

Chemical Analysis Report

NE-DIST-2019-07-11-01

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

Event Description: **LSJR Southside**
Request ID: **RQ-2019-07-08-15**
Customer: **NE-DIST**
Project ID: **SMP**

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8800 Baymeadows Way West
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Certified by: Kerry Tate, Ph.D., Environmental Administrator

Date Certified: 08-AUG-2019 14:17

A handwritten signature in black ink that reads "Kerry Tate". The signature is written in a cursive, flowing style with a horizontal line above the first name.

NON-CONFORMANCE REPORT INCLUDED

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: Miramar at San Jose

Collection Date/Time: 07/10/2019 09:05

Field ID: G2NE1164

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2101853	EPA 180.1 Rev. 2.0	Turbidity	6.4		NTU	P367118	
	EPA 300.0 Rev. 2.1	Chloride	1.6E+03		mg Cl/L	P367302	
		Sulfate	280		mg SO4/L	P367304	
	SM 2120 B	Color (true)	31		PCU	P367106	
	SM 2320 B-97	Total Alkalinity	82		mg CaCO3/L	P367553	
	SM 2540 C-97	TDS	2.94E+03	A	mg/L	P367654	
	SM 2540 D-97	TSS	5	UA	mg/L	P367241	
	SM 4500 F-C-97	Fluoride	0.21		mg F/L	P367558	
2101854	EPA 350.1 Rev. 2.0	Ammonia-N	0.12		mg N/L	P367420	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.60		mg N/L	P367287	
	EPA 353.2 Rev. 2.0	NO2NO3-N	1.4		mg N/L	P367617	
	EPA 365.1 Rev. 2.0	Total-P	0.079		mg P/L	P367282	
	SM 5310 B-00	Organic Carbon	4.7		mg C/L	P367346	
2101855	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.051		mg P/L	P367099	

Ref. Method and Comment:

SM 2540 C-97: The reported result is consistent with the laboratory conductivity, 5430 umhos/cm.

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample. The MDL was elevated because of insufficient sample volume to perform the analysis.

Sample Location: BIG POTTSBURG CR BOWDEN RD

Collection Date/Time: 07/10/2019 09:30

Field ID: 20030068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2101847	EPA 180.1 Rev. 2.0	Turbidity	2.9		NTU	P367117	
	EPA 300.0 Rev. 2.1	Chloride	22	A	mg Cl/L	P367302	
		Sulfate	45	A	mg SO4/L	P367304	
	SM 2120 B	Color (true)	59		PCU	P367107	
	SM 2320 B-97	Total Alkalinity	65		mg CaCO3/L	P367447	
	SM 2540 C-97	TDS	200		mg/L	P367438	
	SM 2540 D-97	TSS	2	I	mg/L	P367238	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P367451	
2101849	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P367422	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P367284	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P367141	
	EPA 365.1 Rev. 2.0	Total-P	0.088		mg P/L	P367233	
	SM 5310 B-00	Organic Carbon	10		mg C/L	P367346	
2101851	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.048		mg P/L	P367098	
2101885	EPA 8321B	2,4-D	0.035		ug/L	P367058	
		Acesulfame K**	0.10	U	ug/L	P367189	
		AMPA**	0.30	I	ug/L	P367189	
		Sucralose**	0.054		ug/L	P367189	
		Acetaminophen**	0.0080	U	ug/L	P367058	
		Endothall**	0.25	U	ug/L	P367189	
		Acetamiprid**	0.0020	UJ	ug/L	P367058	
		Glufosinate**	0.10	U	ug/L	P367189	
		Glyphosate**	0.37	I	ug/L	P367189	
		Afidopyropen**	0.0020	UJ	ug/L	P367058	
		Bentazon	0.040		ug/L	P367058	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P367058	
		Carbamazepine**	8.0E-04	U	ug/L	P367058	
		Clothianidin**	0.046	J	ug/L	P367058	
		Dinotefuran**	0.0020	UJ	ug/L	P367058	
		Diuron	0.0094		ug/L	P367058	
		Fenuron	0.016	U	ug/L	P367058	
		Fluridone**	0.099		ug/L	P367058	
		Imazapyr**	0.33		ug/L	P367058	
		Hydrocodone**	0.0020	U	ug/L	P367058	
		Ibuprofen**	0.020	U	ug/L	P367058	
		Imidacloprid	0.12	J	ug/L	P367058	MS
		Linuron	0.0040	U	ug/L	P367058	
		Mandestrobin**	0.0020	UJ	ug/L	P367058	
		MCP	0.0062	IJ	ug/L	P367058	MS
		Naproxen**	0.0080	U	ug/L	P367058	
		Primidone**	0.0040	U	ug/L	P367058	
		Pyraclostrobin**	0.0020	U	ug/L	P367058	
		Thiamethoxam**	0.0020	UJ	ug/L	P367058	MS

Field ID: 20030068

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2101885	EPA 8321B	Tolfenpyrad**	0.0020	UJ	ug/L	P367058	
		Triclopyr**	0.0040	UJ	ug/L	P367058	MS
2101888	EPA 200.7 Rev. 4.4	Barium	29.5		ug/L	P367227	
		Calcium	36.4		mg/L	P367227	
		Iron	570		ug/L	P367227	
		Magnesium	7.06		mg/L	P367227	
		Potassium	1.8		mg/L	P367227	
		Sodium	14.4		mg/L	P367227	
		Zinc	5.0	U	ug/L	P367227	
	EPA 200.8 Rev. 5.4	Aluminum	52		ug/L	P367833	
		Antimony	0.26		ug/L	P367227	
		Arsenic	0.98		ug/L	P367227	
		Boron**	30.7		ug/L	P367227	
		Cadmium	0.020	U	ug/L	P367227	
		Chromium	0.40	U	ug/L	P367227	
		Copper	1.52		ug/L	P367227	
		Lead	0.20	U	ug/L	P367227	
		Nickel	2.9		ug/L	P367227	
		Selenium	0.20	U	ug/L	P367833	
		Silver	0.010	U	ug/L	P367833	
		Thallium	0.10	U	ug/L	P367227	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample. J - second source check standards for some analytes were not available for analysis. Refer to the narrative for an explanation of QC Codes.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium and potassium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: BIG POTTSBURG CR BOWDEN RD

Collection Date/Time: 07/10/2019 09:35

Field ID: 20030068 DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2101848	EPA 180.1 Rev. 2.0	Turbidity	2.6		NTU	P367118	
	EPA 300.0 Rev. 2.1	Chloride	22		mg Cl/L	P367302	
		Sulfate	45		mg SO4/L	P367304	
	SM 2120 B	Color (true)	58		PCU	P367107	
	SM 2320 B-97	Total Alkalinity	65		mg CaCO3/L	P367447	
	SM 2540 C-97	TDS	202		mg/L	P367438	
	SM 2540 D-97	TSS	2	U	mg/L	P367238	
	SM 4500 F-C-97	Fluoride	0.11		mg F/L	P367451	
2101850	EPA 350.1 Rev. 2.0	Ammonia-N	0.049		mg N/L	P367422	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P367284	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.14		mg N/L	P367141	
	EPA 365.1 Rev. 2.0	Total-P	0.089		mg P/L	P367233	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P367346	
2101852	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.049		mg P/L	P367098	
2101886	EPA 8321B	2,4-D	0.031		ug/L	P367058	
		Acesulfame K**	0.10	U	ug/L	P367189	
		AMPA**	0.29	I	ug/L	P367189	
		Sucralose**	0.065		ug/L	P367189	
		Acetaminophen**	0.0080	U	ug/L	P367058	
		Endothall**	0.25	U	ug/L	P367189	
		Acetamiprid**	0.0020	UJ	ug/L	P367058	
		Glufosinate**	0.10	U	ug/L	P367189	
		Glyphosate**	0.38	I	ug/L	P367189	
		Afidopyropen**	0.0020	UJ	ug/L	P367058	
		Bentazon	0.040		ug/L	P367058	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P367058	
		Carbamazepine**	8.0E-04	U	ug/L	P367058	
		Clothianidin**	0.045	J	ug/L	P367058	
		Dinotefuran**	0.0020	UJ	ug/L	P367058	
		Diuron	0.0082		ug/L	P367058	
		Fenuron	0.016	U	ug/L	P367058	
		Fluridone**	0.090		ug/L	P367058	
		Imazapyr**	0.31		ug/L	P367058	
		Hydrocodone**	0.0020	U	ug/L	P367058	
		Ibuprofen**	0.020	U	ug/L	P367058	
		Imidacloprid	0.10		ug/L	P367058	MS
		Linuron	0.0040	U	ug/L	P367058	
		Mandestrobin**	0.0020	UJ	ug/L	P367058	
		MCP	0.0047	I	ug/L	P367058	MS
		Naproxen**	0.0080	U	ug/L	P367058	
		Primidone**	0.0040	U	ug/L	P367058	
		Pyraclostrobin**	0.0020	U	ug/L	P367058	
		Thiamethoxam**	0.0020	UJ	ug/L	P367058	MS

