

## Chemical Analysis Report

**WQAP-2017-08-22-04**

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

Event Description: **kit C\_pesticides**  
Request ID: **RQ-2017-08-14-46**  
Customer: **WQAP**  
Project ID: **SMP**

Send Reports to:  
FL Dept. of Environmental Protection  
2600 Blair Stone Rd  
MS #3560  
Tallahassee, FL 32399-2400  
Attn: Michael Eckles

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Certified by: Liang Lin, Environmental Administrator

Date Certified: 18-SEP-2017 11:25

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

## Case Narrative

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

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

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

| Field ID: G1TLHR0037-2017-03 |                |                  |         |      | Matrix: W-SURF-FRH |          |          |  |
|------------------------------|----------------|------------------|---------|------|--------------------|----------|----------|--|
| Sample ID                    | Ref. Method    | Component        | Result  | Code | Units              | Batch ID | QC Codes |  |
| 1923246                      | EPA 8321B      | Glyphosate**     | 0.50    | U    | ug/L               | P330738  |          |  |
|                              |                | Pyraclostrobin** | 0.0020  | U    | ug/L               | P330680  |          |  |
|                              |                | Sucralose**      | 0.020   | U    | ug/L               | P330689  |          |  |
|                              | USGS O-2060-01 | 2,4-D            | 0.0020  | U    | ug/L               | P330679  |          |  |
|                              |                | Diuron           | 8.0E-04 | U    | ug/L               | P330679  |          |  |
|                              |                | Fenuron          | 0.0080  | U    | ug/L               | P330679  |          |  |
|                              |                | Imidacloprid     | 8.0E-04 | U    | ug/L               | P330679  | MS       |  |
|                              |                | Bentazon         | 8.0E-04 | U    | ug/L               | P330679  |          |  |
|                              |                | Linuron          | 0.0040  | U    | ug/L               | P330679  |          |  |
|                              |                | Acetaminophen**  | 0.0080  | U    | ug/L               | P330679  |          |  |

Field ID: G1TLHR0037-2017-03

Matrix: W-SURF-FRH

| Sample ID | Ref. Method    | Component           | Result  | Code | Units | Batch ID | QC Codes |
|-----------|----------------|---------------------|---------|------|-------|----------|----------|
| 1923246   | USGS O-2060-01 | MCP                 | 0.0020  | U    | ug/L  | P330679  |          |
|           |                | Carbamazepine**     | 4.0E-04 | U    | ug/L  | P330679  | MS       |
|           |                | Triclopyr**         | 0.0040  | U    | ug/L  | P330679  |          |
|           |                | Primidone**         | 0.0040  | U    | ug/L  | P330679  |          |
|           |                | Fluridone**         | 4.0E-04 | U    | ug/L  | P330679  |          |
| 1923247   | EPA 8270D      | Aldrin              | 4.5     | U    | ng/L  | P330746  |          |
|           |                | Alpha-BHC           | 2.2     | U    | ng/L  | P330746  |          |
|           |                | Beta-BHC            | 4.5     | U    | ng/L  | P330746  |          |
|           |                | Delta-BHC           | 4.5     | U    | ng/L  | P330746  |          |
|           |                | Gamma-BHC           | 4.5     | U    | ng/L  | P330746  |          |
|           |                | Carbophenothion     | 4.5     | U    | ng/L  | P330746  |          |
|           |                | Chlorothalonil      | 2.2     | U    | ng/L  | P330746  |          |
|           |                | Cypermethrin        | 22      | U    | ng/L  | P330746  |          |
|           |                | DDD-p,p'            | 3.4     | U    | ng/L  | P330746  |          |
|           |                | DDE-p,p'            | 3.4     | U    | ng/L  | P330746  |          |
|           |                | DDT-p,p'            | 3.4     | U    | ng/L  | P330746  |          |
|           |                | Dieldrin            | 4.5     | U    | ng/L  | P330746  |          |
|           |                | Endosulfan I        | 4.5     | U    | ng/L  | P330746  |          |
|           |                | Endosulfan II       | 4.5     | U    | ng/L  | P330746  |          |
|           |                | Endosulfan Sulfate  | 2.2     | U    | ng/L  | P330746  |          |
|           |                | Endrin              | 2.2     | UJ   | ng/L  | P330746  | RPD      |
|           |                | Endrin Aldehyde     | 2.2     | U    | ng/L  | P330746  | RPD      |
|           |                | Heptachlor          | 1.7     | U    | ng/L  | P330746  |          |
|           |                | Heptachlor Epoxide  | 2.2     | U    | ng/L  | P330746  |          |
|           |                | Methoxychlor        | 4.5     | U    | ng/L  | P330746  |          |
|           |                | Mirex               | 2.2     | U    | ng/L  | P330746  |          |
|           |                | Permethrin          | 11      | U    | ng/L  | P330746  |          |
|           |                | Trifluralin         | 1.1     | U    | ng/L  | P330746  |          |
|           |                | Alpha-Chlordane     | 1.1     | U    | ng/L  | P330746  |          |
|           |                | Gamma-Chlordane     | 1.1     | U    | ng/L  | P330746  |          |
|           |                | Endrin Ketone       | 2.2     | U    | ng/L  | P330746  |          |
|           |                | Dicofol             | 34      | U    | ng/L  | P330746  | RPD      |
|           | EPA 8276       | Chlordane**         | 2.8     | U    | ng/L  | P330746  |          |
|           |                | Toxaphene**         | 14      | U    | ng/L  | P330746  |          |
| 1923248   | EPA 8270D      | Alachlor            | 0.25    | U    | ng/L  | P330733  |          |
|           |                | Ametryn             | 0.57    | I    | ng/L  | P330733  |          |
|           |                | Atrazine            | 3.4     |      | ng/L  | P330733  |          |
|           |                | Atrazine Desethyl   | 1.5     | U    | ng/L  | P330733  |          |
|           |                | Azinphos Methyl     | 2.3     | U    | ng/L  | P330733  |          |
|           |                | Bromacil            | 11      |      | ng/L  | P330733  |          |
|           |                | Butylate            | 0.40    | U    | ng/L  | P330733  | RPD      |
|           |                | Chlorpyrifos Ethyl  | 0.25    | U    | ng/L  | P330733  |          |
|           |                | Chlorpyrifos Methyl | 0.10    | U    | ng/L  | P330733  |          |
|           |                | Demeton             | 2.0     | U    | ng/L  | P330733  |          |
|           |                | Diazinon            | 0.13    | U    | ng/L  | P330733  |          |

