

Chemical Analysis Report

NW-DIST-2019-03-12-02

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

Event Description: **Navarre Run**
Request ID: **RQ-2019-03-11-24**
Customer: **NW-DIST**
Project ID: **SMP**

Send Reports to:
FL Dept. of Environmental Protection
160 Government Center
Suite 208
Pensacola, FL 32502-5794
Attn: Cheryl Bunch

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Date Certified: 04-APR-2019 14:55



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: 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: WILLIAMS CREEK BELOW FRANKFORT AVENUE

Collection Date/Time: 03/11/2019 10:00

Field ID: G4NW0198

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2068885	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P360285	
	EPA 300.0 Rev. 2.1	Chloride	13		mg Cl/L	P360813	
		Sulfate	4.6		mg SO4/L	P360720	
	SM 2120 B	Color (true)	120		PCU	P360324	
	SM 2320 B-97	Total Alkalinity	0.65	U	mg CaCO3/L	P360895	
	SM 2540 C-97	TDS	51		mg/L	P360683	
	SM 2540 D-97	TSS	2	I	mg/L	P360657	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P360902	
2068887	EPA 350.1 Rev. 2.0	Ammonia-N	0.042		mg N/L	P360586	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.48		mg N/L	P360466	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.024		mg N/L	P360495	
	EPA 365.1 Rev. 2.0	Total-P	0.008		mg P/L	P360529	
	SM 5310 B-00	Organic Carbon	11		mg C/L	P360635	
2068889	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.004	I	mg P/L	P360298	

Ref. Method and Comment:

EPA 300.0 Rev. 2.1: Sulfate: Batch relative percent difference is unavailable because of low analyte concentration in the QC sample.

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

Sample Location: TOM KING CREEK

Collection Date/Time: 03/11/2019 10:35

Field ID: G4NW0193

Matrix: W-SURF-FRH

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2068886	EPA 180.1 Rev. 2.0	Turbidity	6.6	A	NTU	P360286	
	EPA 300.0 Rev. 2.1	Chloride	21	A	mg Cl/L	P360616	
		Sulfate	7.2	A	mg SO4/L	P360618	
	SM 2120 B	Color (true)	100	A	PCU	P360325	
	SM 2320 B-97	Total Alkalinity	5.7		mg CaCO3/L	P360895	
	SM 2540 C-97	TDS	78		mg/L	P360683	
	SM 2540 D-97	TSS	2	I	mg/L	P360657	
	SM 4500 F-C-97	Fluoride	0.035	U	mg F/L	P360902	
2068888	EPA 350.1 Rev. 2.0	Ammonia-N	0.030		mg N/L	P360586	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	0.38		mg N/L	P360468	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.55		mg N/L	P360495	
	EPA 365.1 Rev. 2.0	Total-P	0.021		mg P/L	P360529	
	SM 5310 B-00	Organic Carbon	8.6		mg C/L	P360635	
2068890	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.012		mg P/L	P360298	

Ref. Method and Comment:

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

**Sample Location: Discharge from Tiger Point Golf Course at
Maplewood Drive**

Collection Date/Time: 03/11/2019 11:10

Field ID: G4NW0211

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2068891	EPA 180.1 Rev. 2.0	Turbidity	4.1		NTU	P360286	
	EPA 300.0	Bromide	0.069		mg Br/L	P360571	
	SM 2320 B-97	Total Alkalinity	34		mg CaCO3/L	P360895	
	SM 2540 D-97	TSS	4	I	mg/L	P360658	
	SM 4500 F-C-97	Fluoride	0.048	I	mg F/L	P360902	
2068892	EPA 350.1 Rev. 2.0	Ammonia-N	0.35		mg N/L	P360586	
	EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	1.0		mg N/L	P360468	
	EPA 353.2 Rev. 2.0	NO2NO3-N	0.064		mg N/L	P360495	
	EPA 365.1 Rev. 2.0	Total-P	0.17		mg P/L	P360529	
	SM 5310 B-00	Organic Carbon	12		mg C/L	P360635	
2068893	EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	0.12		mg P/L	P360298	
2068903	EPA 8270D	Acetochlor	0.27	U	ng/L	P360553	
		Alachlor	0.27	U	ng/L	P360553	
		Ametryn	0.65	U	ng/L	P360553	
		Atrazine	6.1		ng/L	P360553	
		Atrazine Desethyl	2.1	I	ng/L	P360553	
		Azinphos Methyl	5.4	U	ng/L	P360553	
		Bromacil	0.54	U	ng/L	P360553	
		Butylate	0.43	UJ	ng/L	P360553	RPD
		Chlorpyrifos Ethyl	0.27	U	ng/L	P360553	
		Chlorpyrifos Methyl	0.11	U	ng/L	P360553	
		Cyanazine	3.5	U	ng/L	P360553	
		Demeton	7.5	U	ng/L	P360553	
		Diazinon	0.13	U	ng/L	P360553	
		Dimethenamid**	0.11	U	ng/L	P360553	
		Disulfoton	0.54	U	ng/L	P360553	
		Dithiopyr**	2.1		ng/L	P360553	
		EPTC	1.3	UJ	ng/L	P360553	RPD
		Ethion	0.16	U	ng/L	P360553	
		Ethoprop	0.11	U	ng/L	P360553	
		Fenamiphos	0.54	U	ng/L	P360553	
		Fipronil	5.5		ng/L	P360553	
		Fipronil Desulfinyl**	1.2		ng/L	P360553	
		Fipronil Sulfide	15		ng/L	P360553	
		Fipronil Sulfone	10		ng/L	P360553	
		Fonofos	0.22	U	ng/L	P360553	
		Hexazinone	0.79	I	ng/L	P360553	
		Malathion	0.38	U	ng/L	P360553	
		Metalaxyl	0.32	U	ng/L	P360553	
		Metolachlor	0.54	U	ng/L	P360553	
		Metribuzin	81		ng/L	P360553	
		Mevinphos	0.54	U	ng/L	P360553	

