Chemical Analysis Report

SE-DIST-2024-01-30-03

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

Event Description: **SMP - Micco**
Request ID: **RQ-2024-01-29-19**
Customer: **SE-DIST**
Project ID: **SMP**

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Certified by: Thekkekalathil Chandrasekhar, Environmental Consultant Date Certified: 14-FEB-2024 15:23

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: Trout Creek near 1st St **Collection Date/Time: 01/29/2024 12:45**

Field ID: G5SE0137 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2464207	DEP SOP: NU-094-1	Color (true)	190		PCU	P440646	
	EPA 180.1 Rev. 2.0	Turbidity	3.5		NTU	P440653	
	EPA 300.0 Rev. 2.1	Chloride	180		mg Cl/L	P441021	
		Sulfate	25		mg SO4/L	P441024	
	SM 2320 B-2011	Total Alkalinity	67	A	mg CaCO3/L	P440907	
	SM 2540 C-2015	TDS	435		mg/L	P441269	
	SM 2540 D-2015	TSS	4	I	mg/L	P441045	
	SM 4500-F- C-2011	Fluoride	0.15		mg F/L	P440910	
2464208	EPA 350.1 Rev. 2.0	Ammonia-N	0.078		mg N/L	P440725	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.86		mg N/L	P440751	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.066		mg N/L	P440841	
	EPA 365.1 Rev. 2.0	Total-P	0.034		mg P/L	P440809	MS
	SM 5310 B-2014	Organic Carbon	22		mg C/L	P440899	
2464231	EPA 8321B	2,4-D	0.022		ug/L	P440692	
		Acesulfame K	0.10	U	ug/L	P440589	
		2,4,5-T	0.0040	U	ug/L	P440692	
		AMPA	0.10	U	ug/L	P440589	
		Acetaminophen	0.0080	U	ug/L	P440692	
		Acetamiprid	0.0020	U	ug/L	P440692	
		Endothall	0.25	U	ug/L	P440589	
		Glufosinate	0.10	U	ug/L	P440589	
		Glyphosate	0.28	I	ug/L	P440589	
		Afidopyropen	0.0020	U	ug/L	P440692	
		Bentazon	0.0070		ug/L	P440692	
		Sucralose	0.26		ug/L	P440589	
		Benzovindiflupyr	0.0020	U	ug/L	P440692	
		Carbamazepine	0.0056		ug/L	P440692	
		Clothianidin	0.0020	U	ug/L	P440692	
		Dinotefuran	0.0020	U	ug/L	P440692	
		Diuron	0.0020	U	ug/L	P440692	
		Fenuron	0.032	U	ug/L	P440692	
		Fluridone	8.0E-04	U	ug/L	P440692	
		Imazapyr	0.0067	I	ug/L	P440692	
		Hydrocodone	0.0020	U	ug/L	P440692	
		Ibuprofen	0.080	U	ug/L	P440692	
		Imidacloprid	0.0020	U	ug/L	P440692	
		Linuron	0.0040	U	ug/L	P440692	
		Mandestrobin	0.0020	U	ug/L	P440692	
		MCPP	0.0020	U	ug/L	P440692	
		Naproxen	0.0080	U	ug/L	P440692	
		Primidone	0.0040	U	ug/L	P440692	
		Pyraclostrobin	0.0020	U	ug/L	P440692	
		Silvex	0.0040	U	ug/L	P440692	
		Thiamethoxam	0.0020	U	ug/L	P440692	

Field ID: G5SE0137 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2464231	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P440692	
		Triclopyr	0.0040	U	ug/L	P440692	
2464235	EPA 200.7 Rev. 4.4	Calcium	46.1		mg/L	P440718	
		Iron	1.14E+03		ug/L	P440718	
		Magnesium	17.1		mg/L	P440718	
		Potassium	2.2		mg/L	P440718	
		Sodium	83.4		mg/L	P440718	
		Strontium	1.71E+03		ug/L	P440718	
		Tin	3.0	U	ug/L	P440718	
		Titanium	1.0	I	ug/L	P440718	
		Vanadium	2.0	U	ug/L	P440718	
		Zinc	5.0	U	ug/L	P440718	
	EPA 200.8 Rev. 5.4	Aluminum	128		ug/L	P440718	
		Antimony	0.050	U	ug/L	P440718	
		Arsenic	0.54		ug/L	P440718	
		Barium	38.1		ug/L	P440718	
		Beryllium	0.024	I	ug/L	P440718	
		Boron	38.7		ug/L	P440718	
		Cadmium	0.020	U	ug/L	P440718	
		Chromium	1.5	I	ug/L	P440718	
		Cobalt	0.088		ug/L	P440718	
		Copper	0.40	U	ug/L	P440718	
		Lead	0.20	U	ug/L	P440718	
		Manganese	9.37		ug/L	P440718	
		Molybdenum	0.27	I	ug/L	P440718	
		Nickel	0.50	U	ug/L	P440718	
		Selenium	0.20	U	ug/L	P440718	
		Silver	0.010	U	ug/L	P440718	
		Thallium	0.10	U	ug/L	P440718	
	SM 2340 B-2011	Hardness	186		mg/L	P440718	

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: Unnamed Canal North of Shell Pit Rd **Collection Date/Time: 01/29/2024 13:10**

Field ID: G5SE0138 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2464209	DEP SOP: NU-094-1	Color (true)	140		PCU	P440646	
	EPA 180.1 Rev. 2.0	Turbidity	3.6		NTU	P440655	
	EPA 300.0 Rev. 2.1	Chloride	320		mg Cl/L	P441022	
		Sulfate	46		mg SO4/L	P441025	
	SM 2320 B-2011	Total Alkalinity	65		mg CaCO3/L	P440907	
	SM 2540 C-2015	TDS	668		mg/L	P441269	
	SM 2540 D-2015	TSS	3	I	mg/L	P441045	
	SM 4500-F- C-2011	Fluoride	0.24		mg F/L	P440910	
2464210	EPA 350.1 Rev. 2.0	Ammonia-N	0.13		mg N/L	P440725	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.83		mg N/L	P440751	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.099		mg N/L	P440842	
	EPA 365.1 Rev. 2.0	Total-P	0.029		mg P/L	P440809	MS
	SM 5310 B-2014	Organic Carbon	21		mg C/L	P440899	
2464232	EPA 8321B	2,4-D	0.0020	U	ug/L	P440692	
		Acesulfame K	0.10	U	ug/L	P440589	
		2,4,5-T	0.0040	U	ug/L	P440692	
		AMPA	0.10	I	ug/L	P440589	
		Acetaminophen	0.0080	U	ug/L	P440692	
		Acetamiprid	0.0020	U	ug/L	P440692	
		Endothall	0.25	U	ug/L	P440589	
		Glufosinate	0.10	U	ug/L	P440589	
		Glyphosate	0.22	I	ug/L	P440589	
		Afidopyropen	0.0020	U	ug/L	P440692	
		Bentazon	0.011		ug/L	P440692	
		Sucralose	0.15		ug/L	P440589	
		Benzovindiflupyr	0.0020	U	ug/L	P440692	
		Carbamazepine	0.0089		ug/L	P440692	
		Clothianidin	0.0020	U	ug/L	P440692	
		Dinotefuran	0.0020	U	ug/L	P440692	
		Diuron	0.0020	U	ug/L	P440692	
		Fenuron	0.032	U	ug/L	P440692	
		Fluridone	8.0E-04	U	ug/L	P440692	
		Imazapyr	0.12		ug/L	P440692	
		Hydrocodone	0.0020	U	ug/L	P440692	
		Ibuprofen	0.080	U	ug/L	P440692	
		Imidacloprid	0.0023	I	ug/L	P440692	
		Linuron	0.0040	U	ug/L	P440692	
		Mandestrobin	0.0020	U	ug/L	P440692	
		MCPP	0.0020	U	ug/L	P440692	
		Naproxen	0.0080	U	ug/L	P440692	
		Primidone	0.0065	I	ug/L	P440692	
		Pyraclostrobin	0.0020	U	ug/L	P440692	
		Silvex	0.0040	U	ug/L	P440692	
		Thiamethoxam	0.0020	U	ug/L	P440692	