Field ID: G1TLHR0037-2017-03

Matrix: W-SURF-FRH

| Sample ID | Ref. Method | Component        | Result | Code | Units | Batch ID | QC Codes |
|-----------|-------------|------------------|--------|------|-------|----------|----------|
| 1923248   | EPA 8270D   | Disulfoton       | 0.50   | U    | ng/L  | P330733  |          |
|           |             | EPTC             | 1.3    | U    | ng/L  | P330733  | RPD      |
|           |             | Ethion           | 0.15   | U    | ng/L  | P330733  |          |
|           |             | Ethoprop         | 0.10   | U    | ng/L  | P330733  |          |
|           |             | Fenamiphos       | 0.25   | U    | ng/L  | P330733  |          |
|           |             | Fipronil         | 1.1    |      | ng/L  | P330733  |          |
|           |             | Fipronil Sulfide | 0.95   |      | ng/L  | P330733  |          |
|           |             | Fipronil Sulfone | 2.1    |      | ng/L  | P330733  |          |
|           |             | Hexazinone       | 1.7    | I    | ng/L  | P330733  |          |
|           |             | Malathion        | 0.35   | U    | ng/L  | P330733  |          |
|           |             | Metribuzin       | 0.20   | UJ   | ng/L  | P330733  | CCV, MS  |
|           |             | Mevinphos        | 0.50   | U    | ng/L  | P330733  |          |
|           |             | Molinate         | 0.30   | U    | ng/L  | P330733  |          |
|           |             | Norflurazon      | 0.50   | U    | ng/L  | P330733  |          |
|           |             | Pendimethalin    | 1.0    | U    | ng/L  | P330733  |          |
|           |             | Phorate          | 0.25   | U    | ng/L  | P330733  |          |
|           |             | Prometon         | 2.4    | I    | ng/L  | P330733  |          |
|           |             | Prometryn        | 0.20   | U    | ng/L  | P330733  |          |
|           |             | Simazine         | 1.1    | I    | ng/L  | P330733  |          |
|           |             | Terbufos         | 0.10   | U    | ng/L  | P330733  |          |
|           |             | Terbuthylazine   | 0.43   | U    | ng/L  | P330733  |          |
|           |             | Fonofos          | 0.20   | U    | ng/L  | P330733  |          |
|           |             | Metalaxyl        | 0.20   | U    | ng/L  | P330733  |          |
|           |             | Metolachlor      | 0.45   | I    | ng/L  | P330733  |          |
|           |             | Acetochlor       | 0.25   | U    | ng/L  | P330733  |          |
|           |             | Cyanazine        | 0.50   | U    | ng/L  | P330733  |          |
|           |             | Parathion Ethyl  | 0.25   | U    | ng/L  | P330733  |          |
|           |             | Parathion Methyl | 0.25   | U    | ng/L  | P330733  |          |

Ref. Method and Comment:

EPA 8321B: MDL elevated due to matrix interference.

EPA 8270D: MS accuracy for Dieldrin not assessed due to high content of this parameter in the sample spiked. Refer to the narrative for an explanation of QC Codes.

EPA 8270D: 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: P330658

| Component | Result | Code | Units |
|-----------|--------|------|-------|
| Turbidity | 0.10   | U    | NTU   |

Reference Method: EPA 200.7 Rev. 4.4

Batch ID: P330710

| Component | Result | Code | Units |
|-----------|--------|------|-------|
| Calcium   | 0.075  | U    | mg/L  |
| Iron      | 30     | U    | ug/L  |

## Quality Assurance Report Method Blank Results

Reference Method: EPA 200.7 Rev. 4.4  
Batch ID: P330710

| Component | Result | Code | Units |
|-----------|--------|------|-------|
| 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: P330710

| Component | Result | Code | Units |
|-----------|--------|------|-------|
| Arsenic   | 0.050  | U    | ug/L  |
| Cadmium   | 0.020  | U    | ug/L  |
| Chromium  | 0.40   | U    | ug/L  |
| Copper    | 0.20   | U    | ug/L  |
| Lead      | 0.050  | U    | ug/L  |
| Nickel    | 0.20   | U    | ug/L  |
| Silver    | 0.010  | U    | ug/L  |

Reference Method: EPA 300.0 Rev. 2.1  
Batch ID: P330749

| Component | Result | Code | Units   |
|-----------|--------|------|---------|
| Chloride  | 0.20   | U    | mg Cl/L |

Reference Method: EPA 300.0 Rev. 2.1  
Batch ID: P330752

| Component | Result | Code | Units    |
|-----------|--------|------|----------|
| Sulfate   | 0.20   | U    | mg SO4/L |

Reference Method: EPA 350.1 Rev. 2.0  
Batch ID: P330834

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

Reference Method: EPA 351.2 Rev. 2.0  
Batch ID: P330777

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

Reference Method: EPA 353.2 Rev. 2.0  
Batch ID: P330847

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

Reference Method: EPA 365.1 Rev. 2.0  
Batch ID: P330788

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

## Quality Assurance Report Method Blank Results

Reference Method: EPA 365.1 Rev. 2.0 dissolved  
Batch ID: P330727

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

Reference Method: EPA 8270D  
Batch ID: P330733

| Component           | Result | Code | Units |
|---------------------|--------|------|-------|
| Acetochlor          | 0.25   | U    | ng/L  |
| Alachlor            | 0.25   | U    | ng/L  |
| Ametryn             | 0.32   | U    | ng/L  |
| Atrazine            | 0.25   | U    | ng/L  |
| Atrazine Desethyl   | 1.5    | U    | ng/L  |
| Azinphos Methyl     | 2.2    | 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           | 0.50   | U    | ng/L  |
| Demeton             | 2.0    | U    | ng/L  |
| Diazinon            | 0.12   | U    | ng/L  |
| Disulfoton          | 0.50   | U    | ng/L  |
| EPTC                | 1.2    | U    | ng/L  |
| Ethion              | 0.15   | U    | ng/L  |
| Ethoprop            | 0.10   | U    | ng/L  |
| Fenamiphos          | 0.25   | U    | ng/L  |
| Fipronil            | 0.25   | 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           | 0.20   | U    | ng/L  |
| Metolachlor         | 0.25   | U    | ng/L  |
| Metribuzin          | 0.20   | U    | ng/L  |
| Mevinphos           | 0.50   | U    | ng/L  |
| Molinate            | 0.30   | U    | ng/L  |
| Norflurazon         | 0.50   | U    | ng/L  |
| Parathion Ethyl     | 0.25   | U    | ng/L  |
| Parathion Methyl    | 0.25   | U    | ng/L  |
| Pendimethalin       | 1.0    | U    | ng/L  |
| Phorate             | 0.25   | U    | ng/L  |
| Prometon            | 0.90   | U    | ng/L  |
| Prometryn           | 0.20   | U    | ng/L  |
| Simazine            | 0.50   | U    | ng/L  |
| Terbufos            | 0.10   | U    | ng/L  |
| Terbutylazine       | 0.42   | U    | ng/L  |

Reference Method: EPA 8270D  
Batch ID: P330746

| Component | Result | Code | Units |
|-----------|--------|------|-------|
| Aldrin    | 4.0    | U    | ng/L  |
| Alpha-BHC | 2.0    | U    | ng/L  |