Field ID: 20030068 DUP

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2101886	EPA 8321B	Tolfenpyrad**	0.0020	UJ	ug/L	P367058	
		Triclopyr**	0.0040	U	ug/L	P367058	MS
2101889	EPA 200.7 Rev. 4.4	Barium	29.7		ug/L	P367227	
		Calcium	36.6		mg/L	P367227	
		Iron	580		ug/L	P367227	
		Magnesium	7.02		mg/L	P367227	
		Potassium	1.8		mg/L	P367227	
		Sodium	14.4		mg/L	P367227	
		Zinc	5.0	U	ug/L	P367227	
	EPA 200.8 Rev. 5.4	Aluminum	56		ug/L	P367833	
		Antimony	0.25		ug/L	P367227	
		Arsenic	1.0		ug/L	P367227	
		Boron**	30.8		ug/L	P367227	
		Cadmium	0.020	U	ug/L	P367227	
		Chromium	0.40	U	ug/L	P367227	
		Copper	1.67		ug/L	P367227	
		Lead	0.20	U	ug/L	P367227	
		Nickel	3.0		ug/L	P367227	
		Selenium	0.20	U	ug/L	P367833	
		Silver	0.010	U	ug/L	P367833	
		Thallium	0.10	U	ug/L	P367227	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample. J - second source check standards for some analytes were not available for analysis.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium and potassium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: BIG POTTSBURG CR BOWDEN RD

Collection Date/Time: 07/10/2019 09:45

Field ID: FB 07102019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2101865	EPA 180.1 Rev. 2.0	Turbidity	0.10	U	NTU	P367118	
	EPA 300.0 Rev. 2.1	Chloride	0.20	U	mg Cl/L	P367302	
		Sulfate	0.20	U	mg SO4/L	P367304	
	SM 2120 B	Color (true)	2.5	U	PCU	P367107	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P367447	
	SM 2540 C-97	TDS	15	U	mg/L	P367439	
	SM 2540 D-97	TSS	2	U	mg/L	P367239	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P367451	
2101866	EPA 350.1 Rev. 2.0	Ammonia-N	0.002	U	mg N/L	P367422	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.080	U	mg N/L	P367284	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.004	U	mg N/L	P367141	
	EPA 365.1 Rev. 2.0	Total-P	0.002	U	mg P/L	P367249	
	SM 5310 B-00	Organic Carbon	0.50	U	mg C/L	P367346	
2101867	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	U	mg P/L	P367098	
2101887	EPA 8321B	2,4-D	0.0020	U	ug/L	P367058	
		Acesulfame K**	0.10	U	ug/L	P367189	
		AMPA**	0.10	U	ug/L	P367189	
		Sucralose**	0.010	U	ug/L	P367189	
		Acetaminophen**	0.0080	U	ug/L	P367058	
		Endothall**	0.25	U	ug/L	P367189	
		Acetamiprid**	0.0020	UJ	ug/L	P367058	
		Glufosinate**	0.10	U	ug/L	P367189	
		Glyphosate**	0.10	U	ug/L	P367189	
		Afidopyrophen**	0.0020	UJ	ug/L	P367058	
		Bentazon	8.0E-04	U	ug/L	P367058	
		Benzovindiflupyr**	0.0020	UJ	ug/L	P367058	
		Carbamazepine**	8.0E-04	U	ug/L	P367058	
		Clothianidin**	0.0020	UJ	ug/L	P367058	
		Dinotefuran**	0.0020	UJ	ug/L	P367058	
		Diuron	0.0020	U	ug/L	P367058	
		Fenuron	0.016	U	ug/L	P367058	
		Fluridone**	8.0E-04	U	ug/L	P367058	
		Imazapyr**	0.0040	U	ug/L	P367058	
		Hydrocodone**	0.0020	U	ug/L	P367058	
		Ibuprofen**	0.020	U	ug/L	P367058	
		Imidacloprid	0.0020	U	ug/L	P367058	MS
		Linuron	0.0040	U	ug/L	P367058	
		Mandestrobin**	0.0020	UJ	ug/L	P367058	
		MCP	0.0020	U	ug/L	P367058	MS
		Naproxen**	0.0080	U	ug/L	P367058	
		Primidone**	0.0040	U	ug/L	P367058	
		Pyraclostrobin**	0.0020	U	ug/L	P367058	
		Thiamethoxam**	0.0020	UJ	ug/L	P367058	MS

Field ID: FB 07102019

Matrix: W-FIELD-BK

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2101887	EPA 8321B	Tolfenpyrad**	0.0020	UJ	ug/L	P367058	
		Triclopyr**	0.0040	U	ug/L	P367058	MS
2101893	EPA 200.7 Rev. 4.4	Barium	1.0	U	ug/L	P367227	
		Calcium	0.075	U	mg/L	P367227	
		Iron	30	U	ug/L	P367227	
		Magnesium	0.040	U	mg/L	P367227	
		Potassium	0.30	U	mg/L	P367227	
		Sodium	0.50	U	mg/L	P367227	
		Zinc	5.0	U	ug/L	P367227	
	EPA 200.8 Rev. 5.4	Aluminum	5.0	U	ug/L	P367227	
		Antimony	0.050	U	ug/L	P367227	
		Arsenic	0.050	U	ug/L	P367227	
		Boron**	2.0	U	ug/L	P367227	
		Cadmium	0.020	U	ug/L	P367227	
		Chromium	0.40	U	ug/L	P367227	
		Copper	0.40	U	ug/L	P367227	
		Lead	0.20	U	ug/L	P367227	
		Nickel	0.50	U	ug/L	P367227	
		Selenium	0.20	U	ug/L	P367833	
		Silver	0.010	U	ug/L	P367833	
		Thallium	0.10	U	ug/L	P367227	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 8321B: MS accuracy for imazapyr could not be assessed due to high concentration of parameter in the spiked sample. J - second source check standards for some analytes were not available for analysis.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium and potassium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: DEEP BOTTOM CREEK AT SCOTT MILL RD

Collection Date/Time: 07/10/2019 11:40

Field ID: 20030595

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2101856	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P367118	
	EPA 300.0 Rev. 2.1	Chloride	20		mg Cl/L	P367302	
		Sulfate	11		mg SO4/L	P367304	
		Color (true)	58	A	PCU	P367107	
	SM 2320 B-97	Total Alkalinity	67		mg CaCO3/L	P367447	
	SM 2540 C-97	TDS	143		mg/L	P367438	
	SM 2540 D-97	TSS	2	U	mg/L	P367238	
	SM 4500 F-C-97	Fluoride	0.080	I	mg F/L	P367451	
2101859	EPA 350.1 Rev. 2.0	Ammonia-N	0.091		mg N/L	P367422	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.58		mg N/L	P367371	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.16		mg N/L	P367141	
	EPA 365.1 Rev. 2.0	Total-P	0.063		mg P/L	P367233	
	SM 5310 B-00	Organic Carbon	8.8		mg C/L	P367346	
2101862	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.032		mg P/L	P367098	
2101890	EPA 200.7 Rev. 4.4	Barium	20.8		ug/L	P367227	
		Calcium	27.1		mg/L	P367227	
		Iron	1.14E+03		ug/L	P367227	
		Magnesium	4.06		mg/L	P367227	
		Potassium	1.9		mg/L	P367227	
		Sodium	13.7		mg/L	P367227	
		Zinc	5.0	U	ug/L	P367227	
	EPA 200.8 Rev. 5.4	Aluminum	122		ug/L	P367227	
		Antimony	0.23		ug/L	P367227	
		Arsenic	1.86		ug/L	P367227	
		Boron**	26.4		ug/L	P367227	
		Cadmium	0.020	U	ug/L	P367227	
		Chromium	0.40	U	ug/L	P367227	
		Copper	1.16		ug/L	P367227	
		Lead	0.20	U	ug/L	P367227	
		Nickel	0.50	U	ug/L	P367227	
		Selenium	0.20	U	ug/L	P367833	
		Silver	0.010	U	ug/L	P367833	
		Thallium	0.10	U	ug/L	P367227	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium and potassium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: OLDFIELD CR @ JULINGTON CREEK ROAD