Field ID: G5SE0138 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2464232	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P440692	
		Triclopyr	0.0040	U	ug/L	P440692	

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: Unnamed Canal North of Senne Highlands **Collection Date/Time: 01/29/2024 13:30**

Field ID: G5SE0139 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2464211	DEP SOP: NU-094-1	Color (true)	110		PCU	P440646	
	EPA 180.1 Rev. 2.0	Turbidity	0.90	I	NTU	P440655	
	EPA 300.0 Rev. 2.1	Chloride	63		mg Cl/L	P441022	
		Sulfate	17		mg SO4/L	P441025	
	SM 2320 B-2011	Total Alkalinity	47		mg CaCO3/L	P440907	
	SM 2540 C-2015	TDS	219	A	mg/L	P441270	
	SM 2540 D-2015	TSS	2	I A	mg/L	P441046	
	SM 4500-F- C-2011	Fluoride	0.092	I	mg F/L	P440910	
2464212	EPA 350.1 Rev. 2.0	Ammonia-N	0.021		mg N/L	P440725	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.77		mg N/L	P440751	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.090		mg N/L	P440842	
	EPA 365.1 Rev. 2.0	Total-P	0.015		mg P/L	P440810	
	SM 5310 B-2014	Organic Carbon	21		mg C/L	P440899	
2464233	EPA 8321B	2,4-D	0.0032	I	ug/L	P440692	
		Acesulfame K	0.10	U	ug/L	P440589	
		2,4,5-T	0.0040	U	ug/L	P440692	
		AMPA	0.13	I	ug/L	P440589	
		Acetaminophen	0.0080	U	ug/L	P440692	
		Acetamiprid	0.0020	U	ug/L	P440692	
		Endothall	0.25	U	ug/L	P440589	
		Glufosinate	0.10	U	ug/L	P440589	
		Glyphosate	0.12	I	ug/L	P440589	
		Afidopyropen	0.0020	U	ug/L	P440692	
		Bentazon	0.012		ug/L	P440692	
		Sucralose	0.022	I	ug/L	P440589	
		Benzovindiflupyr	0.0020	U	ug/L	P440692	
		Carbamazepine	8.0E-04	U	ug/L	P440692	
		Clothianidin	0.0020	U	ug/L	P440692	
		Dinotefuran	0.0020	U	ug/L	P440692	
		Diuron	0.0027	I	ug/L	P440692	
		Fenuron	0.032	U	ug/L	P440692	
		Fluridone	0.41		ug/L	P440692	
		Imazapyr	0.51		ug/L	P440692	
		Hydrocodone	0.0020	U	ug/L	P440692	
		Ibuprofen	0.080	U	ug/L	P440692	
		Imidacloprid	0.0045	I	ug/L	P440692	
		Linuron	0.0040	U	ug/L	P440692	
		Mandestrobin	0.0020	U	ug/L	P440692	
		MCPP	0.0020	U	ug/L	P440692	
		Naproxen	0.0080	U	ug/L	P440692	
		Primidone	0.0040	U	ug/L	P440692	
		Pyraclostrobin	0.0020	U	ug/L	P440692	
		Silvex	0.0040	U	ug/L	P440692	
		Thiamethoxam	0.0020	U	ug/L	P440692	

Field ID: G5SE0139 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2464233	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P440692	
		Triclopyr	0.0040	U	ug/L	P440692	

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: Micco Ditches Weir Off Dottie **Collection Date/Time: 01/29/2024 13:50**

Field ID: G5SE0063 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2464205	DEP SOP: NU-094-1	Color (true)	85	A	PCU	P440646	
	EPA 180.1 Rev. 2.0	Turbidity	5.4		NTU	P440653	
	EPA 300.0 Rev. 2.1	Chloride	60		mg Cl/L	P441021	
		Sulfate	16		mg SO4/L	P441024	
	SM 2320 B-2011	Total Alkalinity	79		mg CaCO3/L	P440907	
	SM 2540 C-2015	TDS	240		mg/L	P441269	
	SM 2540 D-2015	TSS	8	I	mg/L	P441045	
	SM 4500-F- C-2011	Fluoride	0.13		mg F/L	P440910	
2464206	EPA 350.1 Rev. 2.0	Ammonia-N	0.11		mg N/L	P440725	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.1		mg N/L	P440751	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.10		mg N/L	P440841	
	EPA 365.1 Rev. 2.0	Total-P	0.10		mg P/L	P440809	MS
	SM 5310 B-2014	Organic Carbon	16		mg C/L	P440891	
2464230	EPA 8321B	2,4-D	0.0078	I	ug/L	P440692	
		Acesulfame K	0.17	I	ug/L	P440589	
		2,4,5-T	0.0040	U	ug/L	P440692	
		AMPA	0.64		ug/L	P440589	
		Acetaminophen	0.0080	U	ug/L	P440692	
		Acetamiprid	0.0020	U	ug/L	P440692	
		Endothall	0.25	U	ug/L	P440589	
		Glufosinate	0.10	U	ug/L	P440589	
		Glyphosate	1.3		ug/L	P440589	
		Afidopyropen	0.0020	U	ug/L	P440692	
		Bentazon	0.040		ug/L	P440692	
		Sucralose	0.42		ug/L	P440589	
		Benzovindiflupyr	0.0020	U	ug/L	P440692	
		Carbamazepine	8.0E-04	U	ug/L	P440692	
		Clothianidin	0.0020	U	ug/L	P440692	
		Dinotefuran	0.0020	U	ug/L	P440692	
		Diuron	0.0022	I	ug/L	P440692	
		Fenuron	0.032	U	ug/L	P440692	
		Fluridone	0.036		ug/L	P440692	
		Imazapyr	0.023		ug/L	P440692	
		Hydrocodone	0.0020	U	ug/L	P440692	
		Ibuprofen	0.080	U	ug/L	P440692	
		Imidacloprid	0.0094		ug/L	P440692	
		Linuron	0.0040	U	ug/L	P440692	
		Mandestrobin	0.0020	U	ug/L	P440692	
		MCPP	0.0045	I	ug/L	P440692	
		Naproxen	0.0080	U	ug/L	P440692	
		Primidone	0.021		ug/L	P440692	
		Pyraclostrobin	0.0020	U	ug/L	P440692	
		Silvex	0.0040	U	ug/L	P440692	
		Thiamethoxam	0.0020	U	ug/L	P440692	

Field ID: G5SE0063 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2464230	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P440692	
		Triclopyr	0.0040	U	ug/L	P440692	

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: Unnamed Canal West of Micco **Collection Date/Time: 01/29/2024 11:30**

