

Chemical Analysis Report

TLH-ROC-2021-09-13-01

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

Event Description: **Run 10**
Request ID: **RQ-2021-09-06-56**
Customer: **TLH-ROC**
Project ID: **SMP**

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

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 07-OCT-2021 13:19

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

Case Narrative

Unless otherwise noted, all samples included in this report were received in accordance with protocols referenced in Chapter 62-160, Florida Administrative Code (F.A.C.). Results published in this report pertain only to the samples as submitted to, and received by the laboratory. All times in this report are adjusted to the applicable Eastern Time Zone (EST or EDT).

Results for the following analytical groups are included in this report: Metals, Nutrients and Pesticides.

Scientific notation may be used in reporting very large or small values. Values reported using scientific notation will take the form of the following example: 1.3E+03, which is equivalent to 1.3×10^3 or 1300.

Unless otherwise noted, analytical values for soil and sediment samples are reported on a dry weight basis, and analytical values for waste and tissue samples are reported on a wet weight basis.

Results for TNI accredited tests met requirements established by The NELAC Institute. A double asterisk (**) is used to indicate an analyte/matrix/method for which the laboratory is not TNI accredited by the Florida Department of Health Environmental Laboratory Certification Program or where accreditation for that field of testing is not applicable.

Any significant anomalies or deviations from established protocols are documented in Non-Conformance Reports, which, where appropriate, are included within this analytical report. Additional comments related to specific analytical tests may be included as remarks following the analytical results for each sample. Such comments and remarks are for informational purposes only and are not intended to convey judgement about the usability of the reported data.

A quality control report on the performance of the test method for the submitted samples is included. Uncertainty associated with the analytical results contained in this report can be estimated from the reported quality assurance results and from published quality control acceptance limits for each analytical test. Matrix quality control results (matrix spike recoveries and matrix sample precision) pertain only to the matrix sample tested and do not necessarily reflect test method performance for other samples.

Typical matrix quality control (QC) measurements may include matrix spike recovery, matrix spike duplicate recovery, matrix spike precision and matrix sample precision. Not all matrix QC results may be available or reportable; where they are not an explanation is provided. Typical reasons for unavailable QC results include, but are not limited to, a) insufficient matrix sample to perform some or all QC measurements; b) analyte concentration in the sample replicated was too low for a meaningful measurement of precision and c) analyte concentration in the matrix sample spiked was too high (relative to the amount of analyte spiked) for a meaningful measurement of recovery. Where matrix QC results are unavailable, other method performance metrics (e.g., LCS recovery, LCS precision, surrogate recovery) may be used to assess performance of the method. Comments explaining any missing QC measurements are not intended to convey any adverse conclusions about the quality of the reported data.

Precision is reported as relative percent difference unless otherwise noted.

Quality Control codes as defined below may be used in this report to indicate results that are associated with one or more quality control elements which did not fall within established test method criteria. Such results may be qualified as estimates using a J qualifier as required by 62-160 F.A.C. Explanations are included in the report for any results that were reported as estimates for other reasons.

QC Codes used in this report may include:

- LCS – Recovery for the batch Laboratory Control Sample (LCS) was outside existing control limits;
- MS – Recovery for the batch matrix spike (MS) was outside existing control limits;
- CCV – Recovery for a continuing calibration verification (CCV) standard was outside existing control limits;
- SUR – Recovery of a surrogate (SUR) for associated analytes was outside existing control limits;
- RPD – The precision, measured as relative percent difference (RPD), of batch replicate measurements was outside existing control limits;
- RSD – The precision, measured as relative standard deviation (RSD), of batch replicate measurements was outside existing control limits;
- SMP – Sample - used precision derived from replicate analyses of a sample;

The following data qualifiers are used, where applicable, in this report as specified in 62-160 F.A.C.

- A - Value reported is the mean of two or more determinations.
- B - Results based on colony counts outside the acceptable range.
- I - The reported value is between the laboratory method detection limit and the laboratory practical quantitation limit.
- J - Estimated value and/or the analysis did not meet established quality control criteria.
- K - Actual value is known to be less than value given.
- L - Actual value is known to be greater than value given.
- N - Presumptive evidence of presence of material.
- O - Sampled, but analysis lost or not performed.
- Q - Sample held beyond normal holding time.
- T - Value reported is less than the criterion of detection.
- U - Material was analyzed for but not detected. The reported value is the method detection limit for the sample analyzed.
- V - Analyte was detected in both sample and method blank.
- X - Too few individuals to calculate SCI value.
- Y - The laboratory analysis was from an unpreserved or improperly preserved sample. The data may not be accurate.
- Z - Colonies were too numerous to count (TNTC).

Quality control information from overflow laboratories may not be included in this report. Please refer to the associated report from the overflow laboratory for additional information.

Sample Location: Sandy Branch @ SR22

Collection Date/Time: 09/13/2021 11:40

Field ID: G3TLHR0027

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2275547	EPA 180.1 Rev. 2.0	Turbidity	2.5		NTU	P403709	
	EPA 300.0 Rev. 2.1	Chloride	2.2		mg Cl/L	P403798	
		Sulfate	0.20	U	mg SO4/L	P403803	
	SM 2120 B-2011	Color (true)	330		PCU	P403712	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P403815	
	SM 2540 C-2011	TDS	33		mg/L	P404173	
	SM 2540 D-2011	TSS	5	I	mg/L	P404001	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P403816	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.19		mg N/L	P403833	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.99		mg N/L	P403879	
2275548	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P403755	
	EPA 365.1 Rev. 2.0	Total-P	0.012		mg P/L	P403772	
	SM 5310 B-2011	Organic Carbon	30		mg C/L	P404047	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P403705	
	dissolved						

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low 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.

Sample Location: Big Branch @ Rd. 5

Collection Date/Time: 09/13/2021 12:10

Field ID: G2TLHR0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2275550	EPA 180.1 Rev. 2.0	Turbidity	4.0		NTU	P403709	
	EPA 300.0 Rev. 2.1	Chloride	2.8		mg Cl/L	P403798	
		Sulfate	0.20	U	mg SO4/L	P403803	
	SM 2120 B-2011	Color (true)	170		PCU	P403712	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P403815	
	SM 2540 C-2011	TDS	28		mg/L	P404173	
	SM 2540 D-2011	TSS	4	I	mg/L	P404001	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P403816	
2275552	EPA 350.1 Rev. 2.0	Ammonia-N	0.077		mg N/L	P403833	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.52		mg N/L	P403879	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.011		mg N/L	P403755	
	EPA 365.1 Rev. 2.0	Total-P	0.010		mg P/L	P403772	
	SM 5310 B-2011	Organic Carbon	15		mg C/L	P404047	
2275554	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P403705	
2275569	EPA 8321B	Acesulfame K	0.10	U	ug/L	P403676	
		2,4-D	0.0020	U	ug/L	P403651	MS
		2,4,5-T	0.0040	U	ug/L	P403651	
		AMPA	0.10	U	ug/L	P403676	
		Acetaminophen	0.0080	U	ug/L	P403651	
		Acetamiprid	0.0020	U	ug/L	P403651	
		Endothall	0.25	U	ug/L	P403676	
		Glufosinate	0.10	U	ug/L	P403676	
		Glyphosate	0.10	U	ug/L	P403676	
		Afidopyropen	0.0020	U	ug/L	P403651	
		Bentazon	8.0E-04	U	ug/L	P403651	
		Sucralose	0.010	U	ug/L	P403676	
		Benzovindiflupyr	0.0020	U	ug/L	P403651	
		Carbamazepine	8.0E-04	U	ug/L	P403651	
		Clothianidin	0.0020	U	ug/L	P403651	
		Dinotefuran	0.0020	U	ug/L	P403651	
		Diuron	0.0020	U	ug/L	P403651	
		Fenuron	0.016	U	ug/L	P403651	
		Fluridone	8.0E-04	U	ug/L	P403651	
		Imazapyr	0.051		ug/L	P403651	
		Hydrocodone	0.0020	U	ug/L	P403651	
		Ibuprofen	0.020	U	ug/L	P403651	
		Imidacloprid	0.0020	U	ug/L	P403651	
		Linuron	0.0040	U	ug/L	P403651	
		Mandestrobin	0.0020	U	ug/L	P403651	
		MCP	0.0020	U	ug/L	P403651	MS
		Naproxen	0.0080	U	ug/L	P403651	MS
		Primidone	0.0040	U	ug/L	P403651	
		Pyraclostrobin	0.0020	U	ug/L	P403651	