## Quality Assurance Report Method Blank Results

Reference Method: EPA 8270D  
Batch ID: P330746

| Component          | Result | Code | Units |
|--------------------|--------|------|-------|
| Alpha-Chlordane    | 1.0    | U    | ng/L  |
| Beta-BHC           | 4.0    | U    | ng/L  |
| Carbophenothion    | 4.0    | U    | ng/L  |
| Chlorothalonil     | 2.0    | U    | ng/L  |
| Cypermethrin       | 20     | U    | ng/L  |
| DDD-p,p'           | 3.0    | U    | ng/L  |
| DDE-p,p'           | 3.0    | U    | ng/L  |
| DDT-p,p'           | 3.0    | U    | ng/L  |
| Delta-BHC          | 4.0    | U    | ng/L  |
| Dicofol            | 30     | U    | ng/L  |
| Dieldrin           | 4.0    | U    | ng/L  |
| Endosulfan I       | 4.0    | U    | ng/L  |
| Endosulfan II      | 4.0    | U    | ng/L  |
| Endosulfan Sulfate | 2.0    | U    | ng/L  |
| Endrin             | 2.0    | U    | ng/L  |
| Endrin Aldehyde    | 2.0    | U    | ng/L  |
| Endrin Ketone      | 2.0    | U    | ng/L  |
| Gamma-BHC          | 4.0    | U    | ng/L  |
| Gamma-Chlordane    | 1.0    | U    | ng/L  |
| Heptachlor         | 1.5    | U    | ng/L  |
| Heptachlor Epoxide | 2.0    | U    | ng/L  |
| Methoxychlor       | 4.0    | U    | ng/L  |
| Mirex              | 2.0    | U    | ng/L  |
| Permethrin         | 10     | U    | ng/L  |
| Trifluralin        | 1.0    | U    | ng/L  |

Reference Method: EPA 8276  
Batch ID: P330746

| Component | Result | Code | Units |
|-----------|--------|------|-------|
| Chlordane | 2.5    | U    | ng/L  |
| Toxaphene | 12     | U    | ng/L  |

Reference Method: EPA 8321B  
Batch ID: P330680

| Component      | Result | Code | Units |
|----------------|--------|------|-------|
| Pyraclostrobin | 0.0020 | U    | ug/L  |

Reference Method: EPA 8321B  
Batch ID: P330689

| Component | Result | Code | Units |
|-----------|--------|------|-------|
| Sucralose | 0.010  | U    | ug/L  |

Reference Method: EPA 8321B  
Batch ID: P330738

| Component  | Result | Code | Units |
|------------|--------|------|-------|
| Glyphosate | 0.50   | U    | ug/L  |

## Quality Assurance Report Method Blank Results

Reference Method: SM 2120 B  
Batch ID: P330669

| Component    | Result | Code | Units |
|--------------|--------|------|-------|
| Color (true) | 2.5    | U    | PCU   |

Reference Method: SM 2320 B-97  
Batch ID: P330956

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

Reference Method: SM 2540 C-97  
Batch ID: P331042

| Component | Result | Code | Units |
|-----------|--------|------|-------|
| TDS       | 15     | U    | mg/L  |

Reference Method: SM 2540 D-97  
Batch ID: P331175

| Component | Result | Code | Units |
|-----------|--------|------|-------|
| TSS       | 2      | U    | mg/L  |

Reference Method: SM 4500 F-C-97  
Batch ID: P330958

| Component | Result | Code | Units  |
|-----------|--------|------|--------|
| Fluoride  | 0.035  | U    | mg F/L |

Reference Method: SM 5310 B-00  
Batch ID: P330864

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

Reference Method: USGS O-2060-01  
Batch ID: P330679

| Component     | Result  | Code | Units |
|---------------|---------|------|-------|
| 2,4-D         | 0.0020  | U    | ug/L  |
| Acetaminophen | 0.0080  | U    | ug/L  |
| Bentazon      | 8.0E-04 | U    | ug/L  |
| Carbamazepine | 4.0E-04 | U    | ug/L  |
| Diuron        | 8.0E-04 | U    | ug/L  |
| Fenuron       | 0.0080  | U    | ug/L  |
| Fluridone     | 4.0E-04 | U    | ug/L  |
| Imidacloprid  | 8.0E-04 | U    | ug/L  |
| Linuron       | 0.0040  | U    | ug/L  |
| MCP           | 0.0020  | U    | ug/L  |
| Primidone     | 0.0040  | U    | ug/L  |
| Triclopyr     | 0.0040  | U    | ug/L  |

## Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 200.7 Rev. 4.4  
Batch ID: P330710

| Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|-----------|---------|---------|-----------|----------------|
| Calcium   | 101     |         | P         | 85 - 115       |
| Iron      | 108     |         | P         | 85 - 115       |
| Magnesium | 101     |         | P         | 85 - 115       |
| Potassium | 95.7    |         | P         | 85 - 115       |
| Sodium    | 98.5    |         | P         | 85 - 115       |
| Zinc      | 102     |         | P         | 85 - 115       |

Reference Method: EPA 200.8 Rev. 5.4  
Batch ID: P330710

| Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|-----------|---------|---------|-----------|----------------|
| Arsenic   | 104     |         | P         | 85 - 115       |
| Cadmium   | 98.4    |         | P         | 85 - 115       |
| Chromium  | 97.4    |         | P         | 85 - 115       |
| Copper    | 99.5    |         | P         | 85 - 115       |
| Lead      | 99.5    |         | P         | 85 - 115       |
| Nickel    | 101     |         | P         | 85 - 115       |
| Silver    | 103     |         | P         | 85 - 115       |

Reference Method: EPA 300.0 Rev. 2.1  
Batch ID: P330749

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

Reference Method: EPA 300.0 Rev. 2.1  
Batch ID: P330752

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

Reference Method: EPA 350.1 Rev. 2.0  
Batch ID: P330834

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

Reference Method: EPA 351.2 Rev. 2.0  
Batch ID: P330777

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

Reference Method: EPA 353.2 Rev. 2.0  
Batch ID: P330847

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

## Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 365.1 Rev. 2.0  
 Batch ID: P330788

| 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: P330727

| Component     | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|---------|---------|-----------|----------------|
| O-Phosphate-P | 97.6    |         | P         | 90 - 110       |