Field ID: G5SE0140 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2464213	DEP SOP: NU-094-1	Color (true)	130		PCU	P440646	
	EPA 180.1 Rev. 2.0	Turbidity	14		NTU	P440655	
	EPA 300.0 Rev. 2.1	Chloride	82		mg Cl/L	P441022	
		Sulfate	23		mg SO4/L	P441025	
	SM 2320 B-2011	Total Alkalinity	149		mg CaCO3/L	P440907	
	SM 2540 C-2015	TDS	338		mg/L	P441270	
	SM 2540 D-2015	TSS	8	I	mg/L	P441046	
	SM 4500-F- C-2011	Fluoride	0.21		mg F/L	P440910	
2464214	EPA 350.1 Rev. 2.0	Ammonia-N	0.093		mg N/L	P440725	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.68		mg N/L	P440748	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.080		mg N/L	P440842	
	EPA 365.1 Rev. 2.0	Total-P	0.044		mg P/L	P440810	
	SM 5310 B-2014	Organic Carbon	17		mg C/L	P440899	
2464234	EPA 8321B	2,4-D	0.0096		ug/L	P440692	
		Acesulfame K	0.10	U	ug/L	P440589	
		2,4,5-T	0.0040	U	ug/L	P440692	
		AMPA	0.14	I	ug/L	P440589	
		Acetaminophen	0.0080	U	ug/L	P440692	
		Acetamiprid	0.0020	U	ug/L	P440692	
		Endothall	0.25	U	ug/L	P440589	
		Glufosinate	0.10	U	ug/L	P440589	
		Glyphosate	0.26	I	ug/L	P440589	
		Afidopyropen	0.0020	U	ug/L	P440692	
		Bentazon	0.0016	I	ug/L	P440692	
		Sucralose	0.024	I	ug/L	P440589	
		Benzovindiflupyr	0.0020	U	ug/L	P440692	
		Carbamazepine	8.0E-04	U	ug/L	P440692	
		Clothianidin	0.0020	U	ug/L	P440692	
		Dinotefuran	0.0020	U	ug/L	P440692	
		Diuron	0.0036	I	ug/L	P440692	
		Fenuron	0.032	U	ug/L	P440692	
		Fluridone	0.0072		ug/L	P440692	
		Imazapyr	0.073		ug/L	P440692	
		Hydrocodone	0.0020	U	ug/L	P440692	
		Ibuprofen	0.080	U	ug/L	P440692	
		Imidacloprid	0.0073	I	ug/L	P440692	
		Linuron	0.0040	U	ug/L	P440692	
		Mandestrobin	0.0020	U	ug/L	P440692	
		MCPP	0.0020	U	ug/L	P440692	
		Naproxen	0.0080	U	ug/L	P440692	
		Primidone	0.0040	U	ug/L	P440692	
		Pyraclostrobin	0.0020	U	ug/L	P440692	
		Silvex	0.0040	U	ug/L	P440692	
		Thiamethoxam	0.0020	U	ug/L	P440692	

Field ID: G5SE0140 Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2464234	EPA 8321B	Tolfenpyrad	0.0020	U	ug/L	P440692	
		Triclopyr	0.0040	U	ug/L	P440692	

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

Quality Assurance Report
Method Blank Results

Reference Method: DEP SOP: NU-094-1
Batch ID: P440646

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P440653

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P440655

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P440718

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: P440718

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: P441021

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441022

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441024

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441025

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P440725

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P440748

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P440751

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P440841

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P440842

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

Quality Assurance Report
Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P440809

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P440810

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

Reference Method: EPA 8321B
Batch ID: P440589

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: P440692

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

Quality Assurance Report
Method Blank Results

Reference Method: SM 2320 B-2011
Batch ID: P440907

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

Reference Method: SM 2540 C-2015
Batch ID: P441269

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-2015
Batch ID: P441270

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P441045

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-2015
Batch ID: P441046

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500-F- C-2011
Batch ID: P440910

Component	Result	Code	Units
Fluoride	0.025	U	mg F/L

Reference Method: SM 5310 B-2014
Batch ID: P440891

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

Reference Method: SM 5310 B-2014
Batch ID: P440899

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: P440646

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P440653

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

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P440655

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

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P440718

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Calcium	107		P	85 - 115
Iron	114		P	85 - 115
Magnesium	114		P	85 - 115
Potassium	105		P	85 - 115
Sodium	99.7		P	85 - 115
Strontium	95.9		P	85 - 115
Tin	97.6		P	85 - 115
Titanium	103		P	85 - 115
Vanadium	100		P	85 - 115
Zinc	95.8		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P440718

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	104		P	85 - 115
Antimony	105		P	85 - 115
Arsenic	103		P	85 - 115
Barium	105		P	85 - 115
Beryllium	98.6		P	85 - 115
Boron	109		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	104		P	85 - 115
Cobalt	99.9		P	85 - 115
Copper	99.0		P	85 - 115
Lead	94.9		P	85 - 115
Manganese	102		P	85 - 115
Molybdenum	102		P	85 - 115
Nickel	99.6		P	85 - 115
Selenium	102		P	85 - 115
Silver	96.2		P	85 - 115
Thallium	101		P	85 - 115

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441021

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441022

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441024

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441025

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P440725

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Ammonia-N	97.4		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P440748

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	97.7		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P440751

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P440841

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P440842

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
NO2NO3-N	105		P	90 - 110

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P440809

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P440810

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

Reference Method: EPA 8321B
Batch ID: P440589

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	121		P	40 - 150
AMPA	114		P	40 - 160
Endothall	92.1		P	40 - 160
Glufosinate	95.9		P	40 - 160
Glyphosate	101		P	40 - 160
Sucralose	82.5		P	40 - 150

Reference Method: EPA 8321B
Batch ID: P440692

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	93.9		P	40 - 150
2,4,5-T	103		P	40 - 150
Acetaminophen	86.4		P	30 - 150
Acetamiprid	84.1		P	40 - 150
Afidopyropen	68.1		P	30 - 150
Bentazon	81.9		P	30 - 150
Benzovindiflupyr	81.9		P	40 - 150
Carbamazepine	84.7		P	40 - 150
Clothianidin	91.9		P	40 - 150
Dinotefuran	100		P	40 - 150
Diuron	77.7		P	40 - 150
Fenuron	93.3		P	40 - 150
Fluridone	90.3		P	40 - 150
Hydrocodone	101		P	40 - 150
Ibuprofen	70.8		P	40 - 150
Imazapyr	86.6		P	40 - 150
Imidacloprid	89.6		P	40 - 150
Linuron	77.8		P	40 - 150
Mandestrobin	88.7		P	40 - 150
MCPP	83.4		P	40 - 150
Naproxen	70.5		P	40 - 150
Primidone	88.0		P	40 - 150
Pyraclostrobin	87.5		P	40 - 150
Silvex	82.1		P	40 - 150
Thiamethoxam	97.9		P	40 - 150
Tolfenpyrad	56.4		P	30 - 150
Triclopyr	112		P	40 - 150

Quality Assurance Report
Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-2011
Batch ID: P440907

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	96.4		P	92 - 105

Reference Method: SM 2540 C-2015
Batch ID: P441269

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	95.6		P	85 - 115

Reference Method: SM 2540 C-2015
Batch ID: P441270

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TDS	98.0		P	85 - 115

Reference Method: SM 2540 D-2015
Batch ID: P441045

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

Reference Method: SM 2540 D-2015
Batch ID: P441046

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
TSS	96.8		P	85 - 115

Reference Method: SM 4500-F- C-2011
Batch ID: P440910

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

Reference Method: SM 5310 B-2014
Batch ID: P440891

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

Reference Method: SM 5310 B-2014
Batch ID: P440899

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Organic Carbon	99.5		P	85 - 115