Collection Date/Time: 07/10/2019 12:15

Field ID: 20030684

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2101857	EPA 180.1 Rev. 2.0	Turbidity	2.3		NTU	P367118	
	EPA 300.0 Rev. 2.1	Chloride	120		mg Cl/L	P367340	
		Sulfate	38		mg SO4/L	P367304	
	SM 2120 B	Color (true)	63		PCU	P367107	
	SM 2320 B-97	Total Alkalinity	65		mg CaCO3/L	P367447	
	SM 2540 C-97	TDS	344	A	mg/L	P367439	
	SM 2540 D-97	TSS	2	UA	mg/L	P367239	
2101860	SM 4500 F-C-97	Fluoride	0.10		mg F/L	P367451	
	EPA 350.1 Rev. 2.0	Ammonia-N	0.027	Y	mg N/L	P367422	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.57	Y	mg N/L	P367372	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.088	Y	mg N/L	P367141	
	EPA 365.1 Rev. 2.0	Total-P	0.091	Y	mg P/L	P367233	
2101863	SM 5310 B-00	Organic Carbon	10	Y	mg C/L	P367346	
	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.056		mg P/L	P367098	
2101891	EPA 200.7 Rev. 4.4	Barium	32.8		ug/L	P367227	
		Calcium	31.6		mg/L	P367227	
		Iron	620		ug/L	P367227	
		Magnesium	11.9		mg/L	P367227	
		Potassium	3.7		mg/L	P367227	
		Sodium	75.0		mg/L	P367227	
		Zinc	5.0	U	ug/L	P367227	
	EPA 200.8 Rev. 5.4	Aluminum	33		ug/L	P367227	
		Antimony	0.10	I	ug/L	P367227	
		Arsenic	3.16		ug/L	P367227	
		Boron**	55.1		ug/L	P367227	
		Cadmium	0.020	U	ug/L	P367227	
		Chromium	0.40	U	ug/L	P367227	
		Copper	1.21		ug/L	P367227	
		Lead	0.20	U	ug/L	P367227	
		Nickel	0.94	I	ug/L	P367227	
		Selenium	0.20	U	ug/L	P367833	
		Silver	0.010	U	ug/L	P367833	
		Thallium	0.10	U	ug/L	P367227	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 350.1 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 351.2 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 353.2 Rev. 2.0: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 365.1 Rev. 2.0: Total-P: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

SM 5310 B-00: The sample was received unpreserved: pH > 2. Sample preserved in laboratory.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium and potassium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Sample Location: CORMORANT BRANCH @ MARBON RD

Collection Date/Time: 07/10/2019 12:40

Field ID: 20030852

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2101858	EPA 180.1 Rev. 2.0	Turbidity	4.4		NTU	P367118	
	EPA 300.0 Rev. 2.1	Chloride	19		mg Cl/L	P367302	
		Sulfate	18		mg SO4/L	P367304	
		Color (true)	70		PCU	P367107	
	SM 2120 B	Total Alkalinity	69		mg CaCO3/L	P367447	
	SM 2540 C-97	TDS	152		mg/L	P367439	
	SM 2540 D-97	TSS	2	U	mg/L	P367239	
	SM 4500 F-C-97	Fluoride	0.092	I	mg F/L	P367451	
2101861	EPA 350.1 Rev. 2.0	Ammonia-N	0.031		mg N/L	P367422	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.55		mg N/L	P367372	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.23		mg N/L	P367141	
	EPA 365.1 Rev. 2.0	Total-P	0.091		mg P/L	P367233	
	SM 5310 B-00	Organic Carbon	7.9		mg C/L	P367346	
2101864	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.058		mg P/L	P367098	
2101892	EPA 200.7 Rev. 4.4	Barium	35.0		ug/L	P367227	
		Calcium	28.6		mg/L	P367227	
		Iron	1.52E+03		ug/L	P367227	
		Magnesium	5.05		mg/L	P367227	
		Potassium	1.9		mg/L	P367227	
		Sodium	13.3		mg/L	P367227	
		Zinc	5.0	U	ug/L	P367227	
	EPA 200.8 Rev. 5.4	Aluminum	21		ug/L	P367227	
		Antimony	0.10	I	ug/L	P367227	
		Arsenic	2.41		ug/L	P367227	
		Boron**	27.1		ug/L	P367227	
		Cadmium	0.020	U	ug/L	P367227	
		Chromium	0.40	U	ug/L	P367227	
		Copper	1.71		ug/L	P367227	
		Lead	0.20	U	ug/L	P367227	
		Nickel	0.50	U	ug/L	P367227	
		Selenium	0.20	U	ug/L	P367833	
		Silver	0.010	U	ug/L	P367833	
		Thallium	0.10	U	ug/L	P367227	

Ref. Method and Comment:

SM 2540 D-97: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

EPA 200.7 Rev. 4.4: Batch matrix spike recoveries for magnesium and potassium are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

EPA 200.8 Rev. 5.4: Batch matrix spike recoveries for boron are unavailable for one of two spiked samples because of high analyte concentration in the QC sample.

Non-Conformance Report

NCR ID: 7775

Event(s)

NE-DIST-2019-07-11-01

Job(s)

TLH-2019-07-11-18

Sample(s)

2101860

Test(s)

NCR Type: SHIPPING/RECEIVING

NCR Category: Preservation Not Intact

Observation: Sample not preserved to pH < 2.

Resolution: Sample preserved in the laboratory with sulfuric acid.

H2SO4 Lot# SA874050 | Expiration Date: 10/01/2019

Authorized by/Date: Joshua Ayres 7/15/2019

The Non-Conformance Report details exceptions or problems encountered with the events/jobs/samples/test.
Please address questions to:

Chemistry	Colin Wright	(850) 245-8085
Biology	Cheryl Swanson	(850) 245-8177

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P367117

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P367118

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P367227

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
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: P367227

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Antimony	0.050	U	ug/L
Arsenic	0.050	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
Thallium	0.10	U	ug/L

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P367833

Component	Result	Code	Units
Aluminum	5.0	U	ug/L
Selenium	0.20	U	ug/L
Silver	0.010	U	ug/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367302

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367304

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367340

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367420

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367422

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367284

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367287

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367371

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367372

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367141

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367617

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367233

Component	Result	Code	Units
Total-P	0.005	U	mg P/L

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367249

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367282

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P367098

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P367099

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

Reference Method: EPA 8321B
Batch ID: P367058

Component	Result	Code	Units
2,4-D	0.0020	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

Quality Assurance Report Method Blank Results

Reference Method: EPA 8321B
Batch ID: P367058

Component	Result	Code	Units
Linuron	0.0040	U	ug/L
Mandestrobin	0.0020	U	ug/L
MCP	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: P367189

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
Batch ID: P367106

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P367107

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P367447

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

Reference Method: SM 2320 B-97
Batch ID: P367553

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

Reference Method: SM 2540 C-97
Batch ID: P367438

Component	Result	Code	Units
TDS	15	U	mg/L

Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 C-97
Batch ID: P367439

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 C-97
Batch ID: P367654

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P367238

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P367239

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P367241

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P367451

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 4500 F-C-97
Batch ID: P367558