Field ID: G4NW0211

Matrix: W-SURF-SLT

Sample ID	Ref. Method	Component	Result	Code	Units	Batch ID	QC Codes
2068903	EPA 8270D	Molinate	0.32	U	ng/L	P360553	
		Norflurazon	0.54	U	ng/L	P360553	
		Oxadiazon**	9.0		ng/L	P360553	
		Parathion Ethyl	0.27	U	ng/L	P360553	
		Parathion Methyl	0.59	U	ng/L	P360553	
		Pendimethalin	1.1	U	ng/L	P360553	
		Phorate	0.27	U	ng/L	P360553	
		Prodiamine**	0.29	IJ	ng/L	P360553	LCS
		Prometon	0.97	U	ng/L	P360553	
		Prometryn	0.22	U	ng/L	P360553	
		Simazine	0.54	U	ng/L	P360553	
		Tebuconazole**	0.54	UJ	ng/L	P360553	RPD
		Terbufos	0.11	U	ng/L	P360553	
		Terbuthylazine	0.46	U	ng/L	P360553	

Ref. Method and Comment:

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

EPA 8270D: Ms accuracies for atrazine, metalaxyl, oxidiazon, fipronil sulfide, fipronil sulfone and fipronil not assessed due to high content of these parameters in the sample spiked. Refer to the narrative for an explanation of QC Codes.

Quality Assurance Report Method Blank Results

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P360285

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P360286

Component	Result	Code	Units
Turbidity	0.10	U	NTU

Reference Method: EPA 300.0
Batch ID: P360571

Component	Result	Code	Units
Bromide	0.013	U	mg Br/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360616

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360618

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360720

Component	Result	Code	Units
Sulfate	0.20	U	mg SO4/L

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360813

Component	Result	Code	Units
Chloride	0.20	U	mg Cl/L

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360586

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

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360466

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

Quality Assurance Report

Method Blank Results

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360468

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

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360495

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

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360529

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360298

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

Reference Method: EPA 8270D
Batch ID: P360553

Component	Result	Code	Units
Acetochlor	0.25	U	ng/L
Alachlor	0.25	U	ng/L
Ametryn	0.60	U	ng/L
Atrazine	0.25	U	ng/L
Atrazine Desethyl	1.5	U	ng/L
Azinphos Methyl	5.0	U	ng/L
Bromacil	0.50	U	ng/L
Butylate	0.40	U	ng/L
Chlorpyrifos Ethyl	0.25	U	ng/L
Chlorpyrifos Methyl	0.10	U	ng/L
Cyanazine	3.2	U	ng/L
Demeton	7.0	U	ng/L
Diazinon	0.12	U	ng/L
Dimethenamid	0.10	U	ng/L
Disulfoton	0.50	U	ng/L
Dithiopyr	0.10	U	ng/L
EPTC	1.2	U	ng/L
Ethion	0.15	U	ng/L
Ethoprop	0.10	U	ng/L
Fenamiphos	0.50	U	ng/L
Fipronil	0.25	U	ng/L
Fipronil Desulfinyl	0.12	U	ng/L
Fipronil Sulfide	0.15	U	ng/L
Fipronil Sulfone	0.15	U	ng/L
Fonofos	0.20	U	ng/L
Hexazinone	0.50	U	ng/L
Malathion	0.35	U	ng/L
Metalaxyl	0.30	U	ng/L

Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D
Batch ID: P360553

Component	Result	Code	Units
Metolachlor	0.50	U	ng/L
Metribuzin	0.75	U	ng/L
Mevinphos	0.50	U	ng/L
Molinate	0.30	U	ng/L
Norflurazon	0.50	U	ng/L
Oxadiazon	0.10	U	ng/L
Parathion Ethyl	0.25	U	ng/L
Parathion Methyl	0.55	U	ng/L
Pendimethalin	1.0	U	ng/L
Phorate	0.25	U	ng/L
Prodiamine	0.18	U	ng/L
Prometon	0.90	U	ng/L
Prometryn	0.20	U	ng/L
Simazine	0.50	U	ng/L
Tebuconazole	0.50	U	ng/L
Terbufos	0.10	U	ng/L
Terbutylazine	0.42	U	ng/L

Reference Method: SM 2120 B
Batch ID: P360324

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2120 B
Batch ID: P360325

Component	Result	Code	Units
Color (true)	2.5	U	PCU

Reference Method: SM 2320 B-97
Batch ID: P360895

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

Reference Method: SM 2540 C-97
Batch ID: P360683

Component	Result	Code	Units
TDS	15	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P360657

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 2540 D-97
Batch ID: P360658

Component	Result	Code	Units
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Quality Assurance Report