Field ID: G2TLHR0049

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2275569	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P403651	
		Tolfenpyrad	0.0020	U	ug/L	P403651	
		Triclopyr	0.0040	U	ug/L	P403651	MS
2275573	EPA 200.7 Rev. 4.4	Barium	7.7		ug/L	P403690	
		Calcium	1.15		mg/L	P403690	
		Iron	1.34E+03		ug/L	P403690	
		Magnesium	0.38		mg/L	P403690	
		Manganese	14.2		ug/L	P403690	
		Potassium	0.31	I	mg/L	P403690	
		Sodium	1.8	I	mg/L	P403690	
		Zinc	5.0	U	ug/L	P403690	
	EPA 200.8 Rev. 5.4	Aluminum	437		ug/L	P403690	
		Antimony	0.050	U	ug/L	P403690	
		Arsenic	0.26		ug/L	P403690	
		Beryllium	0.029	I	ug/L	P403690	
		Boron**	9.6		ug/L	P403690	
		Cadmium	0.020	U	ug/L	P403690	
		Chromium	0.51	I	ug/L	P403690	
		Copper	0.40	U	ug/L	P403690	
		Lead	0.65		ug/L	P403690	
		Nickel	0.50	U	ug/L	P403690	
	SM 2340B	Selenium	0.20	U	ug/L	P403690	
		Silver	0.010	U	ug/L	P403690	
		Thallium	0.10	U	ug/L	P403690	
		Hardness	4.5		mg/L	P403690	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low 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 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample.
EPA 200.8 Rev. 5.4: The lead result was confirmed in the undigested sample on 09/17/2021.

Sample Location: Stone Mill Creek Upstream S Dianna St.

Collection Date/Time: 09/13/2021 12:40

Field ID: G2TLHR0046

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2275544	EPA 180.1 Rev. 2.0	Turbidity	6.8		NTU	P403709	
	EPA 300.0 Rev. 2.1	Chloride	2.4		mg Cl/L	P403798	
		Sulfate	0.44	I	mg SO4/L	P403803	
		Color (true)	330		PCU	P403712	
	SM 2120 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P403815	
	SM 2540 C-2011	TDS	40		mg/L	P404172	
	SM 2540 D-2011	TSS	8	I	mg/L	P404000	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P403816	
2275545	EPA 350.1 Rev. 2.0	Ammonia-N	0.22		mg N/L	P403833	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.88		mg N/L	P403879	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P403755	
	EPA 365.1 Rev. 2.0	Total-P	0.020		mg P/L	P403772	
	SM 5310 B-2011	Organic Carbon	25		mg C/L	P404047	
2275546	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.005	I	mg P/L	P403705	
2275572	EPA 200.7 Rev. 4.4	Barium	8.0		ug/L	P403690	
		Calcium	1.31		mg/L	P403690	
		Iron	2.27E+03		ug/L	P403690	
		Magnesium	0.50		mg/L	P403690	
		Manganese	15.1		ug/L	P403690	
		Potassium	0.47	I	mg/L	P403690	
		Sodium	1.6	I	mg/L	P403690	
		Zinc	17	I	ug/L	P403690	
	EPA 200.8 Rev. 5.4	Aluminum	702		ug/L	P403690	
		Antimony	0.050	U	ug/L	P403690	
		Arsenic	0.47		ug/L	P403690	
		Beryllium	0.028	I	ug/L	P403690	
		Boron**	10.8		ug/L	P403690	
		Cadmium	0.020	U	ug/L	P403690	
		Chromium	0.79	I	ug/L	P403690	
		Copper	0.40	U	ug/L	P403690	
		Lead	0.89		ug/L	P403690	
		Nickel	0.77	I	ug/L	P403690	
		Selenium	0.21	I	ug/L	P403690	
		Silver	0.010	U	ug/L	P403690	
		Thallium	0.10	U	ug/L	P403690	
	SM 2340B	Hardness	5.3		mg/L	P403690	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low 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 09/17/2021.

Sample Location: Dead Lakes West Arm

Collection Date/Time: 09/13/2021 13:20

Field ID: G2TLHR0048

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2275538	EPA 180.1 Rev. 2.0	Turbidity	3.4		NTU	P403709	
	EPA 300.0 Rev. 2.1	Chloride	2.3		mg Cl/L	P403798	
		Sulfate	0.39	I	mg SO4/L	P403803	
	SM 2120 B-2011	Color (true)	270		PCU	P403712	
	SM 2320 B-2011	Total Alkalinity	1.3	I	mg CaCO3/L	P403815	
	SM 2540 C-2011	TDS	42		mg/L	P404172	
	SM 2540 D-2011	TSS	6	I	mg/L	P404000	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P403816	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.060		mg N/L	P403833	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.69		mg N/L	P403879	
2275540	EPA 353.2 Rev. 2.0	NO2NO3-N	0.020		mg N/L	P403755	
	EPA 365.1 Rev. 2.0	Total-P	0.018		mg P/L	P403772	
	SM 5310 B-2011	Organic Carbon	21		mg C/L	P404047	
	EPA 365.1 Rev. 2.0	O-Phosphate-P	0.004	U	mg P/L	P403705	
	dissolved						

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low 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.

Sample Location: Apalachicola River 500m From Lola Landing Boat Ramp

Collection Date/Time: 09/13/2021 14:20

Field ID: G2TLHR0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2275551	EPA 180.1 Rev. 2.0	Turbidity	9.0		NTU	P403709	
	EPA 300.0 Rev. 2.1	Chloride	5.0		mg Cl/L	P403798	
		Sulfate	4.0		mg SO4/L	P403803	
	SM 2120 B-2011	Color (true)	27		PCU	P403712	
	SM 2320 B-2011	Total Alkalinity	47		mg CaCO3/L	P403815	
	SM 2540 C-2011	TDS	77		mg/L	P404173	
	SM 2540 D-2011	TSS	13		mg/L	P404001	
	SM 4500 F-C-2011	Fluoride	0.060	I	mg F/L	P403816	
2275553	EPA 350.1 Rev. 2.0	Ammonia-N	0.015		mg N/L	P403887	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.31		mg N/L	P403929	MS
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.46		mg N/L	P403755	
	EPA 365.1 Rev. 2.0	Total-P	0.030		mg P/L	P403772	
	SM 5310 B-2011	Organic Carbon	4.0		mg C/L	P404047	
2275555	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.007	I	mg P/L	P403705	
2275570	EPA 8321B	Acesulfame K	0.10	U	ug/L	P403676	
		2,4-D	0.0088		ug/L	P403651	MS
		2,4,5-T	0.0040	U	ug/L	P403651	
		AMPA	0.10	U	ug/L	P403676	
		Acetaminophen	0.0080	U	ug/L	P403651	
		Acetamiprid	0.0020	U	ug/L	P403651	
		Endothall	0.25	U	ug/L	P403676	
		Glufosinate	0.10	U	ug/L	P403676	
		Glyphosate	0.10	U	ug/L	P403676	
		Afidopyropen	0.0020	U	ug/L	P403651	
		Bentazon	0.014		ug/L	P403651	
		Sucralose	0.70		ug/L	P403676	
		Benzovindiflupyr	0.0020	U	ug/L	P403651	
		Carbamazepine	0.0012	I	ug/L	P403651	
		Clothianidin	0.0020	U	ug/L	P403651	
		Dinotefuran	0.0024	I	ug/L	P403651	
		Diuron	0.029		ug/L	P403651	
		Fenuron	0.016	U	ug/L	P403651	
		Fluridone	0.0019	I	ug/L	P403651	
		Imazapyr	0.029		ug/L	P403651	
		Hydrocodone	0.0020	U	ug/L	P403651	
		Ibuprofen	0.020	U	ug/L	P403651	
		Imidacloprid	0.0040	I	ug/L	P403651	
		Linuron	0.0040	U	ug/L	P403651	
		Mandestrobin	0.0020	U	ug/L	P403651	
		MCP	0.0020	U	ug/L	P403651	MS
		Naproxen	0.0080	U	ug/L	P403651	MS
		Primidone	0.0040	U	ug/L	P403651	