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P440718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2463996	Calcium	108		P	80 - 120
2463996	Iron	112	114	P/P	80 - 120
2463996	Magnesium	113	115	P/P	80 - 120
2463996	Potassium	102	104	P/P	80 - 120
2463996	Sodium	99.5		P	80 - 120
2463996	Strontium	92.4	93.2	P/P	80 - 120
2463996	Tin	95.6	95.8	P/P	80 - 120
2463996	Titanium	99.3	101	P/P	80 - 120
2463996	Vanadium	101	102	P/P	80 - 120
2463996	Zinc	95.1	96.2	P/P	80 - 120
2464041	Calcium	113		P	80 - 120
2464041	Iron	114		P	80 - 120
2464041	Magnesium	114		P	80 - 120
2464041	Potassium	102		P	80 - 120
2464041	Sodium	98.7		P	80 - 120
2464041	Strontium	94.0		P	80 - 120
2464041	Tin	96.2		P	80 - 120
2464041	Titanium	104		P	80 - 120
2464041	Vanadium	100		P	80 - 120
2464041	Zinc	96.1		P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P440718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2463996	Aluminum	103	103	P/P	80 - 120
2463996	Antimony	102	104	P/P	80 - 120
2463996	Arsenic	98.8	99.4	P/P	80 - 120
2463996	Barium	101	103	P/P	80 - 120
2463996	Beryllium	96.2	95.5	P/P	80 - 120
2463996	Boron	109	107	P/P	80 - 120
2463996	Cadmium	103	104	P/P	80 - 120
2463996	Chromium	102	103	P/P	80 - 120
2463996	Cobalt	96.3	97.0	P/P	80 - 120
2463996	Copper	94.7	95.1	P/P	80 - 120
2463996	Lead	93.2	94.2	P/P	80 - 120
2463996	Manganese	98.0	101	P/P	80 - 120
2463996	Molybdenum	99.3	101	P/P	80 - 120
2463996	Nickel	96.0	97.2	P/P	80 - 120
2463996	Selenium	98.5	98.6	P/P	80 - 120
2463996	Silver	93.3	95.2	P/P	80 - 120
2463996	Thallium	101	102	P/P	80 - 120
2464041	Aluminum	101		P	80 - 120
2464041	Antimony	102		P	80 - 120
2464041	Arsenic	99.3		P	80 - 120
2464041	Barium	103		P	80 - 120
2464041	Beryllium	95.8		P	80 - 120
2464041	Boron	104		P	80 - 120
2464041	Cadmium	102		P	80 - 120
2464041	Chromium	103		P	80 - 120
2464041	Cobalt	97.3		P	80 - 120
2464041	Copper	97.9		P	80 - 120

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P440718

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464041	Lead	94.0		P	80 - 120
2464041	Manganese	101		P	80 - 120
2464041	Molybdenum	100		P	80 - 120
2464041	Nickel	97.2		P	80 - 120
2464041	Selenium	99.0		P	80 - 120
2464041	Silver	93.4		P	80 - 120
2464041	Thallium	101		P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441021

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464082	Chloride	101		P	90 - 110
2464183	Chloride	95.3		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441022

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464297	Chloride	99.0		P	90 - 110
2464404	Chloride	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441024

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464082	Sulfate	98.7		P	90 - 110
2464183	Sulfate	96.9		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441025

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464297	Sulfate	99.8		P	90 - 110
2464404	Sulfate	98.5		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P440725

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464185	Ammonia-N	96.2	97.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P440748

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464144	Kjeldahl Nitrogen	95.8	100	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P440751

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P440751

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464296	Kjeldahl Nitrogen	95.8	94.0	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P440841

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464128	NO2NO3-N	104	104	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P440842

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464210	NO2NO3-N	102	104	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P440809

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464144	Total-P	104	114	P/F	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P440810

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464214	Total-P	106	97.8	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P440589

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2463994	Acesulfame K	125	127	P/P	40 - 150
2463994	AMPA	111	111	P/P	40 - 160
2463994	Endothall	98.5	98.0	P/P	40 - 160
2463994	Glufosinate	91.3	93.4	P/P	40 - 160
2463994	Glyphosate	100	102	P/P	40 - 160
2463994	Sucralose	86.4	85.1	P/P	40 - 150

Reference Method: EPA 8321B
Batch ID: P440692

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2463994	2,4-D	93.5	106	P/P	40 - 150
2463994	2,4,5-T	89.0	103	P/P	40 - 150
2463994	Acetaminophen	99.9	103	P/P	30 - 150
2463994	Acetamiprid	84.9	88.7	P/P	40 - 150
2463994	Afidopyropen	77.2	60.6	P/P	30 - 150
2463994	Bentazon	42.0	44.8	P/P	30 - 150
2463994	Benzovindiflupyr	93.9	95.3	P/P	40 - 150
2463994	Carbamazepine	91.1	91.6	P/P	40 - 150
2463994	Clothianidin	109	110	P/P	40 - 150
2463994	Dinotefuran	116	118	P/P	40 - 150
2463994	Diuron	84.3	78.9	P/P	40 - 150

Quality Assurance Report
Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P440692

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2463994	Fenuron	88.8	90.6	P/P	40 - 150
2463994	Fluridone	90.7	92.8	P/P	40 - 150
2463994	Hydrocodone	103	107	P/P	40 - 150
2463994	Ibuprofen	85.9	82.4	P/P	40 - 150
2463994	Imazapyr	107	110	P/P	40 - 150
2463994	Imidacloprid	126	128	P/P	40 - 150
2463994	Linuron	89.6	83.5	P/P	40 - 150
2463994	Mandestrobin	101	104	P/P	40 - 150
2463994	MCPP	90.1	91.6	P/P	40 - 150
2463994	Naproxen	78.2	67.1	P/P	40 - 150
2463994	Primidone	100	105	P/P	40 - 150
2463994	Pyraclostrobin	96.0	95.9	P/P	40 - 150
2463994	Silvex	85.3	92.8	P/P	40 - 150
2463994	Thiamethoxam	116	120	P/P	40 - 150
2463994	Tolfenpyrad	58.9	65.7	P/P	30 - 150
2463994	Triclopyr	95.7	103	P/P	40 - 150

Reference Method: SM 4500-F- C-2011
Batch ID: P440910

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464207	Fluoride	99.4	99.4	P/P	94 - 106

Reference Method: SM 5310 B-2014
Batch ID: P440891

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464094	Organic Carbon	99.9	102	P/P	85 - 115

Reference Method: SM 5310 B-2014
Batch ID: P440899

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2464262	Organic Carbon	102	102	P/P	85 - 115

Quality Assurance Report
Precision

Reference Method: DEP SOP: NU-094-1
Batch ID: P440646

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464205	Color (true)	0.892	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P440653

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464006	Turbidity	3.28	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P440655

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464287	Turbidity	1.66	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P440718

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2463996	Calcium	0.463	Spike	P	0 - 20
2463996	Iron	1.36	Spike	P	0 - 20
2463996	Magnesium	1.33	Spike	P	0 - 20
2463996	Potassium	1.66	Spike	P	0 - 20
2463996	Sodium	0.562	Spike	P	0 - 20
2463996	Strontium	0.808	Spike	P	0 - 20
2463996	Tin	0.233	Spike	P	0 - 20
2463996	Titanium	1.52	Spike	P	0 - 20
2463996	Vanadium	0.742	Spike	P	0 - 20
2463996	Zinc	1.19	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P440718