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P367346

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: P367227

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Barium	98.7		P	85 - 115
Calcium	101		P	85 - 115
Iron	103		P	85 - 115
Magnesium	100		P	85 - 115
Potassium	111		P	85 - 115
Sodium	110		P	85 - 115
Zinc	98.3		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P367227

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	104		P	85 - 115
Antimony	104		P	85 - 115
Arsenic	104		P	85 - 115
Boron	103		P	85 - 115
Cadmium	103		P	85 - 115
Chromium	101		P	85 - 115
Copper	99.1		P	85 - 115
Lead	103		P	85 - 115
Nickel	101		P	85 - 115
Thallium	106		P	85 - 115

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P367833

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Aluminum	101		P	85 - 115
Selenium	103		P	85 - 115
Silver	104		P	85 - 115

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367302

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367304

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

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367340

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367420

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

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367422

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367284

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367287

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367371

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	99.9		P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367372

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Kjeldahl Nitrogen	98.6		P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367141

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: P367617

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367233

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P367249

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

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P367282

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P367098

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P367099

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

Reference Method: EPA 8321B
 Batch ID: P367058

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2,4-D	136		P	40 - 150
Acetaminophen	101		P	30 - 150
Acetamiprid	105		P	40 - 150
Afidopyropen	94.7		P	40 - 150
Bentazon	110		P	30 - 150
Benzovindiflupyr	94.2		P	40 - 150
Carbamazepine	99.3		P	40 - 150
Clothianidin	96.5		P	40 - 150
Dinotefuran	104		P	40 - 150
Diuron	98.6		P	40 - 150
Fenuron	108		P	40 - 150
Fluridone	106		P	40 - 150
Hydrocodone	102		P	40 - 150
Ibuprofen	103		P	30 - 150
Imazapyr	109		P	40 - 150
Imidacloprid	101		P	40 - 150
Linuron	84.8		P	40 - 150
Mandestrobin	99.3		P	40 - 150
MCPP	145		P	40 - 150
Naproxen	106		P	40 - 150
Primidone	90.7		P	40 - 150
Pyraclostrobin	106		P	30 - 150
Thiamethoxam	120		P	40 - 150
Tolfenpyrad	57.9		P	40 - 150
Triclopyr	122		P	30 - 150

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8321B
Batch ID: P367189

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acesulfame K	123		P	40 - 150
AMPA	98.7		P	40 - 150
Endothall	105		P	40 - 150
Glufosinate	94.4		P	40 - 150
Glyphosate	96.1		P	40 - 140
Sucralose	85.9		P	40 - 150

Reference Method: SM 2120 B
Batch ID: P367106

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	98.5		P	85 - 115

Reference Method: SM 2120 B
Batch ID: P367107

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	99.8		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P367447

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 2320 B-97
Batch ID: P367553

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	104		P	98 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P367451

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	97.5		P	92 - 103

Reference Method: SM 4500 F-C-97
Batch ID: P367558

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	96.9		P	92 - 103

Reference Method: SM 5310 B-00
Batch ID: P367346

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P367227

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101785	Barium	94.0		P	80 - 120
2101785	Calcium	98.7		P	80 - 120
2101785	Iron	97.0		P	80 - 120
2101785	Sodium	105		P	80 - 120
2101785	Zinc	93.9		P	80 - 120
2101890	Barium	95.5	96.2	P/P	80 - 120
2101890	Calcium	94.4		P	80 - 120
2101890	Iron	98.7	98.8	P/P	80 - 120
2101890	Magnesium	96.0		P	80 - 120
2101890	Potassium	103	104	P/P	80 - 120
2101890	Sodium	103		P	80 - 120
2101890	Zinc	97.6	98.1	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P367227

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101785	Aluminum	104		P	80 - 120
2101785	Antimony	105		P	80 - 120
2101785	Arsenic	106		P	80 - 120
2101785	Cadmium	104		P	80 - 120
2101785	Chromium	97.7		P	80 - 120
2101785	Copper	96.2		P	80 - 120
2101785	Lead	104		P	80 - 120
2101785	Nickel	98.3		P	80 - 120
2101785	Thallium	109		P	80 - 120
2101890	Aluminum	98.9	97.3	P/P	80 - 120
2101890	Antimony	102	102	P/P	80 - 120
2101890	Arsenic	104	103	P/P	80 - 120
2101890	Boron	102	104	P/P	80 - 120
2101890	Cadmium	103	103	P/P	80 - 120
2101890	Chromium	103	104	P/P	80 - 120
2101890	Copper	98.0	97.6	P/P	80 - 120
2101890	Lead	103	105	P/P	80 - 120
2101890	Nickel	100	100	P/P	80 - 120
2101890	Thallium	108	110	P/P	80 - 120

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P367833

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101891	Aluminum	100		P	80 - 120
2101891	Selenium	109		P	80 - 120
2101891	Silver	101		P	80 - 120
2105258	Aluminum	102	99.1	P/P	80 - 120
2105258	Selenium	109	105	P/P	80 - 120
2105258	Silver	107	100	P/P	80 - 120

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
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Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367302

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101847	Chloride	97.7		P	90 - 110
2102049	Chloride	99.6		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367304

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101847	Sulfate	99.3		P	90 - 110
2102049	Sulfate	99.4		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367340

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101819	Chloride	101		P	90 - 110
2101913	Chloride	101		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367420

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101730	Ammonia-N	104	102	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367422

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101822	Ammonia-N	103	102	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367284

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2102894	Kjeldahl Nitrogen	94.4	92.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367287

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101854	Kjeldahl Nitrogen	93.0	94.0	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367371

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101794	Kjeldahl Nitrogen	101	103	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367372

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101860	Kjeldahl Nitrogen	99.8	103	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367141

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101859	NO2NO3-N	103	102	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367617

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101742	NO2NO3-N	97.9	98.4	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367233

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101844	Total-P	105	100	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367249

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2102894	Total-P	104	105	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367282

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101854	Total-P	103	101	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P367098

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101864	O-Phosphate-P	93.6	94.5	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P367099

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2102025	O-Phosphate-P	94.5	95.3	P/P	90 - 110

Reference Method: EPA 8321B
Batch ID: P367058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101885	2,4-D	131	147	P/P	40 - 150
2101885	Acetaminophen	114	125	P/P	30 - 150
2101885	Acetamiprid	108	118	P/P	40 - 150
2101885	Afidopyropen	113	110	P/P	40 - 150
2101885	Bentazon	68.0	69.7	P/P	30 - 150
2101885	Benzovindiflupyr	101	95.7	P/P	40 - 150
2101885	Carbamazepine	87.6	93.1	P/P	40 - 150
2101885	Clothianidin	103	107	P/P	40 - 150
2101885	Dinotefuran	122	132	P/P	40 - 150
2101885	Diuron	79.4	81.8	P/P	40 - 150

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8321B
Batch ID: P367058

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101885	Fenuron	85.9	98.2	P/P	40 - 150
2101885	Fluridone	46.2	57.4	P/P	40 - 150
2101885	Hydrocodone	99.5	111	P/P	40 - 150
2101885	Ibuprofen	97.7	103	P/P	30 - 150
2101885	Imidacloprid	176	191	F/F	40 - 150
2101885	Linuron	67.3	78.4	P/P	40 - 150
2101885	Mandestrobin	90.7	96.4	P/P	40 - 150
2101885	MCPP	177	191	F/F	40 - 150
2101885	Naproxen	116	121	P/P	40 - 150
2101885	Primidone	107	118	P/P	40 - 150
2101885	Pyraclostrobin	105	111	P/P	30 - 150
2101885	Thiamethoxam	170	205	F/F	40 - 150
2101885	Tolfenpyrad	64.8	68.3	P/P	40 - 150
2101885	Triclopyr	136	152	P/F	30 - 150

Reference Method: EPA 8321B
Batch ID: P367189

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101887	Acesulfame K	115	122	P/P	40 - 150
2101887	AMPA	86.9	96.5	P/P	40 - 150
2101887	Endothall	96.4	103	P/P	40 - 150
2101887	Glufosinate	89.5	99.2	P/P	40 - 150
2101887	Glyphosate	85.5	96.0	P/P	40 - 140
2101887	Sucralose	87.4	106	P/P	40 - 150