Field ID: G2TLHR0044

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2275570	EPA 8321B	Pyraclostrobin	0.0020	U	ug/L	P403651	
		Thiamethoxam	0.0020	U	ug/L	P403651	
		Tolfenpyrad	0.0020	U	ug/L	P403651	
		Triclopyr	0.0040	U	ug/L	P403651	MS
2275574	EPA 200.7 Rev. 4.4	Barium	22.9		ug/L	P403690	
		Calcium	17.5		mg/L	P403690	
		Iron	770		ug/L	P403690	
		Magnesium	2.04		mg/L	P403690	
		Manganese	86.7		ug/L	P403690	
		Potassium	1.8		mg/L	P403690	
		Sodium	5.2		mg/L	P403690	
	EPA 200.8 Rev. 5.4	Zinc	5.0	U	ug/L	P403690	
		Aluminum	288		ug/L	P403690	
		Antimony	0.079	I	ug/L	P403690	
		Arsenic	0.51		ug/L	P403690	
		Beryllium	0.029	I	ug/L	P403690	
		Boron**	17.7		ug/L	P403690	
		Cadmium	0.020	U	ug/L	P403690	
		Chromium	0.61	I	ug/L	P403690	
		Copper	0.71	I	ug/L	P403690	
		Lead	0.29	I	ug/L	P403690	
		Nickel	0.50	U	ug/L	P403690	
		Selenium	0.20	U	ug/L	P403690	
		Silver	0.010	U	ug/L	P403690	
		Thallium	0.10	U	ug/L	P403690	
	SM 2340B	Hardness	52.2		mg/L	P403690	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: EQB

Collection Date/Time: 09/13/2021 14:00

Field ID: EB_09132021

Matrix: W-EQPMT-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2275556	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P403710	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P403798	
		Sulfate	0.20	U	mg SO4/L	P403803	
	SM 2120 B-2011	Color (true)	2.5	U	PCU	P403713	
	SM 2320 B-2011	Total Alkalinity	0.65	U	mg CaCO3/L	P403815	
	SM 2540 C-2011	TDS	15	U	mg/L	P404172	
	SM 2540 D-2011	TSS	2	U	mg/L	P404000	
	SM 4500 F-C-2011	Fluoride	0.035	U	mg F/L	P403816	
2275557	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P403887	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P403827	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P403756	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P403772	
	SM 5310 B-2011	Organic Carbon	0.53	I	mg C/L	P404047	
2275558	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P403706	
2275571	EPA 8321B	Acesulfame K	0.10	U	ug/L	P403676	
		2,4-D	0.0020	U	ug/L	P403651	MS
		2,4,5-T	0.0040	U	ug/L	P403651	
		AMPA	0.10	U	ug/L	P403676	
		Acetaminophen	0.0080	U	ug/L	P403651	
		Acetamiprid	0.0020	U	ug/L	P403651	
		Endothall	0.25	U	ug/L	P403676	
		Glufosinate	0.10	U	ug/L	P403676	
		Glyphosate	0.10	U	ug/L	P403676	
		Afidopyropen	0.0020	U	ug/L	P403651	
		Bentazon	8.0E-04	U	ug/L	P403651	
		Sucralose	0.010	U	ug/L	P403676	
		Benzovindiflupyr	0.0020	U	ug/L	P403651	
		Carbamazepine	8.0E-04	U	ug/L	P403651	
		Clothianidin	0.0020	U	ug/L	P403651	
		Dinotefuran	0.0020	U	ug/L	P403651	
		Diuron	0.0020	U	ug/L	P403651	
		Fenuron	0.043	I	ug/L	P403651	
		Fluridone	8.0E-04	U	ug/L	P403651	
		Imazapyr	0.0040	U	ug/L	P403651	
		Hydrocodone	0.0020	U	ug/L	P403651	
		Ibuprofen	0.020	U	ug/L	P403651	
		Imidacloprid	0.0020	U	ug/L	P403651	
		Linuron	0.0040	U	ug/L	P403651	
		Mandestrobin	0.0020	U	ug/L	P403651	
		MCP	0.0020	U	ug/L	P403651	MS
		Naproxen	0.0080	U	ug/L	P403651	MS
		Primidone	0.0040	U	ug/L	P403651	
		Pyraclostrobin	0.0020	U	ug/L	P403651	

Field ID: EB_09132021

Matrix: W-EQPMT-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2275571	EPA 8321B	Thiamethoxam	0.0020	U	ug/L	P403651	
		Tolfenpyrad	0.0020	U	ug/L	P403651	
		Triclopyr	0.0040	U	ug/L	P403651	MS
2275575	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P403690	
		Calcium	0.075	U	mg/L	P403690	
		Iron	30	U	ug/L	P403690	
		Magnesium	0.040	U	mg/L	P403690	
		Manganese	1.0	U	ug/L	P403690	
		Potassium	0.30	U	mg/L	P403690	
		Sodium	0.50	U	mg/L	P403690	
		Zinc	5.0	U	ug/L	P403690	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P403690	
		Antimony	0.050	U	ug/L	P403690	
		Arsenic	0.050	U	ug/L	P403690	
		Beryllium	0.010	U	ug/L	P403690	
		Boron**	2.0	U	ug/L	P403690	
		Cadmium	0.020	U	ug/L	P403690	
		Chromium	0.40	U	ug/L	P403690	
		Copper	0.40	U	ug/L	P403690	
		Lead	0.20	U	ug/L	P403690	
		Nickel	0.50	U	ug/L	P403690	
	SM 2340B	Selenium	0.20	U	ug/L	P403690	
		Silver	0.010	U	ug/L	P403690	
		Thallium	0.10	U	ug/L	P403690	
		Hardness	0.35	U	mg/L	P403690	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

SM 5310 B-2011: The result was confirmed on 09/24/2021.

EPA 8321B: MS accuracy for bentazon could not be assessed due to high concentration of parameter in the spiked sample. Results confirmed in re-extraction.

Sample Location: Dead Lakes @ SR22

Collection Date/Time: 09/13/2021 14:45

Field ID: G2TLHR0047

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2275539	EPA 180.1 Rev. 2.0	Turbidity	5.6		NTU	P403709	
	EPA 300.0 Rev. 2.1	Chloride	1.8		mg Cl/L	P403798	
		Sulfate	0.37	I	mg SO4/L	P403803	
	SM 2120 B-2011	Color (true)	120		PCU	P403712	
	SM 2320 B-2011	Total Alkalinity	47		mg CaCO3/L	P403815	
	SM 2540 C-2011	TDS	84		mg/L	P404172	
	SM 2540 D-2011	TSS	5	I	mg/L	P404000	
	SM 4500 F-C-2011	Fluoride	0.035	I	mg F/L	P403816	
2275541	EPA 350.1 Rev. 2.0	Ammonia-N	0.026		mg N/L	P403833	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.42		mg N/L	P403879	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.25		mg N/L	P403755	
	EPA 365.1 Rev. 2.0	Total-P	0.034		mg P/L	P403772	
	SM 5310 B-2011	Organic Carbon	11		mg C/L	P404047	
2275543	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P403705	

Ref. Method and Comment:

SM 2540 D-2011: Batch relative percent difference is unavailable because of low 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.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P403709

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P403710

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P403690

Component	Result	Code	Units
Barium	1.0	U	ug/L
Calcium	0.075	U	mg/L
Iron	30	U	ug/L
Magnesium	0.040	U	mg/L
Manganese	1.0	U	ug/L
Potassium	0.30	U	mg/L
Sodium	0.50	U	mg/L
Zinc	5.0	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P403690

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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
Copper	0.40	U	ug/L
Lead	0.20	U	ug/L
Nickel	0.50	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L
Thallium	0.10	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403798