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2463996	Aluminum	0.425	Spike	P	0 - 20
2463996	Antimony	2.05	Spike	P	0 - 20
2463996	Arsenic	0.658	Spike	P	0 - 20
2463996	Barium	1.56	Spike	P	0 - 20
2463996	Beryllium	0.675	Spike	P	0 - 20
2463996	Boron	1.26	Spike	P	0 - 20
2463996	Cadmium	0.750	Spike	P	0 - 20
2463996	Chromium	1.07	Spike	P	0 - 20
2463996	Cobalt	0.763	Spike	P	0 - 20
2463996	Copper	0.436	Spike	P	0 - 20
2463996	Lead	1.03	Spike	P	0 - 20
2463996	Manganese	1.34	Spike	P	0 - 20
2463996	Molybdenum	1.71	Spike	P	0 - 20
2463996	Nickel	1.24	Spike	P	0 - 20

Quality Assurance Report
Precision

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P440718

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2463996	Selenium	0.0537	Spike	P	0 - 20
2463996	Silver	1.97	Spike	P	0 - 20
2463996	Thallium	1.69	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441021

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464082	Chloride	2.58	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441022

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464297	Chloride	0.00684	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441024

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464082	Sulfate	2.96	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P441025

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464297	Sulfate	0.311	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P440725

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464185	Ammonia-N	0.845	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P440748

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464144	Kjeldahl Nitrogen	2.88	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P440751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits

Quality Assurance Report
Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P440751

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464296	Kjeldahl Nitrogen	1.07	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P440841

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464128	NO2NO3-N	0.482	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P440842

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464210	NO2NO3-N	0.985	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P440809

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464144	Total-P	8.40	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P440810

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464214	Total-P	7.07	Spike	P	0 - 20

Reference Method: EPA 8321B
Batch ID: P440589

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2463994	Acesulfame K	1.20	Spike	P	0 - 30
2463994	AMPA	0.157	Spike	P	0 - 30
2463994	Endothall	0.529	Spike	P	0 - 30
2463994	Glufosinate	2.34	Spike	P	0 - 30
2463994	Glyphosate	1.63	Spike	P	0 - 30
2463994	Sucralose	1.60	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P440692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2463994	2,4-D	12.1	Spike	P	0 - 30
2463994	2,4,5-T	14.7	Spike	P	0 - 30
2463994	Acetaminophen	3.07	Spike	P	0 - 30
2463994	Acetamiprid	4.38	Spike	P	0 - 30

Quality Assurance Report
Precision

Reference Method: EPA 8321B
Batch ID: P440692

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2463994	Afidopyropen	24.0	Spike	P	0 - 30
2463994	Bentazon	6.35	Spike	P	0 - 30
2463994	Benzovindiflupyr	1.52	Spike	P	0 - 30
2463994	Carbamazepine	0.521	Spike	P	0 - 30
2463994	Clothianidin	1.23	Spike	P	0 - 30
2463994	Dinotefuran	1.37	Spike	P	0 - 30
2463994	Diuron	6.65	Spike	P	0 - 30
2463994	Fenuron	1.96	Spike	P	0 - 30
2463994	Fluridone	2.28	Spike	P	0 - 30
2463994	Hydrocodone	4.39	Spike	P	0 - 30
2463994	Ibuprofen	4.14	Spike	P	0 - 30
2463994	Imazapyr	2.06	Spike	P	0 - 30
2463994	Imidacloprid	2.00	Spike	P	0 - 30
2463994	Linuron	7.11	Spike	P	0 - 30
2463994	Mandestrobin	2.81	Spike	P	0 - 30
2463994	MCPP	1.61	Spike	P	0 - 30
2463994	Naproxen	15.3	Spike	P	0 - 30
2463994	Primidone	5.09	Spike	P	0 - 30
2463994	Pyraclostrobin	0.0905	Spike	P	0 - 30
2463994	Silvex	8.48	Spike	P	0 - 30
2463994	Thiamethoxam	2.78	Spike	P	0 - 30
2463994	Tolfenpyrad	10.9	Spike	P	0 - 30
2463994	Triclopyr	6.91	Spike	P	0 - 30

Reference Method: SM 2320 B-2011
Batch ID: P440907

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464207	Total Alkalinity	3.00	Sample	P	0 - 3.9

Reference Method: SM 2540 C-2015
Batch ID: P441269

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464052	TDS	3.25	Sample	P	0 - 10

Reference Method: SM 2540 C-2015
Batch ID: P441270

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464211	TDS	7.31	Sample	P	0 - 10

Reference Method: SM 4500-F- C-2011
Batch ID: P440910

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464207	Fluoride	0.0	Spike	P	0 - 1.9

Quality Assurance Report
Precision

Reference Method: SM 5310 B-2014
Batch ID: P440891

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464094	Organic Carbon	1.70	Spike	P	0 - 15

Reference Method: SM 5310 B-2014
Batch ID: P440899

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2464262	Organic Carbon	0.106	Spike	P	0 - 15

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

Quality Assurance Report
Surrogates

Lab Sample ID: 2464230
Field Sample ID: G5SE0063

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	74.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	75.6	P	30 - 160
EPA 8321B	Carbamazepine-d10	68.4	P	30 - 160
EPA 8321B	Diuron-d6	59.1	P	30 - 160
EPA 8321B	Endothall-d6	110	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	104	P	30 - 160
EPA 8321B	Ibuprofen-d3	55.8	P	30 - 160
EPA 8321B	Primidone-d5	71.7	P	30 - 160
EPA 8321B	Sucralose-d6	92.1	P	30 - 160

Lab Sample ID: 2464231
Field Sample ID: G5SE0137

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	83.3	P	30 - 160
EPA 8321B	Acetaminophen-d4	90.4	P	30 - 160
EPA 8321B	Carbamazepine-d10	72.1	P	30 - 160
EPA 8321B	Diuron-d6	61.7	P	30 - 160
EPA 8321B	Endothall-d6	97.6	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.1	P	30 - 160
EPA 8321B	Ibuprofen-d3	64.2	P	30 - 160
EPA 8321B	Primidone-d5	90.5	P	30 - 160
EPA 8321B	Sucralose-d6	80.9	P	30 - 160

Lab Sample ID: 2464232
Field Sample ID: G5SE0138

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	76.7	P	30 - 160
EPA 8321B	Acetaminophen-d4	84.0	P	30 - 160
EPA 8321B	Carbamazepine-d10	70.0	P	30 - 160
EPA 8321B	Diuron-d6	67.6	P	30 - 160
EPA 8321B	Endothall-d6	98.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	63.4	P	30 - 160
EPA 8321B	Primidone-d5	84.6	P	30 - 160
EPA 8321B	Sucralose-d6	52.4	P	30 - 160

Lab Sample ID: 2464233
Field Sample ID: G5SE0139

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	82.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	88.3	P	30 - 160
EPA 8321B	Carbamazepine-d10	75.8	P	30 - 160
EPA 8321B	Diuron-d6	62.8	P	30 - 160
EPA 8321B	Endothall-d6	113	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	105	P	30 - 160
EPA 8321B	Ibuprofen-d3	66.6	P	30 - 160
EPA 8321B	Primidone-d5	89.8	P	30 - 160
EPA 8321B	Sucralose-d6	85.8	P	30 - 160

Quality Assurance Report
Surrogates

Lab Sample ID: 2464234
Field Sample ID: G5SE0140

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	78.5	P	30 - 160
EPA 8321B	Acetaminophen-d4	89.5	P	30 - 160
EPA 8321B	Carbamazepine-d10	71.8	P	30 - 160
EPA 8321B	Diuron-d6	67.0	P	30 - 160
EPA 8321B	Endothall-d6	111	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	97.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	62.5	P	30 - 160
EPA 8321B	Primidone-d5	83.9	P	30 - 160
EPA 8321B	Sucralose-d6	88.5	P	30 - 160

Quality Assurance Report
Calibration Verification

Reference Method: DEP SOP: NU-094-1
Run ID: A123898
Included Lab Sample IDs: 2464205, 2464209, 2464211, 2464213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 110