Method Blank Results

Reference Method: SM 2540 D-97
Batch ID: P360658

Component	Result	Code	Units
TSS	2	U	mg/L

Reference Method: SM 4500 F-C-97
Batch ID: P360902

Component	Result	Code	Units
Fluoride	0.035	U	mg F/L

Reference Method: SM 5310 B-00
Batch ID: P360635

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 300.0
 Batch ID: P360571

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Bromide	97.8		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P360616

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P360618

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P360720

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

Reference Method: EPA 300.0 Rev. 2.1
 Batch ID: P360813

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

Reference Method: EPA 350.1 Rev. 2.0
 Batch ID: P360586

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P360466

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

Reference Method: EPA 351.2 Rev. 2.0
 Batch ID: P360468

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

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P360495

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

Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P360529

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: P360298

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
O-Phosphate-P	98.3		P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P360553

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Acetochlor	75.7	93.2	P/P	71 - 121
Alachlor	74.5	92.1	P/P	72 - 119
Ametryn	73.9	90.3	P/P	47 - 144
Atrazine	83.0	108	P/P	75 - 123
Atrazine Desethyl	84.0	101	P/P	45 - 133
Azinphos Methyl	104	125	P/P	66 - 165
Bromacil	72.8	95.9	P/P	43 - 123
Butylate	62.2	72.2	P/P	27 - 83.0
Chlorpyrifos Ethyl	86.3	98.7	P/P	70 - 117
Chlorpyrifos Methyl	85.5	100	P/P	71 - 120
Cyanazine	210	237	P/P	34 - 264
Demeton	69.6	73.1	P/P	41 - 122
Diazinon	79.1	99.9	P/P	70 - 127
Dimethenamid	72.6	88.1	P/P	60 - 130
Disulfoton	85.5	102	P/P	56 - 127
Dithiopyr	75.9	96.4	P/P	60 - 130
EPTC	63.7	73.5	P/P	24 - 84.0
Ethion	65.1	79.3	P/P	53 - 132
Ethoprop	87.0	95.9	P/P	57 - 117
Fenamiphos	81.5	97.6	P/P	55 - 136
Fipronil	70.5	91.3	P/P	64 - 126
Fipronil Desulfinyl	68.4	87.9	P/P	60 - 130
Fipronil Sulfide	73.9	86.1	P/P	57 - 120
Fipronil Sulfone	68.0	84.1	P/P	52 - 115
Fonofos	86.4	104	P/P	61 - 121
Hexazinone	83.5	104	P/P	62 - 131
Malathion	79.8	96.4	P/P	67 - 126
Metaxyl	76.9	95.0	P/P	54 - 128
Metolachlor	75.2	92.0	P/P	71 - 118
Metribuzin	192	205	P/P	42 - 221
Mevinphos	75.0	96.7	P/P	45 - 114
Molinate	70.1	80.2	P/P	33 - 91.0
Norflurazon	78.1	97.0	P/P	60 - 123
Oxadiazon	77.0	95.8	P/P	60 - 130
Parathion Ethyl	81.1	94.8	P/P	73 - 111
Parathion Methyl	85.5	101	P/P	74 - 126
Pendimethalin	88.9	97.7	P/P	63 - 131
Phorate	80.3	93.8	P/P	54 - 115
Prodiamine	41.8	44.3	F/F	60 - 130
Prometon	66.2	81.2	P/P	61 - 120

Quality Assurance Report

Laboratory Control Sample Accuracy

Reference Method: EPA 8270D
Batch ID: P360553

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Prometryn	68.4	84.7	P/P	62 - 126
Simazine	85.8	110	P/P	75 - 126
Tebuconazole	32.5	44.6	P/P	30 - 100
Terbufos	82.3	97.8	P/P	65 - 116
Terbutylazine	81.9	98.8	P/P	73 - 117

Reference Method: SM 2120 B
Batch ID: P360324

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	102		P	85 - 115

Reference Method: SM 2120 B
Batch ID: P360325

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Color (true)	103		P	85 - 115

Reference Method: SM 2320 B-97
Batch ID: P360895

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Total Alkalinity	101		P	98 - 107

Reference Method: SM 4500 F-C-97
Batch ID: P360902

Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
Fluoride	98.1		P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P360635

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

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 300.0
Batch ID: P360571

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068488	Bromide	98.9	95.8	P/P	90 - 110
2068891	Bromide	98.0		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360616

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068886	Chloride	99.3		P	90 - 110
2068980	Chloride	100		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360618

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068886	Sulfate	100		P	90 - 110
2068980	Sulfate	101		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360720

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068543	Sulfate	102		P	90 - 110
2068727	Sulfate	102		P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360813

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069257	Chloride	95.4		P	90 - 110
2069258	Chloride	103		P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360586

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068846	Ammonia-N	98.8	99.3	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360466

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068842	Kjeldahl Nitrogen	93.2	91.2	P/P	90 - 110

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360468

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068931	Kjeldahl Nitrogen	108	106	P/P	90 - 110

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 353.2 Rev. 2.0
 Batch ID: P360495

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068698	NO2NO3-N	103	103	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0
 Batch ID: P360529

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068847	Total-P	101	102	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0 dissolved
 Batch ID: P360298

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068863	O-Phosphate-P	94.2	96.1	P/P	90 - 110