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403803

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403833

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403887

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403827

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403879

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403929

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403755

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403756

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403772

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403705

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403706

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

Reference Method: EPA 8321B
Batch ID: P403651

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	0.016	U	ug/L
Fluridone	8.0E-04	U	ug/L
Hydrocodone	0.0020	U	ug/L
Ibuprofen	0.020	U	ug/L
Imazapyr	0.0040	U	ug/L
Imidacloprid	0.0020	U	ug/L
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCPP	0.0020	U	ug/L
Naproxen	0.0080	U	ug/L
Primidone	0.0040	U	ug/L
Pyraclostrobin	0.0020	U	ug/L
Thiamethoxam	0.0020	U	ug/L
Tolfenpyrad	0.0020	U	ug/L
Triclopyr	0.0040	U	ug/L

Reference Method: EPA 8321B
Batch ID: P403676

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: SM 2120 B-2011
Batch ID: P403712

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Quality Assurance Report

Method Blank Results

Reference Method: SM 2120 B-2011
Batch ID: P403713

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-2011
Batch ID: P403815

Component	Result	Code	Units
Total Alkalinity	0.65	U	mg CaCO ₃ /L

Reference Method: SM 2540 C-2011
Batch ID: P404172

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2011
Batch ID: P404173

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P404000

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2011
Batch ID: P404001

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-2011
Batch ID: P403816

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-2011
Batch ID: P404047

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P403690

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	104		P	85 - 115
Calcium	103		P	85 - 115
Iron	108		P	85 - 115
Magnesium	110		P	85 - 115
Manganese	104		P	85 - 115
Potassium	104		P	85 - 115
Sodium	106		P	85 - 115
Zinc	104		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P403690

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	104		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	100		P	85 - 115
Beryllium	98.9		P	85 - 115
Boron	107		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	102		P	85 - 115
Copper	100		P	85 - 115
Lead	102		P	85 - 115
Nickel	100		P	85 - 115
Selenium	101		P	85 - 115
Silver	103		P	85 - 115
Thallium	105		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403798

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403803

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403833

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	99.4		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403887

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	98.4		P	90 - 110

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403827

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403879

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	95.8		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403929

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403755

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403756

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403772

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403705

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403706

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

Reference Method: EPA 8321B
Batch ID: P403651

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	102		P	40 - 150
2,4,5-T	94.4		P	40 - 150
Acetaminophen	88.6		P	30 - 150
Acetamiprid	86.9		P	40 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P403651

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Afidopyropen	72.0		P	40 - 150
Bentazon	137		P	30 - 150
Benzovindiflupyr	76.2		P	40 - 150
Carbamazepine	92.0		P	40 - 150
Clothianidin	95.9		P	40 - 150
Dinotefuran	78.4		P	40 - 150
Diuron	92.9		P	40 - 150
Fenuron	87.0		P	40 - 150
Fluridone	90.4		P	40 - 150
Hydrocodone	86.6		P	40 - 150
Ibuprofen	72.3		P	40 - 150
Imazapyr	81.7		P	40 - 150
Imidacloprid	85.7		P	40 - 150
Linuron	80.4		P	40 - 150
Mandestrobin	85.0		P	40 - 150
MCPP	116		P	40 - 150
Naproxen	78.8		P	40 - 150
Primidone	90.0		P	40 - 150
Pyraclostrobin	76.3		P	40 - 150
Thiamethoxam	83.4		P	40 - 150
Tolfenpyrad	44.1		P	30 - 150
Triclopyr	96.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P403676

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	92.8		P	40 - 150
AMPA	95.3		P	40 - 160
Endothall	85.4		P	40 - 150
Glufosinate	95.0		P	40 - 160
Glyphosate	89.3		P	40 - 160
Sucralose	86.5		P	40 - 150

Reference Method: SM 2120 B-2011
Batch ID: P403712

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	85 - 115

Reference Method: SM 2120 B-2011
Batch ID: P403713

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.6		P	85 - 115

Reference Method: SM 2320 B-2011
Batch ID: P403815

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 4500 F-C-2011
Batch ID: P403816

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	99.6		P	93 - 104

Reference Method: SM 5310 B-2011
Batch ID: P404047

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	96.6		P	85 - 115

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P403690

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275604	Barium	101	101	P/P	80 - 120
2275604	Calcium	101		P	80 - 120
2275604	Iron	107	106	P/P	80 - 120
2275604	Magnesium	108	105	P/P	80 - 120
2275604	Manganese	101	100	P/P	80 - 120
2275604	Potassium	104	104	P/P	80 - 120
2275604	Sodium	105	103	P/P	80 - 120
2275604	Zinc	105	104	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4

Batch ID: P403690

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275604	Aluminum	100	99.3	P/P	80 - 120
2275604	Antimony	106	105	P/P	80 - 120
2275604	Arsenic	99.1	97.8	P/P	80 - 120
2275604	Beryllium	99.4	95.9	P/P	80 - 120
2275604	Boron	103	104	P/P	80 - 120
2275604	Cadmium	106	105	P/P	80 - 120
2275604	Chromium	104	103	P/P	80 - 120
2275604	Copper	95.2	94.7	P/P	80 - 120
2275604	Lead	99.8	102	P/P	80 - 120
2275604	Nickel	97.9	94.9	P/P	80 - 120
2275604	Selenium	99.4	98.5	P/P	80 - 120
2275604	Silver	103	101	P/P	80 - 120
2275604	Thallium	104	105	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P403798

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275508	Chloride	98.6		P	90 - 110
2275583	Chloride	97.2		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Batch ID: P403803

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275508	Sulfate	98.6		P	90 - 110
2275583	Sulfate	99.1		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P403833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275510	Ammonia-N	98.8	99.8	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Batch ID: P403887

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275587	Ammonia-N	98.6	99.4	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403827

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275586	Kjeldahl Nitrogen	97.4	99.5	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403929

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275678	Kjeldahl Nitrogen	92.1	89.0	P/F	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403755

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275511	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403756

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275678	NO2NO3-N	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P403772

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275541	Total-P	107	107	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403705

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275513	O-Phosphate-P	99.4	99.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P403706

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275589	O-Phosphate-P	98.0	98.9	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P403651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2274827	2,4-D	153	139	F/P	40 - 150
2274827	2,4,5-T	143	123	P/P	40 - 150
2274827	Acetaminophen	53.8	55.6	P/P	30 - 150
2274827	Acetamiprid	93.8	95.8	P/P	40 - 150
2274827	Afidopyropen	106	93.0	P/P	40 - 150
2274827	Benzovindiflupyr	91.6	92.5	P/P	40 - 150
2274827	Carbamazepine	89.3	92.5	P/P	40 - 150
2274827	Clothianidin	53.4	55.2	P/P	40 - 150
2274827	Dinotefuran	98.7	98.8	P/P	40 - 150
2274827	Diuron	92.7	99.6	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B

Batch ID: P403651

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2274827	Fenuron	97.8	93.3	P/P	40 - 150
2274827	Fluridone	110	101	P/P	40 - 150
2274827	Hydrocodone	130	119	P/P	40 - 150
2274827	Ibuprofen	127	125	P/P	40 - 150
2274827	Imazapyr	128	110	P/P	40 - 150
2274827	Imidacloprid	97.3	108	P/P	40 - 150
2274827	Linuron	81.9	77.8	P/P	40 - 150
2274827	Mandestrobin	96.2	103	P/P	40 - 150
2274827	MCPP	183	170	F/F	40 - 150
2274827	Naproxen	151	142	F/P	40 - 150
2274827	Primidone	50.5	66.4	P/P	40 - 150
2274827	Pyraclostrobin	85.4	88.1	P/P	40 - 150
2274827	Thiamethoxam	105	105	P/P	40 - 150
2274827	Tolfenpyrad	53.9	56.9	P/P	30 - 150
2274827	Triclopyr	157	138	F/P	40 - 150

Reference Method: EPA 8321B

Batch ID: P403676

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275530	Acesulfame K	96.1	91.3	P/P	40 - 150
2275530	AMPA	99.1	99.3	P/P	40 - 160
2275530	Endothall	91.1	91.6	P/P	40 - 150
2275530	Glufosinate	93.6	93.3	P/P	40 - 160
2275530	Glyphosate	87.4	85.4	P/P	40 - 160
2275530	Sucralose	92.9	92.0	P/P	40 - 150

