30
2456963	2,4,5-T	5.69	Spike	P	0 - 30
2456963	Acetaminophen	13.1	Spike	P	0 - 30
2456963	Acetamiprid	8.64	Spike	P	0 - 30
2456963	Afidopyropen	9.82	Spike	P	0 - 30
2456963	Bentazon	3.83	Spike	P	0 - 30
2456963	Benzovindiflupyr	8.56	Spike	P	0 - 30
2456963	Carbamazepine	7.99	Spike	P	0 - 30
2456963	Clothianidin	10.0	Spike	P	0 - 30
2456963	Dinotefuran	4.53	Spike	P	0 - 30
2456963	Diuron	6.14	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P439060

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456963	Fenuron	2.92	Spike	P	0 - 30
2456963	Fluridone	6.02	Spike	P	0 - 30
2456963	Hydrocodone	4.46	Spike	P	0 - 30
2456963	Ibuprofen	3.91	Spike	P	0 - 30
2456963	Imazapyr	1.95	Spike	P	0 - 30
2456963	Imidacloprid	7.89	Spike	P	0 - 30
2456963	Linuron	6.42	Spike	P	0 - 30
2456963	Mandestrobin	9.82	Spike	P	0 - 30
2456963	MCCP	4.68	Spike	P	0 - 30
2456963	Naproxen	27.4	Spike	P	0 - 30
2456963	Primidone	12.2	Spike	P	0 - 30
2456963	Pyraclostrobin	10.1	Spike	P	0 - 30
2456963	Silvex	5.61	Spike	P	0 - 30
2456963	Thiamethoxam	9.43	Spike	P	0 - 30
2456963	Tolfenpyrad	15.7	Spike	P	0 - 30
2456963	Triclopyr	4.33	Spike	P	0 - 30

Reference Method: SM 2320 B-2011

Batch ID: P439285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457220	Total Alkalinity	3.36	Sample	P	0 - 3.9

Reference Method: SM 2320 B-2011

Batch ID: P439286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457008	Total Alkalinity	0.230	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015

Batch ID: P439432

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2456919	TDS	0.766	Sample	P	0 - 10

Reference Method: SM 2540 C-2015

Batch ID: P439433

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457313	TDS	2.43	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011

Batch ID: P439291

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457220	Fluoride	0.500	Spike	P	0 - 1.9

Quality Assurance Report Precision

Reference Method: SM 4500-F- C-2011
Batch ID: P439292

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457008	Fluoride	0.0	Spike	P	0 - 1.9

Reference Method: SM 4500-F- C-2011
Batch ID: P439422

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2458034	Fluoride	0.492	Spike	P	0 - 1.9

Reference Method: SM 5310 B-2014
Batch ID: P439357

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457007	Organic Carbon	0.643	Spike	P	0 - 15

Reference Method: SM 5310 B-2014
Batch ID: P439361

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2457014	Organic Carbon	1.92	Spike	P	0 - 15

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

Quality Assurance Report Surrogates

Lab Sample ID: 2457031

Field Sample ID: G1SW0139

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	92.0	P	30 - 160
EPA 8321B	Acetaminophen-d4	83.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	62.1	P	30 - 160
EPA 8321B	Diuron-d6	43.0	P	30 - 160
EPA 8321B	Endothall-d6	79.3	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	49.6	P	30 - 160
EPA 8321B	Ibuprofen-d3	59.6	P	30 - 160
EPA 8321B	Primidone-d5	93.7	P	30 - 160
EPA 8321B	Sucralose-d6	38.3	P	30 - 160

Lab Sample ID: 2457032

Field Sample ID: G1SW0140

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	89.2	P	30 - 160
EPA 8321B	Acetaminophen-d4	85.2	P	30 - 160
EPA 8321B	Carbamazepine-d10	55.6	P	30 - 160
EPA 8321B	Diuron-d6	50.4	P	30 - 160
EPA 8321B	Endothall-d6	79.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	74.8	P	30 - 160
EPA 8321B	Ibuprofen-d3	63.5	P	30 - 160
EPA 8321B	Primidone-d5	85.1	P	30 - 160
EPA 8321B	Sucralose-d6	53.9	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: DEP SOP: NU-094-1