Reference Method: DEP SOP: NU-094-1
Run ID: A123900
Included Lab Sample IDs: 2464207

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	102	P/P	90 - 110

Reference Method: EPA 180.1 Rev. 2.0
Run ID: A123901
Included Lab Sample IDs: 2464205, 2464207, 2464209, 2464211, 2464213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	100	100	P/P	95 - 105
Turbidity	99.0	100	P/P	95 - 105

Reference Method: EPA 350.1 Rev. 2.0
Run ID: A123920
Included Lab Sample IDs: 2464206, 2464208, 2464210, 2464212, 2464214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	99.8	98.7	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A123935
Included Lab Sample IDs: 2464230, 2464231, 2464232, 2464233, 2464234

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	141	133	P/P	60 - 160
Sucralose	87.0	86.7	P/P	60 - 160

Reference Method: EPA 8321B
Run ID: A123959
Included Lab Sample IDs: 2464230, 2464231, 2464232, 2464233, 2464234

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	80.8	81.4	P/P	60 - 160
Endothall	68.8	69.9	P/P	60 - 160
Glufosinate	66.7	61.5	P/P	60 - 160
Glyphosate	78.6	76.0	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A123962
Included Lab Sample IDs: 2464235

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	98.5	101	P/P	90 - 110
Antimony	100	103	P/P	90 - 110
Arsenic	95.6	100	P/P	90 - 110
Barium	99.4	102	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4
Run ID: A123962
Included Lab Sample IDs: 2464235

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Beryllium	97.5	98.8	P/P	90 - 110
Boron	103	101	P/P	90 - 110
Cadmium	98.8	101	P/P	90 - 110
Chromium	97.2	98.5	P/P	90 - 110
Cobalt	93.4	96.3	P/P	90 - 110
Copper	93.0	96.5	P/P	90 - 110
Lead	91.4	93.7	P/P	90 - 110
Manganese	96.7	98.9	P/P	90 - 110
Molybdenum	97.0	100	P/P	90 - 110
Nickel	92.9	96.0	P/P	90 - 110
Selenium	98.6	101	P/P	90 - 110
Silver	98.5	101	P/P	90 - 110
Thallium	99.9	101	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Run ID: A123963
Included Lab Sample IDs: 2464206, 2464208, 2464210, 2464212, 2464214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
NO2NO3-N	105	106	P/P	90 - 110
NO2NO3-N	106	108	P/P	90 - 110

Reference Method: EPA 8321B
Run ID: A123970
Included Lab Sample IDs: 2464230, 2464231, 2464232, 2464233, 2464234

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	101	106	P/P	50 - 150
2,4-D	99.0	101	P/P	50 - 150
2,4,5-T	106	87.0	P/P	50 - 150
2,4,5-T	87.0	91.7	P/P	50 - 150
Acetaminophen	111	109	P/P	60 - 160
Acetaminophen	111	111	P/P	60 - 160
Acetamiprid	111	112	P/P	50 - 150
Acetamiprid	111	111	P/P	50 - 150
Afidopyropen	102	98.5	P/P	50 - 150
Afidopyropen	98.5	107	P/P	50 - 150
Bentazon	95.3	88.9	P/P	50 - 160
Bentazon	95.7	95.3	P/P	50 - 160
Benzovindiflupyr	106	108	P/P	50 - 150
Benzovindiflupyr	111	106	P/P	50 - 150
Carbamazepine	111	114	P/P	60 - 150
Carbamazepine	115	111	P/P	60 - 150
Clothianidin	105	109	P/P	60 - 150
Clothianidin	109	111	P/P	60 - 150
Dinotefuran	112	115	P/P	50 - 150
Dinotefuran	116	112	P/P	50 - 150
Diuron	103	104	P/P	60 - 160
Diuron	104	110	P/P	60 - 160
Fenuron	112	113	P/P	60 - 150
Fenuron	113	112	P/P	60 - 150

Quality Assurance Report
Calibration Verification

Reference Method: EPA 8321B
Run ID: A123970
Included Lab Sample IDs: 2464230, 2464231, 2464232, 2464233, 2464234

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluridone	108	109	P/P	60 - 160
Fluridone	111	112	P/P	60 - 160
Fluridone	116	108	P/P	60 - 160
Hydrocodone	116	121	P/P	60 - 150
Hydrocodone	120	116	P/P	60 - 150
Ibuprofen	79.5	91.9	P/P	50 - 160
Ibuprofen	91.9	63.9	P/P	50 - 160
Imazapyr	95.2	96.2	P/P	50 - 150
Imazapyr	96.2	92.4	P/P	50 - 150
Imidacloprid	103	103	P/P	60 - 150
Imidacloprid	104	103	P/P	60 - 150
Linuron	101	104	P/P	60 - 150
Linuron	104	116	P/P	60 - 150
Mandestrobin	108	111	P/P	50 - 150
Mandestrobin	110	108	P/P	50 - 150
MCPP	89.7	92.9	P/P	50 - 150
MCPP	93.7	89.7	P/P	50 - 150
Naproxen	112	112	P/P	50 - 160
Naproxen	112	126	P/P	50 - 160
Primidone	102	102	P/P	60 - 150
Primidone	102	97.8	P/P	60 - 150
Pyraclostrobin	113	115	P/P	60 - 150
Pyraclostrobin	115	116	P/P	60 - 150
Silvex	93.6	96.9	P/P	50 - 150
Silvex	96.9	89.0	P/P	50 - 150
Thiamethoxam	119	117	P/P	50 - 150
Thiamethoxam	120	119	P/P	50 - 150
Tolfenpyrad	101	112	P/P	60 - 150
Tolfenpyrad	98.6	101	P/P	60 - 150
Triclopyr	109	103	P/P	50 - 150
Triclopyr	109	109	P/P	50 - 150

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A123974
Included Lab Sample IDs: 2464206

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

Reference Method: EPA 365.1 Rev. 2.0
Run ID: A123976
Included Lab Sample IDs: 2464208, 2464210, 2464212, 2464214

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

Reference Method: SM 5310 B-2014
Run ID: A123982
Included Lab Sample IDs: 2464206

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

Quality Assurance Report
Calibration Verification

Reference Method: SM 5310 B-2014
Run ID: A123982
Included Lab Sample IDs: 2464206

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	98.3	127	P/P	85 - 115

Reference Method: SM 5310 B-2014
Run ID: A123983
Included Lab Sample IDs: 2464208, 2464210, 2464212, 2464214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	110	97.7	P/P	70 - 130

Reference Method: EPA 200.7 Rev. 4.4
Run ID: A123985
Included Lab Sample IDs: 2464235

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Calcium	105	106	P/P	90 - 110
Iron	106	106	P/P	90 - 110
Magnesium	106	106	P/P	90 - 110
Potassium	104	104	P/P	90 - 110
Sodium	97.9	98.4	P/P	90 - 110
Strontium	94.9	94.9	P/P	90 - 110
Tin	101	101	P/P	90 - 110
Titanium	104	104	P/P	90 - 110
Vanadium	101	101	P/P	90 - 110
Zinc	101	101	P/P	90 - 110

Reference Method: SM 2320 B-2011
Run ID: A123986
Included Lab Sample IDs: 2464205, 2464207, 2464209, 2464211, 2464213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	95.7	97.4	P/P	90 - 110
Total Alkalinity	97.4	95.0	P/P	90 - 110

Reference Method: SM 4500-F- C-2011
Run ID: A123986
Included Lab Sample IDs: 2464205, 2464207, 2464209, 2464211, 2464213