Reference Method: SM 4500 F-C-2011

Batch ID: P403816

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275592	Fluoride	98.6	97.5	P/P	92 - 107

Reference Method: SM 5310 B-2011

Batch ID: P404047

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2275548	Organic Carbon	103		P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P403709

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275508	Turbidity	4.73	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P403710

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275649	Turbidity	4.12	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P403690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275604	Barium	0.825	Spike	P	0 - 20
2275604	Calcium	0.678	Spike	P	0 - 20
2275604	Iron	1.51	Spike	P	0 - 20
2275604	Magnesium	1.37	Spike	P	0 - 20
2275604	Manganese	0.707	Spike	P	0 - 20
2275604	Potassium	0.196	Spike	P	0 - 20
2275604	Sodium	1.38	Spike	P	0 - 20
2275604	Zinc	1.41	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P403690

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275604	Aluminum	0.983	Spike	P	0 - 20
2275604	Antimony	1.39	Spike	P	0 - 20
2275604	Arsenic	1.31	Spike	P	0 - 20
2275604	Beryllium	3.65	Spike	P	0 - 20
2275604	Boron	0.703	Spike	P	0 - 20
2275604	Cadmium	0.538	Spike	P	0 - 20
2275604	Chromium	1.06	Spike	P	0 - 20
2275604	Copper	0.595	Spike	P	0 - 20
2275604	Lead	2.30	Spike	P	0 - 20
2275604	Nickel	3.12	Spike	P	0 - 20
2275604	Selenium	0.961	Spike	P	0 - 20
2275604	Silver	1.99	Spike	P	0 - 20
2275604	Thallium	0.747	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403798

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275508	Chloride	0.478	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P403803

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275508	Sulfate	4.12	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275510	Ammonia-N	0.634	Spike	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P403887

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275587	Ammonia-N	0.808	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403827

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275586	Kjeldahl Nitrogen	1.91	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403879

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275690	Kjeldahl Nitrogen	14.3	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P403929

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275678	Kjeldahl Nitrogen	1.82	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403755

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275511	NO2NO3-N	0.426	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P403756

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275678	NO2NO3-N	0.324	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0

Batch ID: P403772

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275541	Total-P	0.455	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P403705

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275513	O-Phosphate-P	0.144	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Batch ID: P403706

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275589	O-Phosphate-P	0.914	Spike	P	0 - 20

Reference Method: EPA 8321B

Batch ID: P403651

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2274827	2,4-D	8.88	Spike	P	0 - 30
2274827	2,4,5-T	15.3	Spike	P	0 - 30
2274827	Acetaminophen	3.16	Spike	P	0 - 30
2274827	Acetamiprid	2.15	Spike	P	0 - 30
2274827	Afidopyropen	12.6	Spike	P	0 - 30
2274827	Bentazon	6.63	Spike	P	0 - 30
2274827	Benzovindiflupyr	0.981	Spike	P	0 - 30
2274827	Carbamazepine	3.47	Spike	P	0 - 30
2274827	Clothianidin	3.02	Spike	P	0 - 30
2274827	Dinotefuran	0.114	Spike	P	0 - 30
2274827	Diuron	6.69	Spike	P	0 - 30
2274827	Fenuron	4.65	Spike	P	0 - 30
2274827	Fluridone	5.09	Spike	P	0 - 30
2274827	Hydrocodone	8.95	Spike	P	0 - 30
2274827	Ibuprofen	1.84	Spike	P	0 - 30
2274827	Imazapyr	9.34	Spike	P	0 - 30
2274827	Imidacloprid	9.08	Spike	P	0 - 30
2274827	Linuron	5.19	Spike	P	0 - 30
2274827	Mandestrobin	7.19	Spike	P	0 - 30
2274827	MCPP	7.17	Spike	P	0 - 30
2274827	Naproxen	6.14	Spike	P	0 - 30
2274827	Primidone	27.1	Spike	P	0 - 30
2274827	Pyraclostrobin	3.16	Spike	P	0 - 30
2274827	Thiamethoxam	0.294	Spike	P	0 - 30
2274827	Tolfenpyrad	5.44	Spike	P	0 - 30
2274827	Triclopyr	13.0	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8321B

Batch ID: P403676

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275530	Acesulfame K	5.07	Spike	P	0 - 30
2275530	AMPA	0.211	Spike	P	0 - 30
2275530	Endothall	0.561	Spike	P	0 - 30
2275530	Glufosinate	0.339	Spike	P	0 - 30
2275530	Glyphosate	2.16	Spike	P	0 - 30
2275530	Sucralose	0.689	Spike	P	0 - 30

Reference Method: SM 2120 B-2011

Batch ID: P403712

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275515	Color (true)	1.78	Sample	P	0 - 20

Reference Method: SM 2120 B-2011

Batch ID: P403713

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275660	Color (true)	2.20	Sample	P	0 - 20

Reference Method: SM 2320 B-2011

Batch ID: P403815

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275592	Total Alkalinity	1.38	Sample	P	0 - 5.2

Reference Method: SM 2540 C-2011

Batch ID: P404172

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275509	TDS	7.41	Sample	P	0 - 10

Reference Method: SM 2540 C-2011

Batch ID: P404173

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275585	TDS	1.80	Sample	P	0 - 10

Reference Method: SM 4500 F-C-2011

Batch ID: P403816

Replicated

Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275592	Fluoride	0.967	Spike	P	0 - 2.1

Quality Assurance Report Precision

Reference Method: SM 5310 B-2011
Batch ID: P404047

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2275548	Organic Carbon	0.264	Spike	P	0 - 20

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

Quality Assurance Report Surrogates

Lab Sample ID: 2275569

Field Sample ID: G2TLHR0049

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	150	P	30 - 160
EPA 8321B	2,4-D-d3	150	P	30 - 160
EPA 8321B	Acetaminophen-d4	48.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	48.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.8	P	30 - 160
EPA 8321B	Carbamazepine-d10	78.8	P	30 - 160
EPA 8321B	Carbaryl-d7	67.5	P	30 - 160
EPA 8321B	Carbaryl-d7	67.5	P	30 - 160
EPA 8321B	Diuron-d6	77.3	P	30 - 160
EPA 8321B	Diuron-d6	77.3	P	30 - 160
EPA 8321B	Endothall-d6	93.8	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	84.4	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	81.1	P	30 - 160
EPA 8321B	Primidone-d5	55.1	P	30 - 160
EPA 8321B	Primidone-d5	55.1	P	30 - 160
EPA 8321B	Sucralose-d6	89.3	P	30 - 160

Lab Sample ID: 2275570

Field Sample ID: G2TLHR0044

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	109	P	30 - 160
EPA 8321B	2,4-D-d3	109	P	30 - 160
EPA 8321B	Acetaminophen-d4	55.9	P	30 - 160
EPA 8321B	Acetaminophen-d4	55.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	80.3	P	30 - 160
EPA 8321B	Carbaryl-d7	77.2	P	30 - 160
EPA 8321B	Carbaryl-d7	77.2	P	30 - 160
EPA 8321B	Diuron-d6	77.8	P	30 - 160
EPA 8321B	Diuron-d6	77.8	P	30 - 160
EPA 8321B	Endothall-d6	83.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	90.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	90.1	P	30 - 160
EPA 8321B	Primidone-d5	45.2	P	30 - 160
EPA 8321B	Primidone-d5	45.2	P	30 - 160
EPA 8321B	Sucralose-d6	91.4	P	30 - 160

Lab Sample ID: 2275571

Field Sample ID: EB_09132021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	82.4	P	30 - 160
EPA 8321B	2,4-D-d3	82.4	P	30 - 160
EPA 8321B	Acetaminophen-d4	68.6	P	30 - 160
EPA 8321B	Acetaminophen-d4	68.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	81.4	P	30 - 160
EPA 8321B	Carbaryl-d7	77.1	P	30 - 160
EPA 8321B	Carbaryl-d7	77.1	P	30 - 160