Run ID: A123235

Included Lab Sample IDs: 2457008, 2457010, 2457011, 2457012

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

Reference Method: DEP SOP: NU-094-1

Run ID: A123236

Included Lab Sample IDs: 2457006, 2457016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	99.4	100	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A123238

Included Lab Sample IDs: 2457006, 2457008, 2457010, 2457011, 2457012, 2457016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	98.5	99.5	P/P	95 - 105

Reference Method: EPA 8321B

Run ID: A123270

Included Lab Sample IDs: 2457031, 2457032

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	132	128	P/P	60 - 160
Acesulfame K	136	132	P/P	60 - 160
Sucralose	83.8	87.9	P/P	60 - 160
Sucralose	87.9	84.8	P/P	60 - 160

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123287

Included Lab Sample IDs: 2457009

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123293

Included Lab Sample IDs: 2457007, 2457017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	101	103	P/P	90 - 110
Total-P	99.3	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A123301

Included Lab Sample IDs: 2457031, 2457032

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	127	135	P/P	60 - 160
AMPA	135	127	P/P	60 - 160
Endothall	115	142	P/P	60 - 160
Endothall	127	109	P/P	60 - 160
Glufosinate	136	144	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A123301

Included Lab Sample IDs: 2457031, 2457032

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Glufosinate	144	126	P/P	60 - 160
Glyphosate	138	150	P/P	60 - 160
Glyphosate	150	134	P/P	60 - 160

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123304

Included Lab Sample IDs: 2457007, 2457017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A123310

Included Lab Sample IDs: 2457031, 2457032

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	96.9	108	P/P	50 - 150
2,4,5-T	101	101	P/P	50 - 150
Acetaminophen	109	114	P/P	60 - 160
Acetamiprid	109	112	P/P	50 - 150
Afidopyropen	112	99.7	P/P	50 - 150
Bentazon	89.1	97.5	P/P	50 - 160
Bentazon	96.1	93.1	P/P	50 - 160
Benzovindiflupyr	108	112	P/P	50 - 150
Carbamazepine	108	108	P/P	60 - 150
Clothianidin	107	110	P/P	60 - 150
Dinotefuran	104	112	P/P	50 - 150
Diuron	110	113	P/P	60 - 160
Fenuron	106	109	P/P	60 - 150
Fluridone	105	109	P/P	60 - 160
Fluridone	116	112	P/P	60 - 160
Hydrocodone	112	114	P/P	60 - 150
Ibuprofen	103	104	P/P	50 - 160
Imazapyr	88.8	86.4	P/P	50 - 150
Imidacloprid	99.0	104	P/P	60 - 150
Linuron	101	113	P/P	60 - 150
Mandestrobin	114	112	P/P	50 - 150
MCPP	101	97.9	P/P	50 - 150
Naproxen	92.6	98.8	P/P	50 - 160
Primidone	94.3	102	P/P	60 - 150
Pyraclostrobin	109	112	P/P	60 - 150
Silvex	104	105	P/P	50 - 150
Thiamethoxam	113	120	P/P	50 - 150
Tolfenpyrad	101	100	P/P	60 - 150
Triclopyr	98.3	105	P/P	50 - 150

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A123321

Included Lab Sample IDs: 2457010, 2457011, 2457012, 2457016

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

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A123321

Included Lab Sample IDs: 2457010, 2457011, 2457012, 2457016

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A123325

Included Lab Sample IDs: 2457007, 2457017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	100	98.6	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A123332

Included Lab Sample IDs: 2457033

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	103	104	P/P	90 - 110
Iron	103	105	P/P	90 - 110
Magnesium	103	104	P/P	90 - 110
Potassium	99.6	101	P/P	90 - 110
Sodium	98.9	99.5	P/P	90 - 110
Strontium	99.1	98.2	P/P	90 - 110
Tin	100	102	P/P	90 - 110
Titanium	101	102	P/P	90 - 110
Vanadium	101	102	P/P	90 - 110
Zinc	101	102	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A123335