Reference Method: SM 4500 F-C-97
Batch ID: P367451

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101778	Fluoride	95.9	95.9	P/P	89 - 106

Reference Method: SM 4500 F-C-97
Batch ID: P367558

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2102049	Fluoride	95.7	95.7	P/P	89 - 106

Reference Method: SM 5310 B-00
Batch ID: P367346

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2101843	Organic Carbon	99.9	100	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P367117

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101842	Turbidity	0.0	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P367118

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101913	Turbidity	1.84	Sample	P	0 - 20

Reference Method: EPA 200.7 Rev. 4.4
Batch ID: P367227

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101890	Barium	0.653	Spike	P	0 - 20
2101890	Calcium	0.249	Spike	P	0 - 20
2101890	Iron	0.0784	Spike	P	0 - 20
2101890	Magnesium	0.790	Spike	P	0 - 20
2101890	Potassium	0.187	Spike	P	0 - 20
2101890	Sodium	0.971	Spike	P	0 - 20
2101890	Zinc	0.473	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P367227

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101890	Aluminum	1.46	Spike	P	0 - 20
2101890	Antimony	0.0110	Spike	P	0 - 20
2101890	Arsenic	0.642	Spike	P	0 - 20
2101890	Boron	1.18	Spike	P	0 - 20
2101890	Cadmium	0.182	Spike	P	0 - 20
2101890	Chromium	0.379	Spike	P	0 - 20
2101890	Copper	0.310	Spike	P	0 - 20
2101890	Lead	1.78	Spike	P	0 - 20
2101890	Nickel	0.317	Spike	P	0 - 20
2101890	Thallium	1.67	Spike	P	0 - 20

Reference Method: EPA 200.8 Rev. 5.4
Batch ID: P367833

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2105258	Aluminum	2.70	Spike	P	0 - 20
2105258	Selenium	3.61	Spike	P	0 - 20
2105258	Silver	6.95	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367302

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101847	Chloride	0.0650	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367304

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101847	Sulfate	0.130	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P367340

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101819	Chloride	0.0509	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367420

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101730	Ammonia-N	1.35	Spike	P	0 - 15

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P367422

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101822	Ammonia-N	0.963	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367284

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2102894	Kjeldahl Nitrogen	1.74	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367287

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101854	Kjeldahl Nitrogen	0.845	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367371

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101794	Kjeldahl Nitrogen	1.70	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P367372

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101860	Kjeldahl Nitrogen	2.42	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367141

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101859	NO2NO3-N	0.823	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P367617

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101742	NO2NO3-N	0.499	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367233

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101844	Total-P	3.46	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367249

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2102894	Total-P	0.709	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P367282

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101854	Total-P	1.63	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P367098

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101864	O-Phosphate-P	0.593	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P367099

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2102025	O-Phosphate-P	0.616	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 8321B
Batch ID: P367058

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101885	2,4-D	9.24	Spike	P	0 - 30
2101885	Acetaminophen	9.37	Spike	P	0 - 30
2101885	Acetamiprid	8.80	Spike	P	0 - 30
2101885	Afidopyropen	3.00	Spike	P	0 - 30
2101885	Bentazon	0.607	Spike	P	0 - 30
2101885	Benzovindiflupyr	5.02	Spike	P	0 - 30
2101885	Carbamazepine	6.06	Spike	P	0 - 30
2101885	Clothianidin	2.46	Spike	P	0 - 30
2101885	Dinotefuran	8.18	Spike	P	0 - 30
2101885	Diuron	2.59	Spike	P	0 - 30
2101885	Fenuron	13.3	Spike	P	0 - 30
2101885	Fluridone	2.06	Spike	P	0 - 30
2101885	Hydrocodone	10.8	Spike	P	0 - 30
2101885	Ibuprofen	5.05	Spike	P	0 - 30
2101885	Imazapyr	15.1	Spike	P	0 - 30
2101885	Imidacloprid	4.50	Spike	P	0 - 30
2101885	Linuron	15.3	Spike	P	0 - 30
2101885	Mandestrobin	6.09	Spike	P	0 - 30
2101885	MCPP	7.34	Spike	P	0 - 30
2101885	Naproxen	3.92	Spike	P	0 - 30
2101885	Primidone	9.48	Spike	P	0 - 30
2101885	Pyraclostrobin	6.02	Spike	P	0 - 30
2101885	Thiamethoxam	18.6	Spike	P	0 - 30
2101885	Tolfenpyrad	5.21	Spike	P	0 - 30
2101885	Triclopyr	11.5	Spike	P	0 - 30

Reference Method: EPA 8321B
Batch ID: P367189

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101887	Acesulfame K	5.82	Spike	P	0 - 30
2101887	AMPA	10.4	Spike	P	0 - 30
2101887	Endothall	6.65	Spike	P	0 - 30
2101887	Glufosinate	10.3	Spike	P	0 - 30
2101887	Glyphosate	11.6	Spike	P	0 - 30
2101887	Sucralose	19.3	Spike	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P367106

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101841	Color (true)	1.61	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P367107

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101856	Color (true)	0.0411	Sample	P	0 - 20

Quality Assurance Report Precision

Reference Method: SM 2320 B-97
Batch ID: P367447

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101778	Total Alkalinity	1.24	Sample	P	0 - 2.8

Reference Method: SM 2320 B-97
Batch ID: P367553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2102049	Total Alkalinity	0.263	Sample	P	0 - 2.8

Reference Method: SM 2540 C-97
Batch ID: P367438

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101790	TDS	1.79	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P367439

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101857	TDS	4.95	Sample	P	0 - 10

Reference Method: SM 2540 C-97
Batch ID: P367654

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101853	TDS	0.0	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P367451

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101778	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 4500 F-C-97
Batch ID: P367558

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2102049	Fluoride	0.0	Spike	P	0 - 2.5

Reference Method: SM 5310 B-00
Batch ID: P367346

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2101843	Organic Carbon	0.277	Spike	P	0 - 20

Quality Assurance Report

Precision

* Sample, spike and/or laboratory control sample precision (LCS) is reported.
Replicate spike precision may be reported when sample results are below quantifiable levels.

Quality Assurance Report Surrogates

Lab Sample ID: 2101885
Field Sample ID: 20030068

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	138	P	30 - 160
EPA 8321B	Acetaminophen-d4	134	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.0	P	30 - 160
EPA 8321B	Diuron-d6	85.5	P	30 - 160
EPA 8321B	Endothall-d6	71.5	P	30 - 160
EPA 8321B	Endothall-d6	71.5	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.0	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	85.0	P	30 - 160
EPA 8321B	Ibuprofen-d3	113	P	30 - 160
EPA 8321B	Primidone-d5	120	P	30 - 160
EPA 8321B	Sucralose-d6	34.6	P	30 - 160
EPA 8321B	Sucralose-d6	34.6	P	30 - 160

Lab Sample ID: 2101886
Field Sample ID: 20030068 DUP

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	159	P	30 - 160
EPA 8321B	Acetaminophen-d4	119	P	30 - 160
EPA 8321B	Carbamazepine-d10	50.6	P	30 - 160
EPA 8321B	Diuron-d6	79.6	P	30 - 160
EPA 8321B	Endothall-d6	73.1	P	30 - 160
EPA 8321B	Endothall-d6	73.1	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.9	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	83.9	P	30 - 160
EPA 8321B	Ibuprofen-d3	101	P	30 - 160
EPA 8321B	Primidone-d5	116	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	30 - 160
EPA 8321B	Sucralose-d6	107	P	30 - 160

Lab Sample ID: 2101887
Field Sample ID: FB 07102019

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8321B	2,4-D-d3	138	P	30 - 160
EPA 8321B	Acetaminophen-d4	97.9	P	30 - 160
EPA 8321B	Carbamazepine-d10	87.5	P	30 - 160
EPA 8321B	Diuron-d6	90.1	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Endothall-d6	115	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	105	P	30 - 160
EPA 8321B	Glyphosate 13C 15N	105	P	30 - 160
EPA 8321B	Ibuprofen-d3	85.9	P	30 - 160
EPA 8321B	Primidone-d5	93.6	P	30 - 160
EPA 8321B	Sucralose-d6	130	P	30 - 160
EPA 8321B	Sucralose-d6	130	P	30 - 160