Reference Method: EPA 8270D
 Batch ID: P360553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068903	Acetochlor	75.7	89.8	P/P	63 - 129
2068903	Alachlor	75.1	88.3	P/P	65 - 127
2068903	Ametryn	90.6	110	P/P	40 - 164
2068903	Atrazine Desethyl	65.0	72.4	P/P	14 - 157
2068903	Azinphos Methyl	83.8	95.7	P/P	49 - 180
2068903	Bromacil	73.4	79.6	P/P	48 - 130
2068903	Butylate	39.4	27.8	P/P	10 - 94.0
2068903	Chlorpyrifos Ethyl	79.7	95.5	P/P	58 - 123
2068903	Chlorpyrifos Methyl	74.5	87.3	P/P	58 - 125
2068903	Cyanazine	111	129	P/P	24 - 253
2068903	Demeton	60.3	56.4	P/P	25 - 149
2068903	Diazinon	75.9	90.0	P/P	59 - 144
2068903	Dimethenamid	74.9	87.9	P/P	60 - 130
2068903	Disulfoton	71.4	84.1	P/P	54 - 132
2068903	Dithiopyr	75.0	88.6	P/P	60 - 130
2068903	EPTC	46.2	30.7	P/P	10 - 92.0
2068903	Ethion	80.6	101	P/P	30 - 148
2068903	Ethoprop	76.3	90.1	P/P	50 - 130
2068903	Fenamiphos	98.0	112	P/P	49 - 142
2068903	Fipronil Desulfinyll	79.3	81.3	P/P	60 - 130
2068903	Fonofos	74.9	90.5	P/P	55 - 129
2068903	Hexazinone	91.9	107	P/P	56 - 141
2068903	Malathion	79.7	93.0	P/P	56 - 135
2068903	Metolachlor	76.1	87.8	P/P	51 - 140
2068903	Metribuzin	175	207	P/P	45 - 254
2068903	Mevinphos	72.1	79.7	P/P	33 - 131
2068903	Molinate	56.0	55.9	P/P	14 - 98.0
2068903	Norflurazon	74.7	79.9	P/P	34 - 136
2068903	Parathion Ethyl	77.4	89.2	P/P	66 - 118
2068903	Parathion Methyl	78.8	93.3	P/P	64 - 136
2068903	Pendimethalin	93.5	112	P/P	59 - 144
2068903	Phorate	71.9	78.6	P/P	42 - 130
2068903	Prodiamine	94.8	98.9	P/P	60 - 130
2068903	Prometon	78.1	91.9	P/P	59 - 134

Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D
Batch ID: P360553

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068903	Prometryn	68.6	79.1	P/P	54 - 135
2068903	Simazine	86.0	95.9	P/P	53 - 156
2068903	Tebuconazole	52.6	59.1	P/P	30 - 100
2068903	Terbufos	73.3	87.4	P/P	57 - 131
2068903	Terbuthylazine	78.1	91.7	P/P	68 - 125

Reference Method: SM 4500 F-C-97
Batch ID: P360902

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2069078	Fluoride	93.6	95.2	P/P	91 - 105

Reference Method: SM 5310 B-00
Batch ID: P360635

Spiked Sample	Component	% Rec.1	% Rec.2	Pass/Fail	Control Limits
2068733	Organic Carbon	97.8	99.1	P/P	85 - 115

Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P360285

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068819	Turbidity	3.12	Sample	P	0 - 20

Reference Method: EPA 180.1 Rev. 2.0
Batch ID: P360286

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068886	Turbidity	2.44	Sample	P	0 - 20

Reference Method: EPA 300.0
Batch ID: P360571

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068488	Bromide	2.25	Spike	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360616

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068886	Chloride	0.406	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360618

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068886	Sulfate	0.289	Sample	P	0 - 20

Reference Method: EPA 300.0 Rev. 2.1
Batch ID: P360813

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069257	Chloride	1.36	Sample	P	0 - 20

Reference Method: EPA 350.1 Rev. 2.0
Batch ID: P360586

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068846	Ammonia-N	0.309	Spike	P	0 - 20

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360466

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068842	Kjeldahl Nitrogen	1.81	Spike	P	0 - 20

Quality Assurance Report Precision

Reference Method: EPA 351.2 Rev. 2.0
Batch ID: P360468

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068931	Kjeldahl Nitrogen	1.10	Spike	P	0 - 20

Reference Method: EPA 353.2 Rev. 2.0
Batch ID: P360495

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068698	NO2NO3-N	0.0	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0
Batch ID: P360529

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068847	Total-P	0.589	Spike	P	0 - 20

Reference Method: EPA 365.1 Rev. 2.0 dissolved
Batch ID: P360298

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068863	O-Phosphate-P	1.57	Spike	P	0 - 20