Reference Method: EPA 8270D  
 Batch ID: P330733

| Component           | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------------|---------|---------|-----------|----------------|
| Acetochlor          | 98.0    | 89.3    | P/P       | 78 - 118       |
| Alachlor            | 97.6    | 92.7    | P/P       | 77 - 119       |
| Ametryn             | 92.2    | 106     | P/P       | 61 - 136       |
| Atrazine            | 87.5    | 87.1    | P/P       | 73 - 120       |
| Atrazine Desethyl   | 90.8    | 97.4    | P/P       | 16 - 122       |
| Azinphos Methyl     | 113     | 109     | P/P       | 69 - 186       |
| Bromacil            | 93.9    | 90.9    | P/P       | 40 - 125       |
| Butylate            | 50.3    | 51.0    | P/P       | 32 - 87.0      |
| Chlorpyrifos Ethyl  | 87.9    | 83.5    | P/P       | 53 - 110       |
| Chlorpyrifos Methyl | 90.8    | 88.7    | P/P       | 31 - 119       |
| Cyanazine           | 156     | 146     | P/P       | 36 - 224       |
| Demeton             | 75.7    | 68.3    | P/P       | 39 - 122       |
| Diazinon            | 92.7    | 89.5    | P/P       | 75 - 119       |
| Disulfoton          | 86.7    | 87.7    | P/P       | 42 - 139       |
| EPTC                | 45.6    | 47.4    | P/P       | 33 - 96.0      |
| Ethion              | 85.5    | 82.3    | P/P       | 63 - 127       |
| Ethoprop            | 69.4    | 70.7    | P/P       | 65 - 107       |
| Fenamiphos          | 93.5    | 91.0    | P/P       | 64 - 137       |
| Fipronil            | 102     | 96.6    | P/P       | 60 - 126       |
| Fipronil Sulfide    | 92.2    | 82.8    | P/P       | 58 - 124       |
| Fipronil Sulfone    | 78.3    | 74.4    | P/P       | 57 - 126       |
| Fonofos             | 78.3    | 84.5    | P/P       | 65 - 111       |
| Hexazinone          | 87.2    | 81.7    | P/P       | 46 - 151       |
| Malathion           | 87.3    | 83.3    | P/P       | 68 - 132       |
| Metaxyl             | 92.5    | 83.9    | P/P       | 51 - 132       |
| Metolachlor         | 91.1    | 85.7    | P/P       | 78 - 119       |
| Metribuzin          | 98.4    | 122     | P/P       | 58 - 148       |
| Mevinphos           | 70.7    | 72.1    | P/P       | 34 - 128       |
| Molinate            | 48.4    | 49.0    | P/P       | 44 - 101       |
| Norflurazon         | 93.7    | 89.3    | P/P       | 63 - 129       |
| Parathion Ethyl     | 85.3    | 85.4    | P/P       | 80 - 109       |
| Parathion Methyl    | 98.4    | 96.3    | P/P       | 74 - 125       |
| Pendimethalin       | 75.7    | 72.5    | P/P       | 48 - 134       |
| Phorate             | 68.9    | 75.1    | P/P       | 52 - 119       |
| Prometon            | 90.6    | 83.2    | P/P       | 69 - 124       |
| Prometryn           | 101     | 90.5    | P/P       | 66 - 124       |
| Simazine            | 89.6    | 95.1    | P/P       | 61 - 134       |
| Terbufos            | 79.1    | 79.6    | P/P       | 58 - 115       |
| Terbutylazine       | 82.5    | 81.1    | P/P       | 77 - 113       |

## Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: EPA 8270D  
Batch ID: P330746

| Component          | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|--------------------|---------|---------|-----------|----------------|
| Aldrin             | 49.1    | 49.5    | P/P       | 26 - 88.0      |
| Alpha-BHC          | 75.1    | 84.5    | P/P       | 63 - 114       |
| Alpha-Chlordane    | 85.0    | 85.1    | P/P       | 56 - 117       |
| Beta-BHC           | 91.6    | 101     | P/P       | 57 - 138       |
| Carbophenothion    | 75.6    | 84.1    | P/P       | 36 - 148       |
| Chlorothalonil     | 99.2    | 79.5    | P/P       | 26 - 173       |
| Cypermethrin       | 88.3    | 88.6    | P/P       | 42 - 159       |
| DDD-p,p'           | 92.7    | 92.1    | P/P       | 62 - 126       |
| DDE-p,p'           | 86.5    | 83.9    | P/P       | 53 - 115       |
| DDT-p,p'           | 79.8    | 83.9    | P/P       | 54 - 117       |
| Delta-BHC          | 118     | 123     | P/P       | 68 - 158       |
| Dicofol            | 42.2    | 44.9    | P/P       | 25 - 114       |
| Dieldrin           | 89.8    | 87.8    | P/P       | 59 - 126       |
| Endosulfan I       | 94.5    | 94.2    | P/P       | 62 - 138       |
| Endosulfan II      | 97.8    | 96.4    | P/P       | 61 - 150       |
| Endosulfan Sulfate | 86.6    | 91.5    | P/P       | 63 - 132       |
| Endrin             | 66.7    | 90.4    | P/P       | 49 - 148       |
| Endrin Aldehyde    | 112     | 108     | P/P       | 50 - 144       |
| Endrin Ketone      | 96.5    | 86.6    | P/P       | 66 - 122       |
| Gamma-BHC          | 87.5    | 93.0    | P/P       | 60 - 137       |
| Gamma-Chlordane    | 83.8    | 83.3    | P/P       | 54 - 113       |
| Heptachlor         | 67.1    | 70.7    | P/P       | 43 - 104       |
| Heptachlor Epoxide | 85.4    | 86.3    | P/P       | 64 - 118       |
| Methoxychlor       | 94.0    | 95.9    | P/P       | 63 - 129       |
| Mirex              | 64.8    | 66.1    | P/P       | 39 - 93.0      |
| Permethrin         | 76.5    | 76.3    | P/P       | 51 - 123       |
| Trifluralin        | 108     | 113     | P/P       | 35 - 187       |

Reference Method: EPA 8276  
Batch ID: P330746

| Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|-----------|---------|---------|-----------|----------------|
| Chlordane | 101     | 106     | P/P       | 48 - 121       |
| Toxaphene | 108     | 118     | P/P       | 43 - 135       |

Reference Method: EPA 8321B  
Batch ID: P330680

| Component      | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|----------------|---------|---------|-----------|----------------|
| Pyraclostrobin | 119     |         | P         | 40 - 150       |

Reference Method: EPA 8321B  
Batch ID: P330689

| Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|-----------|---------|---------|-----------|----------------|
| Sucralose | 93.5    |         | P         | 40 - 150       |

Reference Method: EPA 8321B  
Batch ID: P330738

| Component  | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|------------|---------|---------|-----------|----------------|
| Glyphosate | 102     |         | P         | 40 - 150       |

## Quality Assurance Report Laboratory Control Sample Accuracy

Reference Method: SM 2320 B-97  
Batch ID: P330956

| Component        | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|------------------|---------|---------|-----------|----------------|
| Total Alkalinity | 103     |         | P         | 95 - 108       |

Reference Method: SM 4500 F-C-97  
Batch ID: P330958

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

Reference Method: SM 5310 B-00  
Batch ID: P330864

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

Reference Method: USGS O-2060-01  
Batch ID: P330679

| Component     | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|---------|---------|-----------|----------------|
| 2,4-D         | 134     |         | P         | 40 - 150       |
| Acetaminophen | 117     |         | P         | 30 - 150       |
| Bentazon      | 87.2    |         | P         | 40 - 150       |
| Carbamazepine | 128     |         | P         | 40 - 150       |
| Diuron        | 141     |         | P         | 40 - 150       |
| Fenuron       | 144     |         | P         | 40 - 150       |
| Fluridone     | 126     |         | P         | 40 - 150       |
| Imidacloprid  | 137     |         | P         | 40 - 160       |
| Linuron       | 119     |         | P         | 40 - 150       |
| MCP           | 103     |         | P         | 40 - 150       |
| Primidone     | 133     |         | P         | 40 - 150       |
| Triclopyr     | 85.6    |         | P         | 40 - 150       |

## Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.7 Rev. 4.4  
Batch ID: P330710

| Spiked Sample | Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-----------|---------|---------|-----------|----------------|
| 1922957       | Calcium   | 98.9    |         | P         | 80 - 120       |
| 1922957       | Iron      | 107     |         | P         | 80 - 120       |
| 1922957       | Magnesium | 102     |         | P         | 80 - 120       |
| 1922957       | Potassium | 98.0    |         | P         | 80 - 120       |
| 1922957       | Sodium    | 98.3    |         | P         | 80 - 120       |
| 1922957       | Zinc      | 101     |         | P         | 80 - 120       |
| 1923027       | Calcium   | 104     |         | P         | 80 - 120       |
| 1923027       | Iron      | 110     | 110     | P/P       | 80 - 120       |
| 1923027       | Magnesium | 104     |         | P         | 80 - 120       |
| 1923027       | Potassium | 94.6    |         | P         | 80 - 120       |
| 1923027       | Sodium    | 99.2    |         | P         | 80 - 120       |
| 1923027       | Zinc      | 102     | 103     | P/P       | 80 - 120       |

## Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 200.8 Rev. 5.4  
Batch ID: P330710

| Spiked Sample | Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-----------|---------|---------|-----------|----------------|
| 1922957       | Arsenic   | 108     |         | P         | 80 - 120       |
| 1922957       | Cadmium   | 104     |         | P         | 80 - 120       |
| 1922957       | Chromium  | 98.7    |         | P         | 80 - 120       |
| 1922957       | Copper    | 98.1    |         | P         | 80 - 120       |
| 1922957       | Lead      | 103     |         | P         | 80 - 120       |
| 1922957       | Nickel    | 100     |         | P         | 80 - 120       |
| 1922957       | Silver    | 107     |         | P         | 80 - 120       |
| 1923027       | Arsenic   | 106     | 107     | P/P       | 80 - 120       |
| 1923027       | Cadmium   | 104     | 105     | P/P       | 80 - 120       |
| 1923027       | Chromium  | 98.7    | 101     | P/P       | 80 - 120       |
| 1923027       | Copper    | 97.7    | 99.8    | P/P       | 80 - 120       |
| 1923027       | Lead      | 104     | 105     | P/P       | 80 - 120       |
| 1923027       | Nickel    | 100     | 102     | P/P       | 80 - 120       |
| 1923027       | Silver    | 105     | 106     | P/P       | 80 - 120       |

Reference Method: EPA 300.0 Rev. 2.1  
Batch ID: P330749

| Spiked Sample | Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-----------|---------|---------|-----------|----------------|
| 1923333       | Chloride  | 96.5    |         | P         | 90 - 110       |
| 1923478       | Chloride  | 100     |         | P         | 90 - 110       |

Reference Method: EPA 300.0 Rev. 2.1  
Batch ID: P330752

| Spiked Sample | Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-----------|---------|---------|-----------|----------------|
| 1923333       | Sulfate   | 98.2    |         | P         | 90 - 110       |
| 1923478       | Sulfate   | 101     |         | P         | 90 - 110       |

Reference Method: EPA 350.1 Rev. 2.0  
Batch ID: P330834

| Spiked Sample | Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-----------|---------|---------|-----------|----------------|
| 1923054       | Ammonia-N | 102     | 100     | P/P       | 90 - 110       |

Reference Method: EPA 351.2 Rev. 2.0  
Batch ID: P330777

| Spiked Sample | Component         | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-------------------|---------|---------|-----------|----------------|
| 1923253       | Kjeldahl Nitrogen | 98.0    | 95.2    | P/P       | 90 - 110       |

Reference Method: EPA 353.2 Rev. 2.0  
Batch ID: P330847

| Spiked Sample | Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-----------|---------|---------|-----------|----------------|
| 1923092       | NO2NO3-N  | 106     | 106     | P/P       | 90 - 110       |

Reference Method: EPA 365.1 Rev. 2.0  
Batch ID: P330788

| Spiked Sample | Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-----------|---------|---------|-----------|----------------|
| 1923281       | Total-P   | 95.4    | 101     | P/P       | 90 - 110       |

## Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 365.1 Rev. 2.0 dissolved  
 Batch ID: P330727

| Spiked Sample | Component     | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|---------------|---------|---------|-----------|----------------|
| 1923286       | O-Phosphate-P | 95.4    | 97.2    | P/P       | 90 - 110       |

Reference Method: EPA 8270D  
 Batch ID: P330733

| Spiked Sample | Component           | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|---------------------|---------|---------|-----------|----------------|
| 1923026       | Acetochlor          | 89.2    | 95.3    | P/P       | 74 - 123       |
| 1923026       | Alachlor            | 86.7    | 92.3    | P/P       | 73 - 124       |
| 1923026       | Ametryn             | 94.8    | 97.1    | P/P       | 56 - 149       |
| 1923026       | Atrazine            | 88.0    | 94.0    | P/P       | 73 - 124       |
| 1923026       | Atrazine Desethyl   | 76.4    | 87.2    | P/P       | 12 - 103       |
| 1923026       | Azinphos Methyl     | 103     | 104     | P/P       | 60 - 202       |
| 1923026       | Bromacil            | 105     | 94.0    | P/P       | 42 - 133       |
| 1923026       | Butylate            | 24.8    | 38.7    | P/P       | 10 - 85.0      |
| 1923026       | Chlorpyrifos Ethyl  | 76.8    | 84.1    | P/P       | 53 - 113       |
| 1923026       | Chlorpyrifos Methyl | 83.5    | 86.9    | P/P       | 40 - 115       |
| 1923026       | Cyanazine           | 115     | 127     | P/P       | 22 - 210       |
| 1923026       | Demeton             | 82.7    | 84.3    | P/P       | 17 - 149       |
| 1923026       | Diazinon            | 92.9    | 99.7    | P/P       | 72 - 124       |
| 1923026       | Disulfoton          | 90.6    | 100     | P/P       | 43 - 139       |
| 1923026       | EPTC                | 24.9    | 35.5    | P/P       | 10 - 86.0      |
| 1923026       | Ethion              | 87.3    | 91.9    | P/P       | 65 - 131       |
| 1923026       | Ethoprop            | 72.5    | 77.8    | P/P       | 59 - 110       |
| 1923026       | Fenamiphos          | 86.3    | 80.8    | P/P       | 57 - 138       |
| 1923026       | Fipronil            | 104     | 105     | P/P       | 40 - 130       |
| 1923026       | Fipronil Sulfide    | 88.4    | 89.9    | P/P       | 36 - 128       |
| 1923026       | Fipronil Sulfone    | 74.4    | 76.0    | P/P       | 16 - 145       |
| 1923026       | Fonofos             | 75.3    | 88.6    | P/P       | 60 - 112       |
| 1923026       | Hexazinone          | 88.9    | 91.1    | P/P       | 69 - 142       |
| 1923026       | Malathion           | 78.1    | 82.9    | P/P       | 68 - 132       |
| 1923026       | Metalaxyl           | 87.8    | 88.0    | P/P       | 66 - 118       |
| 1923026       | Metolachlor         | 87.1    | 91.1    | P/P       | 71 - 124       |
| 1923026       | Metribuzin          | 150     | 161     | F/F       | 61 - 140       |
| 1923026       | Mevinphos           | 66.3    | 73.6    | P/P       | 38 - 130       |
| 1923026       | Molinate            | 33.0    | 41.4    | P/P       | 23 - 99.0      |
| 1923026       | Norflurazon         | 98.0    | 93.3    | P/P       | 39 - 139       |
| 1923026       | Parathion Ethyl     | 86.0    | 86.1    | P/P       | 75 - 111       |
| 1923026       | Parathion Methyl    | 96.7    | 100     | P/P       | 64 - 130       |
| 1923026       | Pendimethalin       | 80.5    | 81.4    | P/P       | 26 - 173       |
| 1923026       | Phorate             | 70.8    | 76.5    | P/P       | 43 - 127       |
| 1923026       | Prometon            | 92.2    | 100     | P/P       | 50 - 144       |
| 1923026       | Prometryn           | 96.3    | 101     | P/P       | 69 - 126       |
| 1923026       | Simazine            | 95.0    | 103     | P/P       | 51 - 152       |
| 1923026       | Terbufos            | 79.5    | 88.6    | P/P       | 54 - 125       |
| 1923026       | Terbutylazine       | 82.4    | 84.6    | P/P       | 76 - 113       |