Quality Assurance Report Surrogates

Lab Sample ID: 2275571

Field Sample ID: EB_09132021

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	Diuron-d6	82.2	P	30 - 160
EPA 8321B	Diuron-d6	82.2	P	30 - 160
EPA 8321B	Endothall-d6	79.7	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	90.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	136	P	30 - 160
EPA 8321B	Ibuprofen-d3	136	P	30 - 160
EPA 8321B	Primidone-d5	54.9	P	30 - 160
EPA 8321B	Primidone-d5	54.9	P	30 - 160
EPA 8321B	Sucralose-d6	92.6	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A107781

Included Lab Sample IDs: 2275542, 2275543, 2275546, 2275549, 2275554, 2275555, 2275558

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	101	99.1	P/P	90 - 110
O-Phosphate-P	99.1	99.5	P/P	90 - 110
O-Phosphate-P	99.8	101	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A107782

Included Lab Sample IDs: 2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	100	102	P/P	95 - 105

Reference Method: SM 2120 B-2011

Run ID: A107783

Included Lab Sample IDs: 2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	100	P/P	90 - 115
Color (true)	99.9	102	P/P	90 - 115
Color (true)	100	101	P/P	90 - 115

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A107789

Included Lab Sample IDs: 2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	99.7	100	P/P	90 - 110
Sulfate	101	101	P/P	90 - 110
Sulfate	99.7	101	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A107792

Included Lab Sample IDs: 2275569, 2275570, 2275571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	107	131	P/P	50 - 150
2,4-D	131	113	P/P	50 - 150
2,4,5-T	102	107	P/P	50 - 150
2,4,5-T	107	111	P/P	50 - 150
Acetaminophen	101	100	P/P	60 - 160
Acetaminophen	102	101	P/P	60 - 160
Acetamiprid	101	98.6	P/P	50 - 150
Acetamiprid	98.6	94.3	P/P	50 - 150
Afidopyropen	102	106	P/P	50 - 150
Afidopyropen	103	102	P/P	50 - 150
Bentazon	120	127	P/P	50 - 160
Bentazon	127	125	P/P	50 - 160
Benzovindiflupyr	105	105	P/P	50 - 150
Benzovindiflupyr	105	105	P/P	50 - 150
Carbamazepine	104	107	P/P	60 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A107792

Included Lab Sample IDs: 2275569, 2275570, 2275571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Carbamazepine	107	103	P/P	60 - 150
Clothianidin	78.3	85.0	P/P	60 - 150
Clothianidin	85.0	81.3	P/P	60 - 150
Dinotefuran	85.8	93.3	P/P	50 - 150
Dinotefuran	93.3	87.7	P/P	50 - 150
Diuron	106	99.3	P/P	60 - 160
Diuron	110	106	P/P	60 - 160
Fenuron	103	104	P/P	60 - 150
Fenuron	104	100	P/P	60 - 150
Fluridone	108	112	P/P	60 - 160
Fluridone	112	104	P/P	60 - 160
Hydrocodone	94.7	96.0	P/P	60 - 150
Hydrocodone	96.0	94.4	P/P	60 - 150
Ibuprofen	125	145	P/P	50 - 160
Ibuprofen	145	132	P/P	50 - 160
Imazapyr	84.3	96.9	P/P	50 - 150
Imazapyr	95.5	84.3	P/P	50 - 150
Imidacloprid	82.7	94.3	P/P	60 - 150
Imidacloprid	94.3	85.7	P/P	60 - 150
Linuron	107	109	P/P	60 - 150
Linuron	109	107	P/P	60 - 150
Mandestrobin	104	105	P/P	50 - 150
Mandestrobin	105	104	P/P	50 - 150
MCPP	116	126	P/P	50 - 150
MCPP	126	109	P/P	50 - 150
Naproxen	120	125	P/P	50 - 160
Naproxen	125	92.8	P/P	50 - 160
Primidone	109	88.6	P/P	60 - 150
Primidone	88.6	83.0	P/P	60 - 150
Pyraclostrobin	110	111	P/P	60 - 150
Pyraclostrobin	111	109	P/P	60 - 150
Thiamethoxam	80.0	74.6	P/P	50 - 150
Thiamethoxam	86.2	80.0	P/P	50 - 150
Tolfenpyrad	104	108	P/P	60 - 150
Tolfenpyrad	108	116	P/P	60 - 150
Triclopyr	104	109	P/P	50 - 150
Triclopyr	109	117	P/P	50 - 150

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A107801

Included Lab Sample IDs: 2275540, 2275541, 2275545, 2275548, 2275552, 2275553, 2275557

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	102	104	P/P	90 - 110
NO2NO3-N	104	104	P/P	90 - 110

Reference Method: SM 2320 B-2011

Run ID: A107822

Included Lab Sample IDs: 2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556

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

Reference Method: SM 2320 B-2011

Run ID: A107822

Included Lab Sample IDs: 2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	101	99.1	P/P	90 - 110
Total Alkalinity	99.1	103	P/P	90 - 110

Reference Method: SM 4500 F-C-2011

Run ID: A107822

Included Lab Sample IDs: 2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107830

Included Lab Sample IDs: 2275540, 2275541, 2275545, 2275548, 2275552

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.9	98.8	P/P	90 - 110
Ammonia-N	99.5	98.9	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A107836

Included Lab Sample IDs: 2275540, 2275541, 2275545, 2275548, 2275552, 2275553, 2275557

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	100	99.8	P/P	90 - 110
Total-P	99.8	99.8	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107838

Included Lab Sample IDs: 2275572, 2275573, 2275574, 2275575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	100	101	P/P	90 - 110
Aluminum	101	102	P/P	90 - 110
Antimony	101	102	P/P	90 - 110
Antimony	98.6	101	P/P	90 - 110
Arsenic	95.2	94.0	P/P	90 - 110
Arsenic	97.1	95.2	P/P	90 - 110
Beryllium	93.3	91.9	P/P	90 - 110
Beryllium	96.1	93.3	P/P	90 - 110
Boron	102	105	P/P	90 - 110
Boron	105	106	P/P	90 - 110
Cadmium	101	102	P/P	90 - 110
Cadmium	99.2	101	P/P	90 - 110
Chromium	96.7	98.7	P/P	90 - 110
Chromium	98.7	99.4	P/P	90 - 110
Copper	92.5	91.8	P/P	90 - 110
Copper	96.3	92.5	P/P	90 - 110
Lead	96.3	97.2	P/P	90 - 110
Lead	97.2	97.1	P/P	90 - 110
Nickel	92.5	91.1	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A107838

Included Lab Sample IDs: 2275572, 2275573, 2275574, 2275575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Nickel	96.5	92.5	P/P	90 - 110
Selenium	97.1	98.3	P/P	90 - 110
Selenium	97.2	97.1	P/P	90 - 110
Silver	94.9	95.8	P/P	90 - 110
Silver	95.8	96.3	P/P	90 - 110
Thallium	102	99.9	P/P	90 - 110
Thallium	99.6	102	P/P	90 - 110

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A107840

Included Lab Sample IDs: 2275572, 2275573, 2275574, 2275575

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	96.4	98.5	P/P	95 - 105
Barium	98.5	99.9	P/P	90 - 110
Calcium	104	102	P/P	90 - 110
Calcium	99.5	104	P/P	95 - 105
Iron	100	105	P/P	95 - 105
Iron	105	102	P/P	90 - 110
Magnesium	100	105	P/P	95 - 105
Magnesium	105	102	P/P	90 - 110
Manganese	102	102	P/P	95 - 105
Manganese	102	104	P/P	90 - 110
Potassium	102	101	P/P	90 - 110
Potassium	98.3	102	P/P	95 - 105
Sodium	102	101	P/P	90 - 110
Sodium	98.6	102	P/P	95 - 105
Zinc	101	102	P/P	95 - 105
Zinc	102	105	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107853

Included Lab Sample IDs: 2275557

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	99.0	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A107858

Included Lab Sample IDs: 2275553, 2275557

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	98.8	97.9	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A107868

Included Lab Sample IDs: 2275569, 2275570, 2275571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	92.9	87.8	P/P	60 - 160
Acesulfame K	99.9	92.9	P/P	60 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A107868

Included Lab Sample IDs: 2275569, 2275570, 2275571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Endothall	77.8	66.7	P/P	60 - 160
Endothall	95.0	77.8	P/P	60 - 160
Sucralose	88.2	90.1	P/P	60 - 160
Sucralose	91.8	88.2	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A107869

Included Lab Sample IDs: 2275569, 2275570, 2275571

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	94.0	93.4	P/P	60 - 160
Glufosinate	92.0	94.2	P/P	60 - 160
Glyphosate	86.2	82.9	P/P	60 - 160

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107880

Included Lab Sample IDs: 2275540, 2275541, 2275545, 2275548, 2275552

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	100	99.1	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A107906

Included Lab Sample IDs: 2275553

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	98.7	100	P/P	90 - 110

Reference Method: SM 5310 B-2011

Run ID: A107931

Included Lab Sample IDs: 2275540, 2275541, 2275545, 2275548, 2275552, 2275553, 2275557

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.0	99.5	P/P	90 - 110
Organic Carbon	99.3	99.0	P/P	90 - 110
Organic Carbon	99.5	99.3	P/P	90 - 110

* Pass/Fail determinations are made for each bracketing calibration verification check.