Reference Method: EPA 8270D
Batch ID: P360553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068903	Acetochlor	17.1	Spike	P	0 - 30
2068903	Alachlor	16.2	Spike	P	0 - 30
2068903	Ametryn	19.5	Spike	P	0 - 30
2068903	Atrazine	12.9	Spike	P	0 - 30
2068903	Atrazine Desethyl	9.24	Spike	P	0 - 30
2068903	Azinphos Methyl	13.3	Spike	P	0 - 30
2068903	Bromacil	8.08	Spike	P	0 - 30
2068903	Butylate	34.5	Spike	F	0 - 30
2068903	Chlorpyrifos Ethyl	18.1	Spike	P	0 - 30
2068903	Chlorpyrifos Methyl	15.8	Spike	P	0 - 30
2068903	Cyanazine	15.0	Spike	P	0 - 30
2068903	Demeton	6.65	Spike	P	0 - 30
2068903	Diazinon	17.1	Spike	P	0 - 30
2068903	Dimethenamid	15.9	Spike	P	0 - 30
2068903	Disulfoton	16.4	Spike	P	0 - 30
2068903	Dithiopyr	10.4	Spike	P	0 - 30
2068903	EPTC	40.2	Spike	F	0 - 30
2068903	Ethion	22.8	Spike	P	0 - 30
2068903	Ethoprop	16.6	Spike	P	0 - 30
2068903	Fenamiphos	13.1	Spike	P	0 - 30
2068903	Fipronil	0.967	Spike	P	0 - 30
2068903	Fipronil Desulfinyl	1.81	Spike	P	0 - 30
2068903	Fipronil Sulfide	8.94	Spike	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P360553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068903	Fipronil Sulfone	12.5	Spike	P	0 - 30
2068903	Fonofos	18.9	Spike	P	0 - 30
2068903	Hexazinone	14.1	Spike	P	0 - 30
2068903	Malathion	15.4	Spike	P	0 - 30
2068903	Metalaxyl	17.0	Spike	P	0 - 30
2068903	Metolachlor	14.3	Spike	P	0 - 30
2068903	Metribuzin	2.85	Spike	P	0 - 30
2068903	Mevinphos	10.0	Spike	P	0 - 30
2068903	Molinate	0.305	Spike	P	0 - 30
2068903	Norflurazon	6.64	Spike	P	0 - 30
2068903	Oxadiazon	7.73	Spike	P	0 - 30
2068903	Parathion Ethyl	14.1	Spike	P	0 - 30
2068903	Parathion Methyl	16.9	Spike	P	0 - 30
2068903	Pendimethalin	17.9	Spike	P	0 - 30
2068903	Phorate	8.87	Spike	P	0 - 30
2068903	Prodiamine	3.94	Spike	P	0 - 30
2068903	Prometon	16.3	Spike	P	0 - 30
2068903	Prometryn	14.3	Spike	P	0 - 30
2068903	Simazine	10.8	Spike	P	0 - 30
2068903	Tebuconazole	11.6	Spike	P	0 - 30
2068903	Terbufos	17.5	Spike	P	0 - 30
2068903	Terbuthylazine	16.0	Spike	P	0 - 30
LFB	Acetochlor	20.6	LCS	P	0 - 30
LFB	Alachlor	21.2	LCS	P	0 - 30
LFB	Ametryn	20.0	LCS	P	0 - 30
LFB	Atrazine	26.1	LCS	P	0 - 30
LFB	Atrazine Desethyl	18.3	LCS	P	0 - 30
LFB	Azinphos Methyl	18.9	LCS	P	0 - 30
LFB	Bromacil	27.4	LCS	P	0 - 30
LFB	Butylate	14.9	LCS	P	0 - 30
LFB	Chlorpyrifos Ethyl	13.3	LCS	P	0 - 30
LFB	Chlorpyrifos Methyl	16.0	LCS	P	0 - 30
LFB	Cyanazine	11.9	LCS	P	0 - 30
LFB	Demeton	4.90	LCS	P	0 - 30
LFB	Diazinon	23.3	LCS	P	0 - 30
LFB	Dimethenamid	19.3	LCS	P	0 - 30
LFB	Disulfoton	17.8	LCS	P	0 - 30
LFB	Dithiopyr	23.8	LCS	P	0 - 30
LFB	EPTC	14.3	LCS	P	0 - 30
LFB	Ethion	19.7	LCS	P	0 - 30
LFB	Ethoprop	9.74	LCS	P	0 - 30
LFB	Fenamiphos	18.0	LCS	P	0 - 30
LFB	Fipronil	25.7	LCS	P	0 - 30
LFB	Fipronil Desulfinyl	24.8	LCS	P	0 - 30
LFB	Fipronil Sulfide	15.3	LCS	P	0 - 30
LFB	Fipronil Sulfone	21.1	LCS	P	0 - 30
LFB	Fonofos	18.8	LCS	P	0 - 30
LFB	Hexazinone	21.4	LCS	P	0 - 30
LFB	Malathion	18.9	LCS	P	0 - 30
LFB	Metalaxyl	21.1	LCS	P	0 - 30
LFB	Metolachlor	20.0	LCS	P	0 - 30

Quality Assurance Report Precision

Reference Method: EPA 8270D
Batch ID: P360553

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
LFB	Metribuzin	6.58	LCS	P	0 - 30
LFB	Mevinphos	25.4	LCS	P	0 - 30
LFB	Molinate	13.4	LCS	P	0 - 30
LFB	Norflurazon	21.5	LCS	P	0 - 30
LFB	Oxadiazon	21.8	LCS	P	0 - 30
LFB	Parathion Ethyl	15.6	LCS	P	0 - 30
LFB	Parathion Methyl	17.1	LCS	P	0 - 30
LFB	Pendimethalin	9.35	LCS	P	0 - 30
LFB	Phorate	15.5	LCS	P	0 - 30
LFB	Prodiamine	5.77	LCS	P	0 - 30
LFB	Prometon	20.4	LCS	P	0 - 30
LFB	Prometryn	21.4	LCS	P	0 - 30
LFB	Simazine	25.1	LCS	P	0 - 30
LFB	Tebuconazole	31.6	LCS	F	0 - 30
LFB	Terbufos	17.2	LCS	P	0 - 30
LFB	Terbutylazine	18.7	LCS	P	0 - 30

Reference Method: SM 2120 B
Batch ID: P360324

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068727	Color (true)	0.503	Sample	P	0 - 20