Reference Method: EPA 8270D  
 Batch ID: P330746

| Spiked Sample | Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-----------|---------|---------|-----------|----------------|
| 1923194       | Aldrin    | 62.2    | 61.7    | P/P       | 22 - 97.0      |
| 1923194       | Alpha-BHC | 82.8    | 94.4    | P/P       | 43 - 132       |

## Quality Assurance Report Matrix Spike Accuracy

Reference Method: EPA 8270D  
Batch ID: P330746

| Spiked Sample | Component          | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|--------------------|---------|---------|-----------|----------------|
| 1923194       | Alpha-Chlordane    | 85.5    | 97.1    | P/P       | 36 - 126       |
| 1923194       | Beta-BHC           | 102     | 134     | P/P       | 41 - 150       |
| 1923194       | Carbophenothion    | 91.3    | 105     | P/P       | 13 - 196       |
| 1923194       | Chlorothalonil     | 116     | 117     | P/P       | 10 - 266       |
| 1923194       | Cypermethrin       | 95.3    | 108     | P/P       | 37 - 161       |
| 1923194       | DDD-p,p'           | 89.9    | 109     | P/P       | 44 - 131       |
| 1923194       | DDE-p,p'           | 88.3    | 96.9    | P/P       | 32 - 127       |
| 1923194       | DDT-p,p'           | 81.4    | 88.1    | P/P       | 45 - 116       |
| 1923194       | Delta-BHC          | 143     | 164     | P/P       | 50 - 201       |
| 1923194       | Dicofol            | 23.2    | 36.3    | P/P       | 10 - 100       |
| 1923194       | Endosulfan I       | 99.9    | 113     | P/P       | 51 - 139       |
| 1923194       | Endosulfan II      | 103     | 121     | P/P       | 49 - 155       |
| 1923194       | Endosulfan Sulfate | 77.4    | 104     | P/P       | 54 - 136       |
| 1923194       | Endrin             | 78.5    | 99.4    | P/P       | 38 - 141       |
| 1923194       | Endrin Aldehyde    | 68.3    | 118     | P/P       | 14 - 152       |
| 1923194       | Endrin Ketone      | 86.8    | 103     | P/P       | 60 - 128       |
| 1923194       | Gamma-BHC          | 117     | 110     | P/P       | 48 - 157       |
| 1923194       | Gamma-Chlordane    | 83.0    | 95.7    | P/P       | 35 - 123       |
| 1923194       | Heptachlor         | 67.7    | 70.8    | P/P       | 25 - 112       |
| 1923194       | Heptachlor Epoxide | 92.4    | 106     | P/P       | 48 - 125       |
| 1923194       | Methoxychlor       | 90.7    | 99.2    | P/P       | 52 - 127       |
| 1923194       | Mirex              | 68.7    | 72.5    | P/P       | 25 - 108       |
| 1923194       | Permethrin         | 80.6    | 86.6    | P/P       | 46 - 133       |
| 1923194       | Trifluralin        | 140     | 156     | P/P       | 29 - 254       |

Reference Method: EPA 8276  
Batch ID: P330746

| Spiked Sample | Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-----------|---------|---------|-----------|----------------|
| 1922737       | Chlordane | 92.6    | 101     | P/P       | 44 - 134       |
| 1922737       | Toxaphene | 104     | 109     | P/P       | 36 - 147       |

Reference Method: EPA 8321B  
Batch ID: P330680

| Spiked Sample | Component      | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|----------------|---------|---------|-----------|----------------|
| 1923412       | Pyraclostrobin | 120     | 115     | P/P       | 40 - 150       |

Reference Method: EPA 8321B  
Batch ID: P330689

| Spiked Sample | Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-----------|---------|---------|-----------|----------------|
| 1923138       | Sucralose | 111     | 106     | P/P       | 40 - 150       |

Reference Method: EPA 8321B  
Batch ID: P330738

| Spiked Sample | Component  | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|------------|---------|---------|-----------|----------------|
| 1923017       | Glyphosate | 92.6    | 95.6    | P/P       | 40 - 150       |

## Quality Assurance Report Matrix Spike Accuracy

Reference Method: SM 4500 F-C-97  
Batch ID: P330958

| Spiked Sample | Component | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|-----------|---------|---------|-----------|----------------|
| 1923276       | Fluoride  | 101     | 102     | P/P       | 91 - 105       |

Reference Method: SM 5310 B-00  
Batch ID: P330864

| Spiked Sample | Component      | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|----------------|---------|---------|-----------|----------------|
| 1923055       | Organic Carbon | 92.5    | 94.2    | P/P       | 85 - 115       |