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A92716

Included Lab Sample IDs: 2101851, 2101852, 2101855, 2101862, 2101863, 2101864, 2101867

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.7	96.8	P/P	90 - 110
O-Phosphate-P	98.2	99.3	P/P	90 - 110
O-Phosphate-P	99.9	98.7	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A92718

Included Lab Sample IDs: 2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	101	100	P/P	90 - 115
Color (true)	99.7	101	P/P	90 - 115

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A92721

Included Lab Sample IDs: 2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Turbidity	101	102	P/P	95 - 105
Turbidity	99.5	101	P/P	95 - 105

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92730

Included Lab Sample IDs: 2101849, 2101850, 2101859, 2101860, 2101861, 2101866

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

Reference Method: EPA 8321B

Run ID: A92756

Included Lab Sample IDs: 2101885, 2101886, 2101887

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
2,4-D	95.8	110	P/P	50 - 150
Acetaminophen	119	121	P/P	60 - 160
Acetamiprid	102	110	P/P	50 - 150
Afidopyropen	103	101	P/P	50 - 150
Bentazon	113	117	P/P	50 - 160
Benzovindiflupyr	113	113	P/P	50 - 150
Carbamazepine	105	107	P/P	60 - 150
Clothianidin	106	93.4	P/P	60 - 150
Dinotefuran	107	116	P/P	50 - 150
Diuron	105	107	P/P	60 - 150
Fenuron	105	113	P/P	60 - 150
Fluridone	111	111	P/P	60 - 160
Hydrocodone	109	111	P/P	60 - 150
Ibuprofen	102	91.4	P/P	50 - 160
Imazapyr	109	118	P/P	50 - 150
Imidacloprid	103	108	P/P	60 - 150
Linuron	112	118	P/P	60 - 150
Mandestrobin	109	113	P/P	50 - 150
MCPP	103	95.6	P/P	50 - 150

Quality Assurance Report Calibration Verification

Reference Method: EPA 8321B

Run ID: A92756

Included Lab Sample IDs: 2101885, 2101886, 2101887

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Naproxen	112	81.4	P/P	50 - 160
Primidone	101	105	P/P	60 - 150
Pyraclostrobin	117	116	P/P	60 - 150
Thiamethoxam	116	118	P/P	50 - 150
Tolfenpyrad	102	104	P/P	60 - 150
Triclopyr	104	109	P/P	50 - 150

Reference Method: EPA 8321B

Run ID: A92791

Included Lab Sample IDs: 2101885, 2101886, 2101887

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acesulfame K	112	125	P/P	60 - 160
Acesulfame K	128	112	P/P	60 - 160
Endothall	101	111	P/P	60 - 160
Endothall	107	101	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A92793

Included Lab Sample IDs: 2101885, 2101886, 2101887

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
AMPA	98.7	93.1	P/P	60 - 160
AMPA	99.4	98.7	P/P	60 - 160
Glufosinate	89.2	93.5	P/P	60 - 160
Glufosinate	93.5	94.1	P/P	60 - 160
Glyphosate	94.3	98.1	P/P	60 - 160
Glyphosate	98.1	86.9	P/P	60 - 160

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A92796

Included Lab Sample IDs: 2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	100	101	P/P	90 - 110
Chloride	100	101	P/P	90 - 110
Chloride	101	101	P/P	90 - 110
Sulfate	101	102	P/P	90 - 110
Sulfate	102	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92802

Included Lab Sample IDs: 2101849, 2101850, 2101859, 2101860, 2101861

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total-P	99.4	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: SM 5310 B-00

Run ID: A92811

Included Lab Sample IDs: 2101849, 2101850, 2101854, 2101859, 2101860, 2101861, 2101866

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

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A92819

Included Lab Sample IDs: 2101888, 2101889, 2101890, 2101891, 2101892, 2101893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Barium	101	99.3	P/P	90 - 110
Barium	101	101	P/P	90 - 110
Calcium	98.2	96.8	P/P	90 - 110
Calcium	99.4	98.2	P/P	90 - 110
Iron	98.7	98.9	P/P	90 - 110
Iron	99.2	98.7	P/P	90 - 110
Magnesium	100	98.4	P/P	90 - 110
Magnesium	98.4	98.3	P/P	90 - 110
Potassium	101	103	P/P	90 - 110
Potassium	103	101	P/P	90 - 110
Sodium	108	106	P/P	90 - 110
Sodium	108	108	P/P	90 - 110
Zinc	101	99.2	P/P	90 - 110
Zinc	103	101	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92827

Included Lab Sample IDs: 2101849, 2101850, 2101854, 2101866

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	91.9	P/P	90 - 110
Kjeldahl Nitrogen	91.9	96.0	P/P	90 - 110
Kjeldahl Nitrogen	97.2	104	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A92838

Included Lab Sample IDs: 2101849, 2101850, 2101854, 2101859, 2101860, 2101861, 2101866

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Ammonia-N	101	101	P/P	90 - 110
Ammonia-N	101	102	P/P	90 - 110
Ammonia-N	102	99.6	P/P	90 - 110
Ammonia-N	99.6	100	P/P	90 - 110

Reference Method: SM 2320 B-97

Run ID: A92846

Included Lab Sample IDs: 2101847, 2101848, 2101856, 2101857, 2101858, 2101865

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

Quality Assurance Report Calibration Verification

Reference Method: SM 4500 F-C-97

Run ID: A92846

Included Lab Sample IDs: 2101847, 2101848, 2101856, 2101857, 2101858, 2101865

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	98.6	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A92856

Included Lab Sample IDs: 2101854, 2101866

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

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A92865

Included Lab Sample IDs: 2101854

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A92880

Included Lab Sample IDs: 2101859, 2101860, 2101861

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

Reference Method: SM 2320 B-97

Run ID: A92887

Included Lab Sample IDs: 2101853

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

Reference Method: SM 4500 F-C-97

Run ID: A92887

Included Lab Sample IDs: 2101853

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.0	98.6	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92928

Included Lab Sample IDs: 2101888, 2101889, 2101890, 2101891, 2101892, 2101893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	103	102	P/P	90 - 110
Aluminum	99.9	99.7	P/P	90 - 110
Antimony	101	100	P/P	90 - 110
Antimony	101	102	P/P	90 - 110
Arsenic	101	100	P/P	90 - 110
Arsenic	102	101	P/P	90 - 110
Boron	102	106	P/P	90 - 110
Boron	103	101	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A92928

Included Lab Sample IDs: 2101888, 2101889, 2101890, 2101891, 2101892, 2101893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Cadmium	101	100	P/P	90 - 110
Cadmium	101	100	P/P	90 - 110
Chromium	100	101	P/P	90 - 110
Chromium	97.3	99.2	P/P	90 - 110
Copper	98.7	98.9	P/P	90 - 110
Copper	98.9	97.8	P/P	90 - 110
Lead	101	100	P/P	90 - 110
Lead	101	101	P/P	90 - 110
Nickel	99.1	97.5	P/P	90 - 110
Nickel	99.5	99.1	P/P	90 - 110
Thallium	99.1	98.9	P/P	90 - 110
Thallium	99.7	99.5	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A93069

Included Lab Sample IDs: 2101888, 2101889, 2101890, 2101891, 2101892, 2101893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Selenium	100	101	P/P	90 - 110
Selenium	99.6	100	P/P	90 - 110

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A93081

Included Lab Sample IDs: 2101888, 2101889, 2101890, 2101891, 2101892, 2101893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Silver	96.3	93.5	P/P	90 - 110
Silver	96.5	96.3	P/P	90 - 110

Reference Method: EPA 8321B

Run ID: A93136

Included Lab Sample IDs: 2101887

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	96.7	97.1	P/P	60 - 160

Reference Method: EPA 8321B

Run ID: A93158

Included Lab Sample IDs: 2101885, 2101886

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Sucralose	77.7	79.7	P/P	60 - 160

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A93176

Included Lab Sample IDs: 2101888, 2101889

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Aluminum	104	105	P/P	90 - 110