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

Reference Method: EPA 300.0 Rev. 2.1
Run ID: A124027
Included Lab Sample IDs: 2464205, 2464207, 2464209, 2464211, 2464213

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	99.5	99.9	P/P	90 - 110
Chloride	99.9	101	P/P	90 - 110
Sulfate	98.7	99.3	P/P	90 - 110
Sulfate	99.3	100	P/P	90 - 110

Quality Assurance Report
Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A124046
Included Lab Sample IDs: 2464214

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	106	99.6	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Run ID: A124049
Included Lab Sample IDs: 2464206, 2464208, 2464210, 2464212

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	103	97.6	P/P	90 - 110
Kjeldahl Nitrogen	92.3	103	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		
						LCS	SMP	MS
DEP SOP: NU-094-1	Color (true)	102					0.892	
EPA 180.1 Rev. 2.0	Turbidity	104					3.28	
	Turbidity	104					1.66	
EPA 200.7 Rev. 4.4	Calcium	107	108	113				0.463
	Iron	114	112	114	114			1.36
	Magnesium	114	113	115	114			1.33
	Potassium	105	102	104	102			1.66
	Sodium	99.7	99.5	98.7				0.562
	Strontium	95.9	92.4	93.2	94.0			0.808
	Tin	97.6	95.6	95.8	96.2			0.233
	Titanium	103	99.3	101	104			1.52
	Vanadium	100	101	102	100			0.742
	Zinc	95.8	95.1	96.2	96.1			1.19
EPA 200.8 Rev. 5.4	Aluminum	104	103	103	101			0.425
	Antimony	105	102	104	102			2.05
	Arsenic	103	98.8	99.4	99.3			0.658
	Barium	105	101	103	103			1.56
	Beryllium	98.6	96.2	95.5	95.8			0.675
	Boron	109	109	107	104			1.26
	Cadmium	103	103	104	102			0.750
	Chromium	104	102	103	103			1.07
	Cobalt	99.9	96.3	97.0	97.3			0.763
	Copper	99.0	94.7	95.1	97.9			0.436
	Lead	94.9	93.2	94.2	94.0			1.03
	Manganese	102	98.0	101	101			1.34
	Molybdenum	102	99.3	101	100			1.71
	Nickel	99.6	96.0	97.2	97.2			1.24
	Selenium	102	98.5	98.6	99.0			0.0537
	Silver	96.2	93.3	95.2	93.4			1.97
	Thallium	101	101	102	101			1.69
EPA 300.0 Rev. 2.1	Chloride	102	101	95.3			2.58	
	Chloride	101	99.0	101			0.0068	
	Sulfate	101	98.7	96.9			2.96	
	Sulfate	100	99.8	98.5			0.311	
EPA 350.1 Rev. 2.0	Ammonia-N	97.4	96.2	97.2				0.845
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.7	95.8	100				2.88
	Kjeldahl Nitrogen	93.3	95.8	94.0				1.07
EPA 353.2 Rev. 2.0	NO2NO3-N	104	104	104				0.482
	NO2NO3-N	105	102	104				0.985
EPA 365.1 Rev. 2.0	Total-P	106	104	114				8.40
	Total-P	102	106	97.8				7.07
EPA 8321B	2,4-D	93.9	93.5	106				12.1
	2,4,5-T	103	89.0	103				14.7
	Acesulfame K	121	125	127				1.20
	Acetaminophen	86.4	99.9	103				3.07
	Acetamiprid	84.1	84.9	88.7				4.38
	Afidopyropen	68.1	77.2	60.6				24.0
	AMPA	114	111	111				0.157
	Bentazon	81.9	42.0	44.8				6.35
	Benzovindiflupyr	81.9	93.9	95.3				1.52
	Carbamazepine	84.7	91.1	91.6				0.521
	Clothianidin	91.9	109	110				1.23
	Dinotefuran	100	116	118				1.37
	Diuron	77.7	84.3	78.9				6.65

Quality Assurance Report
Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision		
					LCS	SMP	MS
EPA 8321B	Endothall	92.1	98.5	98.0			0.529
	Fenuron	93.3	88.8	90.6			1.96
	Fluridone	90.3	90.7	92.8			2.28
	Glufosinate	95.9	91.3	93.4			2.34
	Glyphosate	101	100	102			1.63
	Hydrocodone	101	103	107			4.39
	Ibuprofen	70.8	85.9	82.4			4.14
	Imazapyr	86.6	107	110			2.06
	Imidacloprid	89.6	126	128			2.00
	Linuron	77.8	89.6	83.5			7.11
	Mandestrobin	88.7	101	104			2.81
	MCPP	83.4	90.1	91.6			1.61
	Naproxen	70.5	78.2	67.1			15.3
	Primidone	88.0	100	105			5.09
	Pyraclostrobin	87.5	96.0	95.9			0.0905
	Silvex	82.1	85.3	92.8			8.48
	Sucralose	82.5	86.4	85.1			1.60
	Thiamethoxam	97.9	116	120			2.78
	Tolfenpyrad	56.4	58.9	65.7			10.9
	Triclopyr	112	95.7	103			6.91
SM 2320 B-2011	Total Alkalinity	96.4				3.00	
SM 2540 C-2015	TDS	95.6				3.25	
	TDS	98.0				7.31	
SM 2540 D-2015	TSS	96.0					
	TSS	96.8					
SM 4500-F- C-2011	Fluoride	102	99.4	99.4			0.0
SM 5310 B-2014	Organic Carbon	101	99.9	102			1.70
	Organic Carbon	99.5	102	102			0.106

Reference Method Descriptions

Method	Description	Associated Samples
DEP SOP: NU-094-1	True Color measured at 450 nm (not valid for NPDES monitoring)	2464205, 2464207, 2464209, 2464211, 2464213
EPA 180.1 Rev. 2.0	Turbidity in aqueous matrices	2464205, 2464207, 2464209, 2464211, 2464213
EPA 200.7 Rev. 4.4	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2464235
EPA 200.8 Rev. 5.4	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2464235
EPA 300.0 Rev. 2.1	Chloride in aqueous matrices	2464205, 2464207, 2464209, 2464211, 2464213
EPA 300.0 Rev. 2.1	Sulfate in aqueous matrices	2464205, 2464207, 2464209, 2464211, 2464213
EPA 350.1 Rev. 2.0	Ammonia in aqueous matrices as mg N/L	2464206, 2464208, 2464210, 2464212, 2464214
EPA 351.2 Rev. 2.0	Total Kjeldahl Nitrogen in aqueous matrices	2464206, 2464208, 2464210, 2464212, 2464214
EPA 353.2 Rev. 2.0	Nitrite/Nitrate in aqueous matrices as mg N/L	2464206, 2464208, 2464210, 2464212, 2464214
EPA 365.1 Rev. 2.0	Total Phosphorus in aqueous matrices as mg P/L	2464206, 2464208, 2464210, 2464212, 2464214
EPA 8321B	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2464230, 2464231, 2464232, 2464233, 2464234

Reference Method Descriptions

Method	Description	Associated Samples
SM 2320 B-2011	Alkalinity in aqueous matrices as mg CaCO3/L	2464205, 2464207, 2464209, 2464211, 2464213
SM 2340 B-2011	Hardness by calculation, in aqueous matrices, reported as mg/L CaCO3	2464235
SM 2540 C-2015	Total Dissolved Solids in aqueous matrices	2464205, 2464207, 2464209, 2464211, 2464213
SM 2540 D-2015	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2464205, 2464207, 2464209, 2464211, 2464213
SM 4500-F- C-2011	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2464205, 2464207, 2464209, 2464211, 2464213
SM 5310 B-2014	Nonpurgeable Organic Carbon in aqueous matrices	2464206, 2464208, 2464210, 2464212, 2464214