Included Lab Sample IDs: 2457033

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.5	99.9	P/P	90 - 110
Antimony	101	101	P/P	90 - 110
Arsenic	99.1	98.6	P/P	90 - 110
Barium	100	99.3	P/P	90 - 110
Beryllium	99.7	98.9	P/P	90 - 110
Boron	99.5	99.4	P/P	90 - 110
Cadmium	98.8	99.4	P/P	90 - 110
Chromium	98.1	100	P/P	90 - 110
Cobalt	95.9	97.5	P/P	90 - 110
Copper	97.0	97.1	P/P	90 - 110
Lead	96.7	96.4	P/P	90 - 110
Manganese	97.4	99.8	P/P	90 - 110
Molybdenum	100	100	P/P	90 - 110
Nickel	96.8	97.3	P/P	90 - 110
Selenium	99.1	101	P/P	90 - 110
Silver	101	102	P/P	90 - 110
Thallium	102	102	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A123338

Included Lab Sample IDs: 2457006, 2457008

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	102	102	P/P	90 - 110
Chloride	99.9	104	P/P	90 - 110
Sulfate	100	104	P/P	90 - 110
Sulfate	102	103	P/P	90 - 110
Sulfate	103	103	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A123353

Included Lab Sample IDs: 2457006, 2457008, 2457010, 2457011, 2457012, 2457016

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	96.2	P/P	90 - 110
Total Alkalinity	98.0	95.8	P/P	90 - 110

Reference Method: SM 4500-F- C-2011

Run ID: A123353

Included Lab Sample IDs: 2457006, 2457008, 2457010, 2457016

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

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A123358

Included Lab Sample IDs: 2457013, 2457014, 2457015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.6	98.4	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123368

Included Lab Sample IDs: 2457009, 2457013

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	104	99.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A123372

Included Lab Sample IDs: 2457013, 2457014, 2457015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	99.8	P/P	90 - 110

Reference Method: SM 5310 B-2014

Run ID: A123379

Included Lab Sample IDs: 2457007, 2457009, 2457013, 2457014, 2457015, 2457017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	114	95.4	P/P	70 - 130
Organic Carbon	96.8	102	P/P	85 - 115

Quality Assurance Report Calibration Verification

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123392

Included Lab Sample IDs: 2457009, 2457013, 2457015

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

Reference Method: SM 4500-F- C-2011

Run ID: A123400

Included Lab Sample IDs: 2457011, 2457012

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123424

Included Lab Sample IDs: 2457007, 2457017

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	93.3	97.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A123426

Included Lab Sample IDs: 2457014, 2457015

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.0	97.3	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A123497

Included Lab Sample IDs: 2457009

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	100	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A123503

Included Lab Sample IDs: 2457014

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	99.0	99.5	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)	100				5.87	
	Color (true)	99.6				0.669	
EPA 180.1 Rev. 2.0	Turbidity	103				2.12	
EPA 200.7 Rev. 4.4	Calcium	104	103	110			1.03
	Iron	103	109	105	109		2.97
	Magnesium	105	109	104	112		2.64
	Potassium	98.4	104	100	101		3.28
	Sodium	99.3	98.2	100			0.517
	Strontium	96.5	97.8	97.9	99.1		0.151
	Tin	96.4	99.9	99.4	101		0.523
	Titanium	98.6	103	102	104		0.650
	Vanadium	98.5	103	102	103		0.876
	Zinc	95.5	99.4	98.9	101		0.453
EPA 200.8 Rev. 5.4	Aluminum	103	102	102	102		0.0377
	Antimony	103	106	106	104		0.0544
	Arsenic	103	104	105	101		1.42
	Barium	103	104	105	104		0.537
	Beryllium	97.2	98.5	98.8	95.1		0.269
	Boron	105	105	106	107		0.752
	Cadmium	102	107	104	101		2.79
	Chromium	106	104	104	106		0.239
	Cobalt	102	101	100	99.9		0.819
	Copper	101	99.7	99.5	99.2		0.123
	Lead	97.9	100	99.6	98.8		0.718
	Manganese	104	101	101	102		0.262
	Molybdenum	100	105	104	101		0.217
	Nickel	102	101	101	99.7		0.549
	Selenium	101	89.3	87.9	101		1.58
	Silver	103	104	104	103		0.480
	Thallium	102	106	106	104		0.0550
EPA 300.0 Rev. 2.1	Chloride	105	100	106		0.908	
	Chloride	102	101	99.0		2.17	
	Chloride	101	99.8	99.4		3.17	
	Sulfate	102	98.6	98.8		1.56	
	Sulfate	100	98.5			2.89	
EPA 350.1 Rev. 2.0	Sulfate	104	100	99.7		1.17	
	Ammonia-N	93.8	99.0	99.8			0.697
	Ammonia-N	90.8	97.6	99.8			1.93
	Ammonia-N	99.2	99.6	98.2			0.913
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	102	97.2	95.7			1.22
	Kjeldahl Nitrogen	98.2	101	100			0.185
	Kjeldahl Nitrogen	108	102	100			1.39
EPA 353.2 Rev. 2.0	NO2NO3-N	101	99.2				0.875
	NO2NO3-N	99.5	98.4	98.9			0.464
	NO2NO3-N	99.0	97.2	97.0			0.156
EPA 365.1 Rev. 2.0	Total-P	103	102	101			1.03
	Total-P	103	109	108			1.08
	Total-P	108	96.6	98.5			1.87
EPA 8321B	2,4-D	109	93.2	94.3			0.986
	2,4,5-T	105	72.0	76.3			5.69
	Acesulfame K	133	123	126			2.29
	Acetaminophen	76.3	84.1	95.8			13.1
	Acetamiprid	82.4	63.5	69.2			8.64
	Afidopyproden	68.6	66.6	73.5			9.82