Control limits for initial calibration checks may be different from those for continuing checks, depending on method requirements.
Where they are different, both control limits are provided.

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		LCS	Precision SMP	MS
EPA 180.1 Rev. 2.0	Turbidity					4.73	
	Turbidity					4.12	
EPA 200.7 Rev. 4.4	Barium	104	101	101			0.825
	Calcium	103	101				0.678
	Iron	108	107	106			1.51
	Magnesium	110	108	105			1.37
	Manganese	104	101	100			0.707
	Potassium	104	104	104			0.196
	Sodium	106	105	103			1.38
	Zinc	104	105	104			1.41
EPA 200.8 Rev. 5.4	Aluminum	104	100	99.3			0.983
	Antimony	104	106	105			1.39
	Arsenic	100	99.1	97.8			1.31
	Beryllium	98.9	99.4	95.9			3.65
	Boron	107	103	104			0.703
	Cadmium	103	106	105			0.538
	Chromium	102	104	103			1.06
	Copper	100	95.2	94.7			0.595
	Lead	102	99.8	102			2.30
	Nickel	100	97.9	94.9			3.12
	Selenium	101	99.4	98.5			0.961
	Silver	103	103	101			1.99
	Thallium	105	104	105			0.747
EPA 300.0 Rev. 2.1	Chloride	98.4	98.6	97.2		0.478	
	Sulfate	98.0	98.6	99.1		4.12	
EPA 350.1 Rev. 2.0	Ammonia-N	99.4	98.8	99.8			0.634
	Ammonia-N	98.4	98.6	99.4			0.808
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	100	97.4	99.5			1.91
	Kjeldahl Nitrogen	95.8					14.3
	Kjeldahl Nitrogen	97.1	92.1	89.0			1.82
EPA 353.2 Rev. 2.0	NO2NO3-N	102	102	102			0.426
	NO2NO3-N	104	102	102			0.324
EPA 365.1 Rev. 2.0	Total-P	106	107	107			0.455
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	100	99.4	99.2			0.144
	O-Phosphate-P	99.5	98.0	98.9			0.914
EPA 8321B	2,4-D	102	139	153			8.88
	2,4,5-T	94.4	143	123			15.3
	Acesulfame K	92.8	96.1	91.3			5.07
	Acetaminophen	88.6	55.6	53.8			3.16
	Acetamiprid	86.9	95.8	93.8			2.15
	Afidopyropen	72.0	93.0	106			12.6
	AMPA	95.3	99.1	99.3			0.211
	Bentazon	137					6.63
	Benzovindiflupyr	76.2	92.5	91.6			0.981
	Carbamazepine	92.0	92.5	89.3			3.47
	Clothianidin	95.9	55.2	53.4			3.02
	Dinotefuran	78.4	98.8	98.7			0.114
	Diuron	92.9	99.6	92.7			6.69
	Endothall	85.4	91.1	91.6			0.561
	Fenuron	87.0	93.3	97.8			4.65
	Fluridone	90.4	101	110			5.09
	Glufosinate	95.0	93.6	93.3			0.339
	Glyphosate	89.3	87.4	85.4			2.16
	Hydrocodone	86.6	119	130			8.95

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Ibuprofen	72.3	127	125		1.84
	Imazapyr	81.7	110	128		9.34
	Imidacloprid	85.7	108	97.3		9.08
	Linuron	80.4	77.8	81.9		5.19
	Mandestrobin	85.0	103	96.2		7.19
	MCCP	116	183	170		7.17
	Naproxen	78.8	142	151		6.14
	Primidone	90.0	66.4	50.5		27.1
	Pyraclostrobin	76.3	88.1	85.4		3.16
	Sucralose	86.5	92.9	92.0		0.689
	Thiamethoxam	83.4	105	105		0.294
	Tolfenpyrad	44.1	56.9	53.9		5.44
	Triclopyr	96.5	138	157		13.0
SM 2120 B-2011	Color (true)	99.6			1.78	
	Color (true)	99.6			2.20	
SM 2320 B-2011	Total Alkalinity	101			1.38	
SM 2540 C-2011	TDS				7.41	
	TDS				1.80	
SM 4500 F-C-2011	Fluoride	99.6	98.6	97.5		0.967
SM 5310 B-2011	Organic Carbon	96.6	103			0.264

Reference Method Descriptions

Method	Description	Associated Samples
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2275572, 2275573, 2275574, 2275575
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2275572, 2275573, 2275574, 2275575
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2275540, 2275541, 2275545, 2275548, 2275552, 2275553, 2275557
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2275540, 2275541, 2275545, 2275548, 2275552, 2275553, 2275557
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2275540, 2275541, 2275545, 2275548, 2275552, 2275553, 2275557
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2275540, 2275541, 2275545, 2275548, 2275552, 2275553, 2275557
EPA 365.1 Rev. 2.0 dissolved	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2275542, 2275543, 2275546, 2275549, 2275554, 2275555, 2275558
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2275569, 2275570, 2275571
SM 2120 B-2011	True Color measured at 450 nm (not valid for NPDES monitoring)	2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556
SM 2340B	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2275572, 2275573, 2275574, 2275575
SM 2540 C-2011	Total Dissolved Solids in aqueous matrices	2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556
SM 2540 D-2011	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556
SM 4500 F-C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556

Reference Method Descriptions

Method	Description	<u>Associated Samples</u>
SM 5310 B-2011	Nonpurgeable Organic Carbon in aqueous matrices	2275540, 2275541, 2275545, 2275548, 2275552, 2275553, 2275557