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	01/30/2024			01/30/2024 14:58	Samantha L Bates	2464205
	01/30/2024			01/30/2024 15:00	Samantha L Bates	2464209
	01/30/2024			01/30/2024 15:01	Samantha L Bates	2464211, 2464213
	01/30/2024			01/30/2024 15:38	Samantha L Bates	2464207
EPA 180.1 Rev. 2.0	01/30/2024			01/30/2024 13:20	Dipa Joshi	2464205
	01/30/2024			01/30/2024 13:55	Dipa Joshi	2464207
	01/30/2024			01/30/2024 14:07	Dipa Joshi	2464209
	01/30/2024			01/30/2024 14:08	Dipa Joshi	2464211
	01/30/2024			01/30/2024 14:11	Dipa Joshi	2464213
EPA 200.7 Rev. 4.4	01/30/2024	01/31/2024 12:20	George D Taylor	02/02/2024 17:04	Chase Roberts	2464235
EPA 200.8 Rev. 5.4	01/30/2024	01/31/2024 12:20	George D Taylor	02/01/2024 19:15	Conrad Hartmann	2464235
EPA 300.0 Rev. 2.1	01/30/2024			02/06/2024 01:00	James L Waggerby	2464205
	01/30/2024			02/06/2024 01:15	James L Waggerby	2464207
	01/30/2024			02/06/2024 03:45	James L Waggerby	2464209
	01/30/2024			02/06/2024 04:00	James L Waggerby	2464211
	01/30/2024			02/06/2024 04:15	James L Waggerby	2464213
EPA 350.1 Rev. 2.0	01/30/2024			01/31/2024 12:57	Ping Hua	2464206
	01/30/2024			01/31/2024 12:58	Ping Hua	2464208
	01/30/2024			01/31/2024 13:00	Ping Hua	2464210
	01/30/2024			01/31/2024 13:01	Ping Hua	2464212
	01/30/2024			01/31/2024 13:02	Ping Hua	2464214
EPA 351.2 Rev. 2.0	01/30/2024	02/01/2024 11:30	Samantha L Bates	02/07/2024 16:24	Samantha L Bates	2464206
	01/30/2024	02/01/2024 11:30	Samantha L Bates	02/07/2024 16:26	Samantha L Bates	2464208
	01/30/2024	02/01/2024 11:30	Samantha L Bates	02/07/2024 16:28	Samantha L Bates	2464210
	01/30/2024	02/01/2024 11:30	Samantha L Bates	02/07/2024 16:32	Samantha L Bates	2464212
	01/30/2024	02/01/2024 15:35	Samantha L Bates	02/07/2024 13:31	Samantha L Bates	2464214
EPA 353.2 Rev. 2.0	01/30/2024			02/01/2024 13:44	Fadila Guebre	2464206
	01/30/2024			02/01/2024 13:46	Fadila Guebre	2464208
	01/30/2024			02/01/2024 13:53	Fadila Guebre	2464210
	01/30/2024			02/01/2024 13:59	Fadila Guebre	2464212
	01/30/2024			02/01/2024 14:00	Fadila Guebre	2464214
EPA 365.1 Rev. 2.0	01/30/2024	02/01/2024 15:22	Adam P Silver	02/02/2024 12:10	Simonne.V. Calhoun	2464206
	01/30/2024	02/01/2024 15:22	Adam P Silver	02/02/2024 12:45	Simonne.V. Calhoun	2464208
	01/30/2024	02/01/2024 15:22	Adam P Silver	02/02/2024 12:46	Simonne.V. Calhoun	2464210
	01/30/2024	02/01/2024 15:22	Adam P Silver	02/02/2024 12:48	Simonne.V. Calhoun	2464214
	01/30/2024	02/01/2024 15:22	Adam P Silver	02/02/2024 12:49	Simonne.V. Calhoun	2464212
EPA 8321B	01/30/2024	01/31/2024 10:45	Hana Lee	01/31/2024 14:27	Hana Lee	2464230
	01/30/2024	01/31/2024 10:45	Hana Lee	01/31/2024 14:41	Hana Lee	2464231
	01/30/2024	01/31/2024 10:45	Hana Lee	01/31/2024 14:55	Hana Lee	2464232
	01/30/2024	01/31/2024 10:45	Hana Lee	01/31/2024 15:09	Hana Lee	2464233

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	01/30/2024	01/31/2024 10:45	Hana Lee	01/31/2024 15:23	Hana Lee	2464234
	01/30/2024	01/31/2024 10:45	Hana Lee	01/31/2024 17:32	Hana Lee	2464230
	01/30/2024	01/31/2024 10:45	Hana Lee	01/31/2024 17:45	Hana Lee	2464231
	01/30/2024	01/31/2024 10:45	Hana Lee	01/31/2024 17:59	Hana Lee	2464232
	01/30/2024	01/31/2024 10:45	Hana Lee	01/31/2024 18:13	Hana Lee	2464233
	01/30/2024	01/31/2024 10:45	Hana Lee	01/31/2024 18:26	Hana Lee	2464234
	01/30/2024	02/01/2024 09:00	Hoor Shaik	02/02/2024 05:26	Juyoung Kim	2464230
	01/30/2024	02/01/2024 09:00	Hoor Shaik	02/02/2024 05:44	Juyoung Kim	2464231
	01/30/2024	02/01/2024 09:00	Hoor Shaik	02/02/2024 06:20	Juyoung Kim	2464232
	01/30/2024	02/01/2024 09:00	Hoor Shaik	02/02/2024 06:38	Juyoung Kim	2464233
	01/30/2024	02/01/2024 09:00	Hoor Shaik	02/02/2024 06:56	Juyoung Kim	2464234
	01/30/2024	02/01/2024 09:00	Hoor Shaik	02/02/2024 10:54	Juyoung Kim	2464233
SM 2320 B-2011	01/30/2024			02/03/2024 00:01	Dale L. Simmons	2464207
	01/30/2024			02/03/2024 00:48	Dale L. Simmons	2464205
	01/30/2024			02/03/2024 01:00	Dale L. Simmons	2464211
	01/30/2024			02/03/2024 01:14	Dale L. Simmons	2464213
	01/30/2024			02/03/2024 04:20	Dale L. Simmons	2464209
SM 2340 B-2011	01/30/2024			02/02/2024 17:04	Chase Roberts	2464235
SM 2540 C-2015	01/30/2024			02/02/2024 15:41	Yijie Li	2464205, 2464207, 2464209, 2464211, 2464213
SM 2540 D-2015	01/30/2024			02/02/2024 15:41	Yijie Li	2464205, 2464207, 2464209, 2464211, 2464213
SM 4500-F- C-2011	01/30/2024			02/02/2024 23:51	Dale L. Simmons	2464207
	01/30/2024			02/03/2024 00:48	Dale L. Simmons	2464205
	01/30/2024			02/03/2024 01:00	Dale L. Simmons	2464211
	01/30/2024			02/03/2024 01:14	Dale L. Simmons	2464213
	01/30/2024			02/03/2024 04:20	Dale L. Simmons	2464209
SM 5310 B-2014	01/30/2024			02/01/2024 16:37	Elise M. Gillis	2464208
	01/30/2024			02/01/2024 16:52	Elise M. Gillis	2464210
	01/30/2024			02/01/2024 17:06	Elise M. Gillis	2464212
	01/30/2024			02/01/2024 17:20	Elise M. Gillis	2464214
	01/30/2024			02/03/2024 05:45	Khloe J Berg	2464206