Reference Method: SM 2120 B
Batch ID: P360325

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068886	Color (true)	4.86	Sample	P	0 - 20

Reference Method: SM 2320 B-97
Batch ID: P360895

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069078	Total Alkalinity	0.869	Sample	P	0 - 1.6

Reference Method: SM 2540 C-97
Batch ID: P360683

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068977	TDS	7.26	Sample	P	0 - 10

Reference Method: SM 4500 F-C-97
Batch ID: P360902

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2069078	Fluoride	1.47	Spike	P	0 - 3.5

Quality Assurance Report Precision

Reference Method: SM 5310 B-00
Batch ID: P360635

Replicated Lab Sample	Component	% RSD/RPD	Sample/Spike/LCS*	Pass/Fail	Control Limits
2068733	Organic Carbon	1.21	Spike	P	0 - 20

* 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: 2068903
Field Sample ID: G4NW0211

Reference Method	Surrogate	% Rec.	Pass/Fail	Control Limits
EPA 8270D	Simazine-d10	86.3	P	68 - 130
EPA 8270D	Terbufos-d10	79.9	P	61 - 136

Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A89962

Included Lab Sample IDs: 2068885, 2068886, 2068891

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

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A89964

Included Lab Sample IDs: 2068889, 2068890, 2068893

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
O-Phosphate-P	97.6	99.7	P/P	90 - 110
O-Phosphate-P	98.3	97.6	P/P	90 - 110
O-Phosphate-P	99.7	98.1	P/P	90 - 110

Reference Method: SM 2120 B

Run ID: A89978

Included Lab Sample IDs: 2068885, 2068886

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Color (true)	102	102	P/P	90 - 115
Color (true)	103	102	P/P	90 - 115

Reference Method: EPA 300.0

Run ID: A90025

Included Lab Sample IDs: 2068891

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Bromide	94.4	96.8	P/P	90 - 110

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A90029

Included Lab Sample IDs: 2068887, 2068888, 2068892

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A90036

Included Lab Sample IDs: 2068887

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	108	103	P/P	90 - 110

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A90056

Included Lab Sample IDs: 2068887, 2068888, 2068892

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

Quality Assurance Report Calibration Verification

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A90063

Included Lab Sample IDs: 2068892

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

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A90069

Included Lab Sample IDs: 2068888, 2068892

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Kjeldahl Nitrogen	101	108	P/P	90 - 110

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A90071

Included Lab Sample IDs: 2068885, 2068886

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Chloride	97.1	101	P/P	90 - 110
Chloride	98.7	101	P/P	90 - 110
Sulfate	102	104	P/P	90 - 110
Sulfate	99.8	102	P/P	90 - 110

Reference Method: SM 5310 B-00

Run ID: A90082

Included Lab Sample IDs: 2068887, 2068888, 2068892

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Organic Carbon	96.2	96.0	P/P	90 - 110
Organic Carbon	96.2	96.2	P/P	90 - 110

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A90147

Included Lab Sample IDs: 2068887, 2068888

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

Reference Method: SM 2320 B-97

Run ID: A90183

Included Lab Sample IDs: 2068885, 2068886, 2068891

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Total Alkalinity	102	99.9	P/P	90 - 110

Reference Method: SM 4500 F-C-97

Run ID: A90183

Included Lab Sample IDs: 2068885, 2068886, 2068891

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Fluoride	99.5	100	P/P	90 - 110

Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D

Run ID: A90253

Included Lab Sample IDs: 2068903

Component	% Rec.1	% Rec.2	Pass/Fail*	Control Limits
Acetochlor	102		P	80 - 120
Alachlor	108		P	80 - 120
Ametryn	104		P	80 - 120
Atrazine	101		P	80 - 120
Atrazine Desethyl	92.9		P	80 - 120
Azinphos Methyl	100		P	80 - 120
Bromacil	103		P	80 - 120
Butylate	95.1		P	80 - 120
Chlorpyrifos Ethyl	102		P	80 - 120
Chlorpyrifos Methyl	98.2		P	80 - 120
Cyanazine	91.6		P	80 - 120
Demeton	96.8		P	80 - 120
Diazinon	99.2		P	80 - 120
Dimethenamid	103		P	80 - 120
Disulfoton	95.5		P	80 - 120
Dithiopyr	104		P	80 - 120
EPTC	99.4		P	80 - 120
Ethion	98.8		P	80 - 120
Ethoprop	96.0		P	80 - 120
Fenamiphos	96.9		P	80 - 120
Fipronil	102		P	80 - 120
Fipronil Desulfinyl	102		P	80 - 120
Fipronil Sulfide	95.7		P	80 - 120
Fipronil Sulfone	94.8		P	80 - 120
Fonofos	95.3		P	80 - 120
Hexazinone	101		P	80 - 120
Malathion	96.5		P	80 - 120
Metaxyl	106		P	80 - 120
Metolachlor	109		P	80 - 120
Metribuzin	87.2		P	80 - 120
Mevinphos	98.7		P	80 - 120
Molinate	97.5		P	80 - 120
Norflurazon	101		P	80 - 120
Oxadiazon	106		P	80 - 120
Parathion Ethyl	96.5		P	80 - 120
Parathion Methyl	96.7		P	80 - 120
Pendimethalin	99.4		P	80 - 120
Phorate	92.3		P	80 - 120
Prodiamine	104		P	80 - 120
Prometon	103		P	80 - 120
Prometryn	103		P	80 - 120
Simazine	97.9		P	80 - 120
Tebuconazole	98.0		P	80 - 120
Terbufos	95.3		P	80 - 120
Terbutylazine	99.5		P	80 - 120