Quality Assurance Report

Calibration Verification

* 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						0.0	
	Turbidity						1.84	
EPA 200.7 Rev. 4.4	Barium	98.7	94.0	95.5	96.2			0.653
	Calcium	101	98.7	94.4				0.249
	Iron	103	97.0	98.7	98.8			0.0784
	Magnesium	100	96.0					0.790
	Potassium	111	103	104				0.187
	Sodium	110	105	103				0.971
	Zinc	98.3	93.9	97.6	98.1			0.473
EPA 200.8 Rev. 5.4	Aluminum	104	98.9	97.3	104			1.46
	Aluminum	101	102	99.1	100			2.70
	Antimony	104	102	102	105			0.0110
	Arsenic	104	104	103	106			0.642
	Boron	103	102	104				1.18
	Cadmium	103	103	103	104			0.182
	Chromium	101	103	104	97.7			0.379
	Copper	99.1	98.0	97.6	96.2			0.310
	Lead	103	103	105	104			1.78
	Nickel	101	100	100	98.3			0.317
	Selenium	103	109	109	105			3.61
	Silver	104	100	101	107			6.95
	Thallium	106	108	110	109			1.67
EPA 300.0 Rev. 2.1	Chloride	98.7	97.7	99.6			0.0650	
	Chloride	100	101	101			0.0509	
	Sulfate	99.5	99.3	99.4			0.130	
EPA 350.1 Rev. 2.0	Ammonia-N	104	104	102				1.35
	Ammonia-N	103	103	102				0.963
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	97.3	94.4	92.2				1.74
	Kjeldahl Nitrogen	101	93.0	94.0				0.845
	Kjeldahl Nitrogen	99.9	101	103				1.70
	Kjeldahl Nitrogen	98.6	99.8	103				2.42
EPA 353.2 Rev. 2.0	NO2NO3-N	104	103	102				0.823
	NO2NO3-N	101	97.9	98.4				0.499
EPA 365.1 Rev. 2.0	Total-P	100	105	100				3.46
	Total-P	101	104	105				0.709
	Total-P	100	103	101				1.63
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	97.0	93.6	94.5				0.593
	O-Phosphate-P	100	94.5	95.3				0.616
EPA 8321B	2,4-D	136	131	147				9.24
	Acesulfame K	123	115	122				5.82
	Acetaminophen	101	114	125				9.37
	Acetamiprid	105	108	118				8.80
	Afidopyropen	94.7	113	110				3.00
	AMPA	98.7	86.9	96.5				10.4
	Bentazon	110	68.0	69.7				0.607
	Benzovindiflupyr	94.2	101	95.7				5.02
	Carbamazepine	99.3	87.6	93.1				6.06
	Clothianidin	96.5	103	107				2.46
	Dinotefuran	104	122	132				8.18
	Diuron	98.6	79.4	81.8				2.59
	Endothall	105	96.4	103				6.65
	Fenuron	108	85.9	98.2				13.3
	Fluridone	106	46.2	57.4				2.06
	Glufosinate	94.4	89.5	99.2				10.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery	MS % Recovery		Precision	
					LCS	MS
EPA 8321B	Glyphosate	96.1	85.5	96.0		11.6
	Hydrocodone	102	99.5	111		10.8
	Ibuprofen	103	97.7	103		5.05
	Imazapyr	109				15.1
	Imidacloprid	101	176	191		4.50
	Linuron	84.8	67.3	78.4		15.3
	Mandestrobin	99.3	90.7	96.4		6.09
	MCPP	145	177	191		7.34
	Naproxen	106	116	121		3.92
	Primidone	90.7	107	118		9.48
	Pyraclostrobin	106	105	111		6.02
	Sucralose	85.9	87.4	106		19.3
	Thiamethoxam	120	170	205		18.6
	Tolfenpyrad	57.9	64.8	68.3		5.21
	Triclopyr	122	136	152		11.5
SM 2120 B	Color (true)	98.5			1.61	
	Color (true)	99.8			0.0411	
SM 2320 B-97	Total Alkalinity	104			1.24	
	Total Alkalinity	104			0.263	
SM 2540 C-97	TDS				1.79	
	TDS				4.95	
	TDS				0.0	
SM 4500 F-C-97	Fluoride	97.5	95.9	95.9		0.0
	Fluoride	96.9	95.7	95.7		0.0
SM 5310 B-00	Organic Carbon	100	99.9	100		0.277

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865
EPA 200.7 Rev. 4.4 / E31780	Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects	2101888, 2101889, 2101890, 2101891, 2101892, 2101893
EPA 200.8 Rev. 5.4 / E31780	Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects	2101888, 2101889, 2101890, 2101891, 2101892, 2101893
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2101849, 2101850, 2101854, 2101859, 2101860, 2101861, 2101866
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2101849, 2101850, 2101854, 2101859, 2101860, 2101861, 2101866
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2101849, 2101850, 2101854, 2101859, 2101860, 2101861, 2101866
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2101849, 2101850, 2101854, 2101859, 2101860, 2101861, 2101866
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2101851, 2101852, 2101855, 2101862, 2101863, 2101864, 2101867
EPA 8321B / E31780	Pesticides, herbicides, and other chemicals in water matrices by HPLC/MS/MS	2101885, 2101886, 2101887
EPA 8321B / E31780	Water soluble organic compounds by HPLC/MS/MS	2101885, 2101886, 2101887
SM 2120 B / E31780	True Color measured at 450 nm	2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2101849, 2101850, 2101854, 2101859, 2101860, 2101861, 2101866

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	07/11/2019			07/11/2019 17:53	Samantha Davila	2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865
EPA 200.7 Rev. 4.4	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/16/2019 18:42	Betina Topolski	2101893
	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/16/2019 20:15	Betina Topolski	2101888
	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/16/2019 20:23	Betina Topolski	2101889
	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/16/2019 20:30	Betina Topolski	2101890
	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/16/2019 20:54	Betina Topolski	2101891
EPA 200.8 Rev. 5.4	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/16/2019 21:01	Betina Topolski	2101892
	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/19/2019 17:57	Martin Acosta	2101888
	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/19/2019 18:07	Martin Acosta	2101889
	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/19/2019 18:16	Martin Acosta	2101890
	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/19/2019 18:56	Martin Acosta	2101891
	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/19/2019 19:05	Martin Acosta	2101892
	07/11/2019	07/15/2019 15:00	Elliott D. Healy	07/19/2019 21:52	Martin Acosta	2101893
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/26/2019 19:38	Robert K Palmer	2101893
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/26/2019 20:09	Robert K Palmer	2101888
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/26/2019 20:15	Robert K Palmer	2101889
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/26/2019 20:22	Robert K Palmer	2101890
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/26/2019 20:28	Robert K Palmer	2101891
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/26/2019 20:53	Robert K Palmer	2101892
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/29/2019 00:53	Robert K Palmer	2101893
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/29/2019 01:22	Robert K Palmer	2101888
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/29/2019 01:28	Robert K Palmer	2101889
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/29/2019 01:34	Robert K Palmer	2101890
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/29/2019 01:40	Robert K Palmer	2101891
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/29/2019 02:04	Robert K Palmer	2101892
	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/31/2019 15:14	Robert K Palmer	2101888
EPA 300.0 Rev. 2.1	07/11/2019	07/24/2019 17:15	Elliott D. Healy	07/31/2019 15:24	Robert K Palmer	2101889
	07/11/2019			07/15/2019 23:11	Jhamieka S. Greenwood	2101847
	07/11/2019			07/16/2019 00:24	Jhamieka S. Greenwood	2101848
	07/11/2019			07/16/2019 00:36	Jhamieka S. Greenwood	2101853
	07/11/2019			07/16/2019 01:12	Jhamieka S. Greenwood	2101856
	07/11/2019			07/16/2019 01:24	Jhamieka S. Greenwood	2101857
	07/11/2019			07/16/2019 01:37	Jhamieka S. Greenwood	2101858
EPA 350.1 Rev. 2.0	07/11/2019			07/16/2019 01:49	Jhamieka S. Greenwood	2101865
	07/11/2019			07/16/2019 17:06	Jhamieka S. Greenwood	2101857
	07/11/2019			07/17/2019 13:06	Virginia P. Brown	2101854
	07/11/2019			07/17/2019 14:14	Virginia P. Brown	2101850
	07/11/2019			07/17/2019 14:15	Virginia P. Brown	2101859
	07/11/2019			07/17/2019 14:23	Virginia P. Brown	2101860