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision	MS
						SMP	
EPA 8321B	AMPA	58.3	72.3	45.4			24.3
	Bentazon	56.0					3.83
	Benzovindiflupyr	78.4	75.8	82.6			8.56
	Carbamazepine	70.7	57.1	62.9			7.99
	Clothianidin	89.6	88.7	98.1			10.0
	Dinotefuran	92.9	77.8	81.7			4.53
	Diuron	66.7	54.6	58.6			6.14
	Endothall	45.4	65.0	50.4			25.2
	Fenuron	140	91.4	94.1			2.92
	Fluridone	82.1	55.0	78.2			6.02
	Glufosinate	59.2	74.6	64.9			13.9
	Glyphosate	47.4					17.3
	Hydrocodone	89.3	72.3	75.5			4.46
	Ibuprofen	68.4	59.9	62.3			3.91
	Imazapyr	90.1					1.95
	Imidacloprid	86.9	104	115			7.89
	Linuron	66.5	59.4	63.3			6.42
	Mandestrobin	84.5	77.4	85.4			9.82
	MCPP	96.3	84.5	88.6			4.68
	Naproxen	66.0	59.4	78.2			27.4
	Primidone	85.0	88.8	100			12.2
	Pyraclostrobin	71.9	72.3	80.0			10.1
	Silvex	84.7	83.0	87.7			5.61
	Sucralose	83.5	64.6	65.5			1.15
	Thiamethoxam	86.7	74.8	82.3			9.43
	Tolfenpyrad	43.5	46.6	54.5			15.7
	Triclopyr	121	76.2	79.6			4.33
SM 2320 B-2011	Total Alkalinity	100				3.36	
	Total Alkalinity	99.9				0.230	
SM 2540 C-2015	TDS	96.4				0.766	
	TDS	94.4				2.43	
SM 2540 D-2015	TSS	95.2					
	TSS	97.6					
SM 4500-F- C-2011	Fluoride	102	101	102			0.500
	Fluoride	104	102	102			0.0
	Fluoride	101	101	100			0.492
SM 5310 B-2014	Organic Carbon	98.9	101	100			0.643
	Organic Carbon	97.8	96.1	98.3			1.92

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2457006, 2457008, 2457010, 2457011, 2457012, 2457016
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2457006, 2457008, 2457010, 2457011, 2457012, 2457016
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2457033
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2457033
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2457006, 2457008, 2457010, 2457011, 2457012, 2457016
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2457006, 2457008, 2457010, 2457011, 2457012, 2457016