* 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	MS
EPA 180.1 Rev. 2.0	Turbidity						3.12	
	Turbidity						2.44	
EPA 300.0	Bromide	97.8		98.9	95.8	98.0		2.25
EPA 300.0 Rev. 2.1	Chloride	100		99.3	100		0.406	
	Chloride	99.5		95.4	103		1.36	
	Sulfate	102		100	101		0.289	
	Sulfate	102		102	102			
EPA 350.1 Rev. 2.0	Ammonia-N	100		98.8	99.3			0.309
EPA 351.2 Rev. 2.0	Kjeldahl Nitrogen	104		93.2	91.2			1.81
	Kjeldahl Nitrogen	108		108	106			1.10
EPA 353.2 Rev. 2.0	NO2NO3-N	100		103	103			0.0
EPA 365.1 Rev. 2.0	Total-P	100		101	102			0.589
EPA 365.1 Rev. 2.0 dissolved	O-Phosphate-P	98.3		94.2	96.1			1.57
EPA 8270D	Acetochlor	75.7	93.2	75.7	89.8	20.6		17.1
	Alachlor	74.5	92.1	75.1	88.3	21.2		16.2
	Ametryn	73.9	90.3	90.6	110	20.0		19.5
	Atrazine	83.0	108			26.1		12.9
	Atrazine Desethyl	84.0	101	65.0	72.4	18.3		9.24
	Azinphos Methyl	104	125	83.8	95.7	18.9		13.3
	Bromacil	72.8	95.9	73.4	79.6	27.4		8.08
	Butylate	62.2	72.2	39.4	27.8	14.9		34.5
	Chlorpyrifos Ethyl	86.3	98.7	79.7	95.5	13.3		18.1
	Chlorpyrifos Methyl	85.5	100	74.5	87.3	16.0		15.8
	Cyanazine	210	237	111	129	11.9		15.0
	Demeton	69.6	73.1	60.3	56.4	4.90		6.65
	Diazinon	79.1	99.9	75.9	90.0	23.3		17.1
	Dimethenamid	72.6	88.1	74.9	87.9	19.3		15.9
	Disulfoton	85.5	102	71.4	84.1	17.8		16.4
	Dithiopyr	75.9	96.4	75.0	88.6	23.8		10.4
	EPTC	63.7	73.5	46.2	30.7	14.3		40.2
	Ethion	65.1	79.3	80.6	101	19.7		22.8
	Ethoprop	87.0	95.9	76.3	90.1	9.74		16.6
	Fenamiphos	81.5	97.6	98.0	112	18.0		13.1
	Fipronil	70.5	91.3			25.7		0.967
	Fipronil Desulfinyl	68.4	87.9	79.3	81.3	24.8		1.81
	Fipronil Sulfide	73.9	86.1			15.3		8.94
	Fipronil Sulfone	68.0	84.1			21.1		12.5
	Fonofos	86.4	104	74.9	90.5	18.8		18.9
	Hexazinone	83.5	104	91.9	107	21.4		14.1
	Malathion	79.8	96.4	79.7	93.0	18.9		15.4
	Metalaxyl	76.9	95.0			21.1		17.0
	Metolachlor	75.2	92.0	76.1	87.8	20.0		14.3
	Metribuzin	192	205	175	207	6.58		2.85
	Mevinphos	75.0	96.7	72.1	79.7	25.4		10.0
	Molinate	70.1	80.2	56.0	55.9	13.4		0.305
	Norflurazon	78.1	97.0	74.7	79.9	21.5		6.64
	Oxadiazon	77.0	95.8			21.8		7.73
	Parathion Ethyl	81.1	94.8	77.4	89.2	15.6		14.1
	Parathion Methyl	85.5	101	78.8	93.3	17.1		16.9
	Pendimethalin	88.9	97.7	93.5	112	9.35		17.9
	Phorate	80.3	93.8	71.9	78.6	15.5		8.87
	Prodiamine	41.8	44.3	94.8	98.9	5.77		3.94
	Prometon	66.2	81.2	78.1	91.9	20.4		16.3
	Prometryn	68.4	84.7	68.6	79.1	21.4		14.3

Quality Assurance Report Summary

Ref. Method	Analyte	LCS % Recovery		MS % Recovery		Precision	
						LCS	MS
EPA 8270D	Simazine	85.8	110	86.0	95.9	25.1	10.8
	Tebuconazole	32.5	44.6	52.6	59.1	31.6	11.6
	Terbufos	82.3	97.8	73.3	87.4	17.2	17.5
	Terbutylazine	81.9	98.8	78.1	91.7	18.7	16.0
SM 2120 B	Color (true)	102				0.503	
	Color (true)	103				4.86	
SM 2320 B-97	Total Alkalinity	101				0.869	
SM 2540 C-97	TDS					7.26	
SM 4500 F-C-97	Fluoride	98.1		93.6	95.2		1.47
SM 5310 B-00	Organic Carbon	97.6		97.8	99.1		1.21