Reference Method: USGS O-2060-01  
Batch ID: P330679

| Spiked Sample | Component     | % Rec.1 | % Rec.2 | Pass/Fail | Control Limits |
|---------------|---------------|---------|---------|-----------|----------------|
| 1923137       | 2,4-D         | 138     | 130     | P/P       | 40 - 150       |
| 1923137       | Acetaminophen | 109     | 112     | P/P       | 30 - 150       |
| 1923137       | Bentazon      | 51.6    | 52.6    | P/P       | 40 - 150       |
| 1923137       | Carbamazepine | 155     | 153     | F/F       | 40 - 150       |
| 1923137       | Diuron        | 113     | 122     | P/P       | 40 - 150       |
| 1923137       | Fenuron       | 113     | 128     | P/P       | 40 - 150       |
| 1923137       | Fluridone     | 94.5    | 110     | P/P       | 40 - 150       |
| 1923137       | Imidacloprid  | 220     | 235     | F/F       | 40 - 160       |
| 1923137       | Linuron       | 110     | 126     | P/P       | 40 - 150       |
| 1923137       | MCP           | 99.5    | 111     | P/P       | 40 - 150       |
| 1923137       | Primidone     | 129     | 145     | P/P       | 40 - 150       |
| 1923137       | Triclopyr     | 101     | 106     | P/P       | 40 - 150       |

## Quality Assurance Report Precision

Reference Method: EPA 180.1 Rev. 2.0  
Batch ID: P330658

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1923252                  | Turbidity | 0.275     | Sample            | P         | 0 - 20         |

Reference Method: EPA 200.7 Rev. 4.4  
Batch ID: P330710

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1923027                  | Calcium   | 0.0484    | Spike             | P         | 0 - 20         |
| 1923027                  | Iron      | 0.316     | Spike             | P         | 0 - 20         |
| 1923027                  | Magnesium | 0.0659    | Spike             | P         | 0 - 20         |
| 1923027                  | Potassium | 0.00705   | Spike             | P         | 0 - 20         |
| 1923027                  | Sodium    | 0.278     | Spike             | P         | 0 - 20         |
| 1923027                  | Zinc      | 0.746     | Spike             | P         | 0 - 20         |

## Quality Assurance Report Precision

Reference Method: EPA 200.8 Rev. 5.4  
Batch ID: P330710

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1923027                  | Arsenic   | 1.37      | Spike             | P         | 0 - 20         |
| 1923027                  | Cadmium   | 1.13      | Spike             | P         | 0 - 20         |
| 1923027                  | Chromium  | 1.91      | Spike             | P         | 0 - 20         |
| 1923027                  | Copper    | 2.04      | Spike             | P         | 0 - 20         |
| 1923027                  | Lead      | 0.962     | Spike             | P         | 0 - 20         |
| 1923027                  | Nickel    | 1.56      | Spike             | P         | 0 - 20         |
| 1923027                  | Silver    | 1.40      | Spike             | P         | 0 - 20         |

Reference Method: EPA 300.0 Rev. 2.1  
Batch ID: P330749

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1923333                  | Chloride  | 3.90      | Sample            | P         | 0 - 20         |

Reference Method: EPA 300.0 Rev. 2.1  
Batch ID: P330752

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1923333                  | Sulfate   | 2.52      | Sample            | P         | 0 - 20         |

Reference Method: EPA 350.1 Rev. 2.0  
Batch ID: P330834

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1923054                  | Ammonia-N | 1.16      | Spike             | P         | 0 - 20         |

Reference Method: EPA 351.2 Rev. 2.0  
Batch ID: P330777

| Replicated<br>Lab Sample | Component         | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-------------------|-----------|-------------------|-----------|----------------|
| 1923253                  | Kjeldahl Nitrogen | 1.94      | Spike             | P         | 0 - 20         |

Reference Method: EPA 353.2 Rev. 2.0  
Batch ID: P330847

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1923092                  | NO2NO3-N  | 0.261     | Spike             | P         | 0 - 20         |

Reference Method: EPA 365.1 Rev. 2.0  
Batch ID: P330788

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1923281                  | Total-P   | 4.93      | Spike             | P         | 0 - 20         |

## Quality Assurance Report Precision

Reference Method: EPA 365.1 Rev. 2.0 dissolved  
Batch ID: P330727

| Replicated<br>Lab Sample | Component     | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|---------------|-----------|-------------------|-----------|----------------|
| 1923286                  | O-Phosphate-P | 1.38      | Spike             | P         | 0 - 20         |

Reference Method: EPA 8270D  
Batch ID: P330733

| Replicated<br>Lab Sample | Component           | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|---------------------|-----------|-------------------|-----------|----------------|
| 1923026                  | Acetochlor          | 6.70      | Spike             | P         | 0 - 30         |
| 1923026                  | Alachlor            | 6.24      | Spike             | P         | 0 - 30         |
| 1923026                  | Ametryn             | 2.40      | Spike             | P         | 0 - 30         |
| 1923026                  | Atrazine            | 5.43      | Spike             | P         | 0 - 30         |
| 1923026                  | Atrazine Desethyl   | 13.3      | Spike             | P         | 0 - 30         |
| 1923026                  | Azinphos Methyl     | 1.26      | Spike             | P         | 0 - 30         |
| 1923026                  | Bromacil            | 10.7      | Spike             | P         | 0 - 30         |
| 1923026                  | Butylate            | 43.9      | Spike             | F         | 0 - 30         |
| 1923026                  | Chlorpyrifos Ethyl  | 6.79      | Spike             | P         | 0 - 30         |
| 1923026                  | Chlorpyrifos Methyl | 4.05      | Spike             | P         | 0 - 30         |
| 1923026                  | Cyanazine           | 10.1      | Spike             | P         | 0 - 30         |
| 1923026                  | Demeton             | 1.91      | Spike             | P         | 0 - 30         |
| 1923026                  | Diazinon            | 6.99      | Spike             | P         | 0 - 30         |
| 1923026                  | Disulfoton          | 10.1      | Spike             | P         | 0 - 30         |
| 1923026                  | EPTC                | 35.1      | Spike             | F         | 0 - 30         |
| 1923026                  | Ethion              | 5.12      | Spike             | P         | 0 - 30         |
| 1923026                  | Ethoprop            | 6.94      | Spike             | P         | 0 - 30         |
| 1923026                  | Fenamiphos          | 6.63      | Spike             | P         | 0 - 30         |
| 1923026                  | Fipronil            | 0.945     | Spike             | P         | 0 - 30         |
| 1923026                  | Fipronil Sulfide    | 1.63      | Spike             | P         | 0 - 30         |
| 1923026                  | Fipronil Sulfone    | 2.20      | Spike             | P         | 0 - 30         |
| 1923026                  | Fonofos             | 16.2      | Spike             | P         | 0 - 30         |
| 1923026                  | Hexazinone          | 2.44      | Spike             | P         | 0 - 30         |
| 1923026                  | Malathion           | 6.05      | Spike             | P         | 0 - 30         |
| 1923026                  | Metalaxyl           | 0.166     | Spike             | P         | 0 - 30         |
| 1923026                  | Metolachlor         | 3.99      | Spike             | P         | 0 - 30         |
| 1923026                  | Metribuzin          | 6.59      | Spike             | P         | 0 - 30         |
| 1923026                  | Mevinphos           | 10.5      | Spike             | P         | 0 - 30         |
| 1923026                  | Molinate            | 22.4      | Spike             | P         | 0 - 30         |
| 1923026                  | Norflurazon         | 4.98      | Spike             | P         | 0 - 30         |
| 1923026                  | Parathion Ethyl     | 0.0871    | Spike             | P         | 0 - 30         |
| 1923026                  | Parathion Methyl    | 3.42      | Spike             | P         | 0 - 30         |
| 1923026                  | Pendimethalin       | 1.20      | Spike             | P         | 0 - 30         |
| 1923026                  | Phorate             | 7.85      | Spike             | P         | 0 - 30         |
| 1923026                  | Prometon            | 8.08      | Spike             | P         | 0 - 30         |
| 1923026                  | Prometryn           | 5.08      | Spike             | P         | 0 - 30         |
| 1923026                  | Simazine            | 8.15      | Spike             | P         | 0 - 30         |
| 1923026                  | Terbufos            | 10.8      | Spike             | P         | 0 - 30         |
| 1923026                  | Terbutylazine       | 2.69      | Spike             | P         | 0 - 30         |
| LFB                      | Acetochlor          | 9.29      | LCS               | P         | 0 - 30         |
| LFB                      | Alachlor            | 5.10      | LCS               | P         | 0 - 30         |
| LFB                      | Ametryn             | 13.5      | LCS               | P         | 0 - 30         |
| LFB                      | Atrazine            | 0.505     | LCS               | P         | 0 - 30         |
| LFB                      | Atrazine Desethyl   | 6.95      | LCS               | P         | 0 - 30         |