Reference Method Descriptions

Method	Description	Associated Samples
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2457007, 2457009, 2457013, 2457014, 2457015, 2457017
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2457007, 2457009, 2457013, 2457014, 2457015, 2457017
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2457007, 2457009, 2457013, 2457014, 2457015, 2457017
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2457007, 2457009, 2457013, 2457014, 2457015, 2457017
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2457031, 2457032
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO ₃ /L	2457006, 2457008, 2457010, 2457011, 2457012, 2457016
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO ₃	2457033
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2457006, 2457008, 2457010, 2457011, 2457012, 2457016
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2457006, 2457008, 2457010, 2457011, 2457012, 2457016
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2457006, 2457008, 2457010, 2457011, 2457012, 2457016
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2457007, 2457009, 2457013, 2457014, 2457015, 2457017

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	12/14/2023			12/14/2023 14:36	Samantha L Bates	2457008
	12/14/2023			12/14/2023 14:37	Samantha L Bates	2457010, 2457011
	12/14/2023			12/14/2023 14:38	Samantha L Bates	2457012
	12/14/2023			12/14/2023 15:36	Samantha L Bates	2457006, 2457016
EPA 180.1 Rev. 2.0	12/14/2023			12/14/2023 14:49	Anna M. Plaviak	2457006
	12/14/2023			12/14/2023 14:51	Anna M. Plaviak	2457008
	12/14/2023			12/14/2023 14:54	Anna M. Plaviak	2457010
	12/14/2023			12/14/2023 14:55	Anna M. Plaviak	2457011
EPA 200.7 Rev. 4.4	12/14/2023			12/14/2023 14:58	Anna M. Plaviak	2457012
	12/14/2023			12/14/2023 15:05	Anna M. Plaviak	2457016
	12/14/2023	12/18/2023 11:15	George D Taylor	12/19/2023 13:44	Samatha Luckman	2457033
	12/14/2023	12/18/2023 11:15	George D Taylor	12/19/2023 17:30	Emily M Philpot	2457033
EPA 200.8 Rev. 5.4	12/14/2023			12/19/2023 01:38	James L Waggeberby	2457010
	12/14/2023			12/19/2023 01:53	James L Waggeberby	2457011
	12/14/2023			12/19/2023 02:08	James L Waggeberby	2457012
	12/14/2023			12/19/2023 02:23	James L Waggeberby	2457016
EPA 300.0 Rev. 2.1	12/14/2023			12/21/2023 08:04	James L Waggeberby	2457006
	12/14/2023			12/21/2023 17:38	James L Waggeberby	2457008
	12/14/2023			12/21/2023 20:24	James L Waggeberby	2457010
	12/14/2023			12/21/2023 20:39	James L Waggeberby	2457011
EPA 350.1 Rev. 2.0	12/14/2023			12/21/2023 20:54	James L Waggeberby	2457012
	12/14/2023			12/21/2023 21:09	James L Waggeberby	2457016
	12/14/2023			01/04/2024 14:11	Ping Hua	2457009
	12/14/2023			12/19/2023 15:45	Khloe J Berg	2457007
EPA 351.2 Rev. 2.0	12/14/2023			12/19/2023 15:46	Khloe J Berg	2457017
	12/14/2023			12/20/2023 12:06	Khloe J Berg	2457013
	12/14/2023			12/20/2023 12:07	Khloe J Berg	2457014
	12/14/2023			12/20/2023 12:09	Khloe J Berg	2457015
EPA 353.2 Rev. 2.0	12/14/2023	12/18/2023 12:31	Simonne.V. Calhoun	12/21/2023 09:57	Samantha L Bates	2457009
	12/14/2023	12/18/2023 12:31	Simonne.V. Calhoun	12/21/2023 09:59	Samantha L Bates	2457013
	12/14/2023	12/18/2023 13:10	Simonne.V. Calhoun	12/27/2023 10:32	Samantha L Bates	2457007
	12/14/2023	12/18/2023 13:10	Simonne.V. Calhoun	12/27/2023 10:34	Samantha L Bates	2457017
EPA 353.2 Rev. 2.0	12/14/2023	12/20/2023 14:15	Simonne.V. Calhoun	12/27/2023 12:32	Samantha L Bates	2457014
	12/14/2023	12/20/2023 14:15	Simonne.V. Calhoun	12/27/2023 12:33	Samantha L Bates	2457015
	12/14/2023			01/03/2024 14:20	Fadila Guebre	2457014
	12/14/2023			12/18/2023 13:32	Fadila Guebre	2457007
EPA 353.2 Rev. 2.0	12/14/2023			12/18/2023 13:33	Fadila Guebre	2457017
	12/14/2023			12/21/2023 11:24	Anna M. Plaviak	2457013
	12/14/2023			12/21/2023 11:34	Anna M. Plaviak	2457009
	12/14/2023			12/21/2023 11:36	Anna M. Plaviak	2457015