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 350.1 Rev. 2.0	07/11/2019			07/17/2019 14:24	Virginia P. Brown	2101861
	07/11/2019			07/17/2019 14:26	Virginia P. Brown	2101866
	07/11/2019			07/17/2019 16:28	Virginia P. Brown	2101849
EPA 351.2 Rev. 2.0	07/11/2019	07/16/2019 12:35	Sima Feizi	07/17/2019 11:24	Joseph Suarez	2101849
	07/11/2019	07/16/2019 12:35	Sima Feizi	07/17/2019 11:25	Joseph Suarez	2101850
	07/11/2019	07/16/2019 12:35	Sima Feizi	07/17/2019 11:30	Joseph Suarez	2101866
	07/11/2019	07/16/2019 12:35	Sima Feizi	07/17/2019 12:20	Joseph Suarez	2101854
	07/11/2019	07/17/2019 12:50	Adrian Shelby	07/18/2019 13:39	Joseph Suarez	2101859
	07/11/2019	07/17/2019 12:50	Adrian Shelby	07/18/2019 13:43	Joseph Suarez	2101860
	07/11/2019	07/17/2019 12:50	Adrian Shelby	07/18/2019 13:48	Joseph Suarez	2101861
EPA 353.2 Rev. 2.0	07/11/2019			07/12/2019 11:53	Beverly Y. Sanders	2101859
	07/11/2019			07/12/2019 11:59	Beverly Y. Sanders	2101849
	07/11/2019			07/12/2019 12:00	Beverly Y. Sanders	2101850
	07/11/2019			07/12/2019 12:01	Beverly Y. Sanders	2101860
	07/11/2019			07/12/2019 12:03	Beverly Y. Sanders	2101861
	07/11/2019			07/12/2019 12:04	Beverly Y. Sanders	2101866
	07/11/2019			07/18/2019 12:20	Beverly Y. Sanders	2101854
EPA 365.1 Rev. 2.0	07/11/2019	07/15/2019 15:15	Adrian Shelby	07/16/2019 15:02	Lipi Saha	2101849
	07/11/2019	07/15/2019 15:15	Adrian Shelby	07/16/2019 15:03	Lipi Saha	2101850
	07/11/2019	07/15/2019 15:15	Adrian Shelby	07/16/2019 15:04	Lipi Saha	2101859
	07/11/2019	07/15/2019 15:15	Adrian Shelby	07/16/2019 15:05	Lipi Saha	2101860
	07/11/2019	07/15/2019 15:15	Adrian Shelby	07/16/2019 15:06	Lipi Saha	2101861
	07/11/2019	07/16/2019 13:30	Sima Feizi	07/17/2019 11:08	Lipi Saha	2101866
	07/11/2019	07/16/2019 13:30	Sima Feizi	07/17/2019 11:30	Lipi Saha	2101854
EPA 365.1 Rev. 2.0 dissolved	07/11/2019			07/11/2019 15:57	Jhamieka S. Greenwood	2101864
	07/11/2019			07/11/2019 16:20	Jhamieka S. Greenwood	2101867
	07/11/2019			07/11/2019 16:23	Jhamieka S. Greenwood	2101851
	07/11/2019			07/11/2019 16:24	Jhamieka S. Greenwood	2101852
	07/11/2019			07/11/2019 16:25	Jhamieka S. Greenwood	2101862
	07/11/2019			07/11/2019 16:26	Jhamieka S. Greenwood	2101863
	07/11/2019			07/11/2019 16:53	Jhamieka S. Greenwood	2101855
EPA 8321B	07/11/2019	07/12/2019 10:00	Hoor Shaik	07/12/2019 23:51	Juyoung Kim	2101885
	07/11/2019	07/12/2019 10:00	Hoor Shaik	07/13/2019 00:25	Juyoung Kim	2101886
	07/11/2019	07/12/2019 10:00	Hoor Shaik	07/13/2019 01:00	Juyoung Kim	2101887
	07/11/2019	07/15/2019 10:30	Rebecca Ware	07/15/2019 12:40	Rebecca Ware	2101887
	07/11/2019	07/15/2019 10:30	Rebecca Ware	07/15/2019 12:51	Rebecca Ware	2101885
	07/11/2019	07/15/2019 10:30	Rebecca Ware	07/15/2019 13:12	Rebecca Ware	2101886
	07/11/2019	07/15/2019 10:30	Rebecca Ware	07/15/2019 17:02	Rebecca Ware	2101887
	07/11/2019	07/15/2019 10:30	Rebecca Ware	07/15/2019 17:16	Rebecca Ware	2101885
	07/11/2019	07/15/2019 10:30	Rebecca Ware	07/15/2019 17:44	Rebecca Ware	2101886

Preparation and Analysis Log

Ref. Method	Received Date	Prep Date/Time	Prepared By	Analysis Date/Time	Analyzed By	Associated Samples
EPA 8321B	07/11/2019	07/15/2019 10:30	Rebecca Ware	07/25/2019 23:09	Rebecca Ware	2101885
	07/11/2019	07/15/2019 10:30	Rebecca Ware	07/25/2019 23:21	Rebecca Ware	2101886
	07/11/2019	07/15/2019 10:30	Rebecca Ware	07/30/2019 12:30	Rebecca Ware	2101887
SM 2120 B	07/11/2019			07/11/2019 16:39	Madeline Funaro	2101853
	07/11/2019			07/11/2019 16:43	Madeline Funaro	2101847, 2101848
	07/11/2019			07/11/2019 16:45	Madeline Funaro	2101856
	07/11/2019			07/11/2019 16:46	Madeline Funaro	2101857, 2101858
	07/11/2019			07/11/2019 16:47	Madeline Funaro	2101865
SM 2320 B-97	07/11/2019			07/17/2019 09:01	Dale L. Simmons	2101847
	07/11/2019			07/17/2019 09:13	Dale L. Simmons	2101848
	07/11/2019			07/17/2019 09:26	Dale L. Simmons	2101856
	07/11/2019			07/17/2019 09:38	Dale L. Simmons	2101857
	07/11/2019			07/17/2019 09:51	Dale L. Simmons	2101858
SM 2540 C-97	07/11/2019			07/17/2019 10:05	Dale L. Simmons	2101865
	07/11/2019			07/18/2019 07:38	Dale L. Simmons	2101853
	07/11/2019			07/12/2019 20:35	Rosalyn Ballman	2101847, 2101848, 2101856, 2101857, 2101858, 2101865
	07/11/2019			07/16/2019 14:31	Rosalyn Ballman	2101853
	07/11/2019			07/12/2019 20:35	Rosalyn Ballman	2101847, 2101848, 2101853, 2101856, 2101857, 2101858, 2101865
SM 4500 F-C-97	07/11/2019			07/17/2019 09:01	Dale L. Simmons	2101847
	07/11/2019			07/17/2019 09:13	Dale L. Simmons	2101848
	07/11/2019			07/17/2019 09:26	Dale L. Simmons	2101856
	07/11/2019			07/17/2019 09:38	Dale L. Simmons	2101857
	07/11/2019			07/17/2019 09:51	Dale L. Simmons	2101858
SM 5310 B-00	07/11/2019			07/17/2019 10:05	Dale L. Simmons	2101865
	07/11/2019			07/18/2019 07:38	Dale L. Simmons	2101853
	07/11/2019			07/16/2019 09:06	Madeline Funaro	2101849
	07/11/2019			07/16/2019 09:19	Madeline Funaro	2101850
	07/11/2019			07/16/2019 09:31	Madeline Funaro	2101854
	07/11/2019			07/16/2019 09:43	Madeline Funaro	2101859
	07/11/2019			07/16/2019 09:55	Madeline Funaro	2101860
	07/11/2019			07/16/2019 10:08	Madeline Funaro	2101861
	07/11/2019			07/16/2019 10:20	Madeline Funaro	2101866