Reference Method Descriptions

Method / DoH Cert #	Description	Associated Samples
EPA 180.1 Rev. 2.0 / E31780	Turbidity in aqueous matrices	2068885, 2068886, 2068891
EPA 300.0 / E31780	Bromide in aqueous matrices	2068891
EPA 300.0 Rev. 2.1 / E31780	Chloride in aqueous matrices	2068885, 2068886
EPA 300.0 Rev. 2.1 / E31780	Sulfate in aqueous matrices	2068885, 2068886
EPA 350.1 Rev. 2.0 / E31780	Ammonia in aqueous matrices as mg N/L	2068887, 2068888, 2068892
EPA 351.2 Rev. 2.0 / E31780	Total Kjeldahl Nitrogen in aqueous matrices	2068887, 2068888, 2068892
EPA 353.2 Rev. 2.0 / E31780	Nitrite/Nitrate in aqueous matrices as mg N/L	2068887, 2068888, 2068892
EPA 365.1 Rev. 2.0 / E31780	Total Phosphorus in aqueous matrices as mg P/L	2068887, 2068888, 2068892
EPA 365.1 Rev. 2.0 dissolved / E31780	Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L	2068889, 2068890, 2068893
EPA 8270D / E31780	Organonitrogen and phosphorus pesticides in water matrices by GC/MS/MS	2068903
SM 2120 B / E31780	True Color measured at 450 nm	2068885, 2068886
SM 2320 B-97 / E31780	Alkalinity in aqueous matrices as mg CaCO3/L	2068885, 2068886, 2068891
SM 2540 C-97 / E31780	Total Dissolved Solids in aqueous matrices	2068885, 2068886
SM 2540 D-97 / E31780	Total Suspended Solids in aqueous matrices using a maximum of 250 mL of sample	2068885, 2068886, 2068891
SM 4500 F-C-97 / E31780	Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)	2068885, 2068886, 2068891
SM 5310 B-00 / E31780	Nonpurgeable Organic Carbon in aqueous matrices	2068887, 2068888, 2068892

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	03/12/2019			03/12/2019 16:50	Adrian Shelby	2068885, 2068886, 2068891
EPA 300.0	03/12/2019			03/16/2019 13:17	Lipi Saha	2068891
EPA 300.0 Rev. 2.1	03/12/2019			03/18/2019 19:14	Lipi Saha	2068886
	03/12/2019			03/20/2019 02:20	Lipi Saha	2068885
	03/12/2019			03/21/2019 00:34	Lipi Saha	2068885
EPA 350.1 Rev. 2.0	03/12/2019			03/15/2019 12:10	Ping Hua	2068887
	03/12/2019			03/15/2019 12:12	Ping Hua	2068888
	03/12/2019			03/15/2019 12:13	Ping Hua	2068892
EPA 351.2 Rev. 2.0	03/12/2019	03/14/2019 12:00	Adrian Shelby	03/15/2019 12:24	Joseph Suarez	2068887
	03/12/2019	03/14/2019 12:17	Adrian Shelby	03/15/2019 15:42	Joseph Suarez	2068888
	03/12/2019	03/14/2019 12:17	Adrian Shelby	03/15/2019 15:44	Joseph Suarez	2068892
EPA 353.2 Rev. 2.0	03/12/2019			03/15/2019 08:54	Beverly Y. Sanders	2068887
	03/12/2019			03/15/2019 08:56	Beverly Y. Sanders	2068888
	03/12/2019			03/15/2019 08:57	Beverly Y. Sanders	2068892
EPA 365.1 Rev. 2.0	03/12/2019	03/15/2019 14:20	Sima Feizi	03/18/2019 10:09	Beverly Y. Sanders	2068892
	03/12/2019	03/15/2019 14:20	Sima Feizi	03/19/2019 13:31	Beverly Y. Sanders	2068887
	03/12/2019	03/15/2019 14:20	Sima Feizi	03/19/2019 13:32	Beverly Y. Sanders	2068888
EPA 365.1 Rev. 2.0 dissolved	03/12/2019			03/12/2019 16:17	Jhamieka S. Greenwood	2068889
	03/12/2019			03/12/2019 16:22	Jhamieka S. Greenwood	2068890
	03/12/2019			03/12/2019 16:41	Jhamieka S. Greenwood	2068893
EPA 8270D	03/12/2019	03/18/2019 09:08	Dinesh Mishra	03/20/2019 15:48	Vandana T. Nagar	2068903
SM 2120 B	03/12/2019			03/12/2019 16:00	Mariam Hanna	2068885
	03/12/2019			03/12/2019 16:05	Mariam Hanna	2068886
SM 2320 B-97	03/12/2019			03/21/2019 04:24	Dale L. Simmons	2068885
	03/12/2019			03/21/2019 04:37	Dale L. Simmons	2068886
	03/12/2019			03/21/2019 04:49	Dale L. Simmons	2068891
SM 2540 C-97	03/12/2019			03/13/2019 14:03	Yijie Li	2068885, 2068886
SM 2540 D-97	03/12/2019			03/13/2019 14:03	Yijie Li	2068885, 2068886, 2068891
SM 4500 F-C-97	03/12/2019			03/21/2019 04:24	Dale L. Simmons	2068885
	03/12/2019			03/21/2019 04:37	Dale L. Simmons	2068886
	03/12/2019			03/21/2019 04:49	Dale L. Simmons	2068891
SM 5310 B-00	03/12/2019			03/18/2019 11:53	Julia Storbeck	2068887
	03/12/2019			03/19/2019 12:33	Julia Storbeck	2068888
	03/12/2019			03/19/2019 12:46	Julia Storbeck	2068892