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 180.1 Rev. 2.0	09/13/2021			09/14/2021 16:38	Sarah A Nixon	2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556
EPA 200.7 Rev. 4.4	09/13/2021	09/14/2021 12:45	Elliott D. Healy	09/16/2021 12:18	Josef B Mick	2275575
	09/13/2021	09/14/2021 12:45	Elliott D. Healy	09/16/2021 13:07	Josef B Mick	2275572
	09/13/2021	09/14/2021 12:45	Elliott D. Healy	09/16/2021 13:44	Josef B Mick	2275573
	09/13/2021	09/14/2021 12:45	Elliott D. Healy	09/16/2021 13:50	Josef B Mick	2275574
EPA 200.8 Rev. 5.4	09/13/2021	09/14/2021 12:45	Elliott D. Healy	09/16/2021 16:09	Alexander Thompson	2275575
	09/13/2021	09/14/2021 12:45	Elliott D. Healy	09/16/2021 16:57	Alexander Thompson	2275572
	09/13/2021	09/14/2021 12:45	Elliott D. Healy	09/16/2021 18:04	Alexander Thompson	2275573
	09/13/2021	09/14/2021 12:45	Elliott D. Healy	09/16/2021 18:14	Alexander Thompson	2275574
EPA 300.0 Rev. 2.1	09/13/2021			09/15/2021 13:51	Roberta Tatti	2275538
	09/13/2021			09/15/2021 14:03	Roberta Tatti	2275539
	09/13/2021			09/15/2021 14:15	Roberta Tatti	2275544
	09/13/2021			09/15/2021 14:27	Roberta Tatti	2275547
	09/13/2021			09/15/2021 14:39	Roberta Tatti	2275550
	09/13/2021			09/15/2021 15:15	Roberta Tatti	2275551
	09/13/2021			09/15/2021 15:28	Roberta Tatti	2275556
EPA 350.1 Rev. 2.0	09/13/2021			09/16/2021 13:44	Ping Hua	2275540
	09/13/2021			09/16/2021 13:46	Ping Hua	2275541
	09/13/2021			09/16/2021 13:50	Ping Hua	2275552
	09/13/2021			09/16/2021 14:06	Ping Hua	2275548
	09/13/2021			09/16/2021 14:08	Ping Hua	2275545
	09/13/2021			09/17/2021 13:37	Ping Hua	2275553
	09/13/2021			09/17/2021 13:46	Ping Hua	2275557
EPA 351.2 Rev. 2.0	09/13/2021	09/16/2021 12:36	Benjamin T. Nordmann	09/17/2021 12:03	Alexandra J Mattheus	2275557
	09/13/2021	09/17/2021 12:17	Benjamin T. Nordmann	09/20/2021 10:22	Alexandra J Mattheus	2275540
	09/13/2021	09/17/2021 12:17	Benjamin T. Nordmann	09/20/2021 10:24	Alexandra J Mattheus	2275541
	09/13/2021	09/17/2021 12:17	Benjamin T. Nordmann	09/20/2021 10:25	Alexandra J Mattheus	2275545
	09/13/2021	09/17/2021 12:17	Benjamin T. Nordmann	09/20/2021 10:27	Alexandra J Mattheus	2275548
	09/13/2021	09/17/2021 12:17	Benjamin T. Nordmann	09/20/2021 10:29	Alexandra J Mattheus	2275552
	09/13/2021	09/20/2021 13:20	Benjamin T. Nordmann	09/21/2021 11:01	Alexandra J Mattheus	2275553
EPA 353.2 Rev. 2.0	09/13/2021			09/15/2021 09:48	Beverly Y. Sanders	2275540
	09/13/2021			09/15/2021 09:49	Beverly Y. Sanders	2275541
	09/13/2021			09/15/2021 09:50	Beverly Y. Sanders	2275545
	09/13/2021			09/15/2021 09:51	Beverly Y. Sanders	2275548
	09/13/2021			09/15/2021 09:52	Beverly Y. Sanders	2275552
	09/13/2021			09/15/2021 09:54	Beverly Y. Sanders	2275553
	09/13/2021			09/15/2021 10:07	Beverly Y. Sanders	2275557
EPA 365.1 Rev. 2.0	09/13/2021	09/15/2021 10:36	Simonne.V. Calhoun	09/16/2021 16:23	Virginia P. Brown	2275557
	09/13/2021	09/15/2021 10:36	Simonne.V. Calhoun	09/16/2021 16:24	Virginia P. Brown	2275541

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 365.1 Rev. 2.0	09/13/2021	09/15/2021 10:36	Simonne.V. Calhoun	09/16/2021 16:25	Virginia P. Brown	2275540
	09/13/2021	09/15/2021 10:36	Simonne.V. Calhoun	09/16/2021 16:26	Virginia P. Brown	2275545
	09/13/2021	09/15/2021 10:36	Simonne.V. Calhoun	09/16/2021 16:27	Virginia P. Brown	2275548
	09/13/2021	09/15/2021 10:36	Simonne.V. Calhoun	09/16/2021 16:28	Virginia P. Brown	2275552
	09/13/2021	09/15/2021 10:36	Simonne.V. Calhoun	09/16/2021 16:35	Virginia P. Brown	2275553
EPA 365.1 Rev. 2.0 dissolved	09/13/2021			09/14/2021 15:16	Blanca Fach	2275542
	09/13/2021			09/14/2021 15:17	Blanca Fach	2275543
	09/13/2021			09/14/2021 15:22	Blanca Fach	2275546
	09/13/2021			09/14/2021 15:23	Blanca Fach	2275549
	09/13/2021			09/14/2021 15:24	Blanca Fach	2275554
	09/13/2021			09/14/2021 15:25	Blanca Fach	2275555
EPA 8321B	09/13/2021			09/14/2021 15:35	Blanca Fach	2275558
	09/13/2021	09/14/2021 12:00	Hoor Shaik	09/15/2021 11:41	Juyoung Kim	2275569
	09/13/2021	09/14/2021 12:00	Hoor Shaik	09/15/2021 12:15	Juyoung Kim	2275570
	09/13/2021	09/14/2021 12:00	Hoor Shaik	09/15/2021 15:43	Juyoung Kim	2275571
	09/13/2021	09/17/2021 08:00	Mohammad Ghaffari	09/17/2021 10:08	Mohammad Ghaffari	2275569
	09/13/2021	09/17/2021 08:00	Mohammad Ghaffari	09/17/2021 10:19	Mohammad Ghaffari	2275570
	09/13/2021	09/17/2021 08:00	Mohammad Ghaffari	09/17/2021 10:30	Mohammad Ghaffari	2275571
	09/13/2021	09/17/2021 08:00	Mohammad Ghaffari	09/17/2021 13:28	Manjita Shrestha	2275569
	09/13/2021	09/17/2021 08:00	Mohammad Ghaffari	09/17/2021 13:42	Manjita Shrestha	2275570
SM 2120 B-2011	09/13/2021	09/17/2021 08:00	Mohammad Ghaffari	09/17/2021 14:12	Manjita Shrestha	2275571
	09/13/2021			09/14/2021 17:25	Sarah A Nixon	2275539
	09/13/2021			09/14/2021 17:28	Sarah A Nixon	2275551
	09/13/2021			09/14/2021 17:33	Sarah A Nixon	2275556
	09/13/2021			09/14/2021 17:47	Sarah A Nixon	2275538
	09/13/2021			09/14/2021 17:48	Sarah A Nixon	2275544, 2275547
SM 2320 B-2011	09/13/2021			09/14/2021 17:49	Sarah A Nixon	2275550
	09/13/2021			09/15/2021 15:05	Dale L. Simmons	2275538
	09/13/2021			09/15/2021 15:54	Dale L. Simmons	2275539
	09/13/2021			09/15/2021 16:02	Dale L. Simmons	2275544
	09/13/2021			09/15/2021 16:09	Dale L. Simmons	2275547
	09/13/2021			09/15/2021 16:18	Dale L. Simmons	2275550
SM 2340B	09/13/2021			09/15/2021 16:31	Dale L. Simmons	2275551
	09/13/2021			09/15/2021 16:39	Dale L. Simmons	2275556
	09/13/2021			09/16/2021 12:18	Josef B Mick	2275575
	09/13/2021			09/16/2021 13:07	Josef B Mick	2275572
	09/13/2021			09/16/2021 13:44	Josef B Mick	2275573
SM 2540 C-2011	09/13/2021			09/16/2021 13:50	Josef B Mick	2275574
	09/13/2021			09/16/2021 15:25	Yijie Li	2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
SM 2540 D-2011	09/13/2021			09/16/2021 15:25	Yijie Li	2275538, 2275539, 2275544, 2275547, 2275550, 2275551, 2275556
SM 4500 F-C-2011	09/13/2021			09/15/2021 15:05	Dale L. Simmons	2275538
	09/13/2021			09/15/2021 15:54	Dale L. Simmons	2275539
	09/13/2021			09/15/2021 16:02	Dale L. Simmons	2275544
	09/13/2021			09/15/2021 16:09	Dale L. Simmons	2275547
	09/13/2021			09/15/2021 16:18	Dale L. Simmons	2275550
SM 5310 B-2011	09/13/2021			09/15/2021 16:31	Dale L. Simmons	2275551
	09/13/2021			09/15/2021 16:39	Dale L. Simmons	2275556
	09/13/2021			09/17/2021 20:35	Touraj Touran	2275548
	09/13/2021			09/17/2021 21:29	Touraj Touran	2275552
	09/13/2021			09/18/2021 00:14	Touraj Touran	2275540
	09/13/2021			09/18/2021 00:27	Touraj Touran	2275541
	09/13/2021			09/18/2021 00:42	Touraj Touran	2275545
	09/13/2021			09/18/2021 00:55	Touraj Touran	2275553
	09/13/2021			09/18/2021 01:36	Touraj Touran	2275557