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	12/14/2023	12/15/2023 12:55	Adam P Silver	12/18/2023 10:58	Chandler E Cox	2457009
	12/14/2023	12/15/2023 12:55	Adam P Silver	12/18/2023 14:59	Chandler E Cox	2457007
	12/14/2023	12/15/2023 12:55	Adam P Silver	12/18/2023 15:02	Chandler E Cox	2457017
	12/14/2023	12/20/2023 12:07	Adam P Silver	12/20/2023 17:32	James L Waggeberby	2457013
	12/14/2023	12/20/2023 12:07	Adam P Silver	12/20/2023 17:33	James L Waggeberby	2457014
	12/14/2023	12/20/2023 12:07	Adam P Silver	12/20/2023 17:34	James L Waggeberby	2457015
EPA 8321B	12/14/2023	12/15/2023 12:00	Hana Lee	12/15/2023 15:14	Hana Lee	2457031
	12/14/2023	12/15/2023 12:00	Hana Lee	12/15/2023 15:42	Hana Lee	2457032
	12/14/2023	12/15/2023 12:00	Hana Lee	12/16/2023 07:38	Tae K Lee	2457032
	12/14/2023	12/15/2023 12:00	Hana Lee	12/16/2023 10:51	Tae K Lee	2457031
	12/14/2023	12/15/2023 12:00	Hana Lee	12/16/2023 14:31	Tae K Lee	2457031
	12/14/2023	12/18/2023 09:00	Hoor Shaik	12/18/2023 18:02	Juyoung Kim	2457031
	12/14/2023	12/18/2023 09:00	Hoor Shaik	12/18/2023 18:19	Juyoung Kim	2457032
	12/14/2023	12/18/2023 09:00	Hoor Shaik	12/19/2023 10:11	Juyoung Kim	2457032
SM 2320 B-2011	12/14/2023			12/19/2023 20:28	Dale L. Simmons	2457006
	12/14/2023			12/19/2023 20:41	Dale L. Simmons	2457016
	12/14/2023			12/20/2023 01:14	Dale L. Simmons	2457008
	12/14/2023			12/20/2023 01:41	Dale L. Simmons	2457010
	12/14/2023			12/20/2023 01:55	Dale L. Simmons	2457011
	12/14/2023			12/20/2023 02:08	Dale L. Simmons	2457012
SM 2340 B-2011	12/14/2023			12/19/2023 13:44	Samatha Luckman	2457033
SM 2540 C-2015	12/14/2023			12/19/2023 15:26	Yijie Li	2457006, 2457008, 2457010, 2457011, 2457012, 2457016
SM 2540 D-2015	12/14/2023			12/19/2023 15:26	Yijie Li	2457006, 2457008, 2457010, 2457011, 2457012, 2457016
SM 4500-F- C-2011	12/14/2023			12/19/2023 20:28	Dale L. Simmons	2457006
	12/14/2023			12/19/2023 20:41	Dale L. Simmons	2457016
	12/14/2023			12/19/2023 23:38	Dale L. Simmons	2457008
	12/14/2023			12/19/2023 23:58	Dale L. Simmons	2457010
	12/14/2023			12/21/2023 23:24	Dale L. Simmons	2457011
	12/14/2023			12/21/2023 23:29	Dale L. Simmons	2457012
SM 5310 B-2014	12/14/2023			12/19/2023 14:35	Kenneth H Lee	2457007
	12/14/2023			12/19/2023 16:35	Kenneth H Lee	2457017
	12/14/2023			12/21/2023 12:07	Kenneth H Lee	2457014
	12/14/2023			12/21/2023 12:48	Kenneth H Lee	2457009
	12/14/2023			12/21/2023 13:02	Kenneth H Lee	2457013
	12/14/2023			12/21/2023 13:29	Kenneth H Lee	2457015