## Quality Assurance Report Precision

Reference Method: EPA 8270D  
Batch ID: P330733

| Replicated<br>Lab Sample | Component           | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|---------------------|-----------|-------------------|-----------|----------------|
| LFB                      | Azinphos Methyl     | 4.19      | LCS               | P         | 0 - 30         |
| LFB                      | Bromacil            | 3.27      | LCS               | P         | 0 - 30         |
| LFB                      | Butylate            | 1.39      | LCS               | P         | 0 - 30         |
| LFB                      | Chlorpyrifos Ethyl  | 5.14      | LCS               | P         | 0 - 30         |
| LFB                      | Chlorpyrifos Methyl | 2.34      | LCS               | P         | 0 - 30         |
| LFB                      | Cyanazine           | 6.39      | LCS               | P         | 0 - 30         |
| LFB                      | Demeton             | 10.2      | LCS               | P         | 0 - 30         |
| LFB                      | Diazinon            | 3.53      | LCS               | P         | 0 - 30         |
| LFB                      | Disulfoton          | 1.21      | LCS               | P         | 0 - 30         |
| LFB                      | EPTC                | 3.76      | LCS               | P         | 0 - 30         |
| LFB                      | Ethion              | 3.81      | LCS               | P         | 0 - 30         |
| LFB                      | Ethoprop            | 1.94      | LCS               | P         | 0 - 30         |
| LFB                      | Fenamiphos          | 2.65      | LCS               | P         | 0 - 30         |
| LFB                      | Fipronil            | 5.34      | LCS               | P         | 0 - 30         |
| LFB                      | Fipronil Sulfide    | 10.7      | LCS               | P         | 0 - 30         |
| LFB                      | Fipronil Sulfone    | 5.19      | LCS               | P         | 0 - 30         |
| LFB                      | Fonofos             | 7.61      | LCS               | P         | 0 - 30         |
| LFB                      | Hexazinone          | 6.58      | LCS               | P         | 0 - 30         |
| LFB                      | Malathion           | 4.73      | LCS               | P         | 0 - 30         |
| LFB                      | Metalaxyl           | 9.75      | LCS               | P         | 0 - 30         |
| LFB                      | Metolachlor         | 6.13      | LCS               | P         | 0 - 30         |
| LFB                      | Metribuzin          | 21.7      | LCS               | P         | 0 - 30         |
| LFB                      | Mevinphos           | 1.96      | LCS               | P         | 0 - 30         |
| LFB                      | Molinate            | 1.21      | LCS               | P         | 0 - 30         |
| LFB                      | Norflurazon         | 4.77      | LCS               | P         | 0 - 30         |
| LFB                      | Parathion Ethyl     | 0.129     | LCS               | P         | 0 - 30         |
| LFB                      | Parathion Methyl    | 2.08      | LCS               | P         | 0 - 30         |
| LFB                      | Pendimethalin       | 4.30      | LCS               | P         | 0 - 30         |
| LFB                      | Phorate             | 8.62      | LCS               | P         | 0 - 30         |
| LFB                      | Prometon            | 8.61      | LCS               | P         | 0 - 30         |
| LFB                      | Prometryn           | 10.5      | LCS               | P         | 0 - 30         |
| LFB                      | Simazine            | 5.88      | LCS               | P         | 0 - 30         |
| LFB                      | Terbufos            | 0.640     | LCS               | P         | 0 - 30         |
| LFB                      | Terbutylazine       | 1.78      | LCS               | P         | 0 - 30         |

Reference Method: EPA 8270D  
Batch ID: P330746

| Replicated<br>Lab Sample | Component       | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------------|-----------|-------------------|-----------|----------------|
| 1923194                  | Aldrin          | 0.764     | Spike             | P         | 0 - 30         |
| 1923194                  | Alpha-BHC       | 13.1      | Spike             | P         | 0 - 30         |
| 1923194                  | Alpha-Chlordane | 11.7      | Spike             | P         | 0 - 30         |
| 1923194                  | Beta-BHC        | 27.6      | Spike             | P         | 0 - 30         |
| 1923194                  | Carbophenothion | 13.6      | Spike             | P         | 0 - 30         |
| 1923194                  | Chlorothalonil  | 1.36      | Spike             | P         | 0 - 30         |
| 1923194                  | Cypermethrin    | 12.5      | Spike             | P         | 0 - 30         |
| 1923194                  | DDD-p,p'        | 18.7      | Spike             | P         | 0 - 30         |
| 1923194                  | DDE-p,p'        | 9.31      | Spike             | P         | 0 - 30         |
| 1923194                  | DDT-p,p'        | 7.97      | Spike             | P         | 0 - 30         |
| 1923194                  | Delta-BHC       | 13.1      | Spike             | P         | 0 - 30         |

## Quality Assurance Report Precision

Reference Method: EPA 8270D  
Batch ID: P330746

| Replicated<br>Lab Sample | Component          | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|--------------------|-----------|-------------------|-----------|----------------|
| 1923194                  | Dicofol            | 44.1      | Spike             | F         | 0 - 30         |
| 1923194                  | Dieldrin           | 16.1      | Spike             | P         | 0 - 30         |
| 1923194                  | Endosulfan I       | 12.0      | Spike             | P         | 0 - 30         |
| 1923194                  | Endosulfan II      | 16.5      | Spike             | P         | 0 - 30         |
| 1923194                  | Endosulfan Sulfate | 29.7      | Spike             | P         | 0 - 30         |
| 1923194                  | Endrin             | 23.5      | Spike             | P         | 0 - 30         |
| 1923194                  | Endrin Aldehyde    | 53.3      | Spike             | F         | 0 - 30         |
| 1923194                  | Endrin Ketone      | 17.3      | Spike             | P         | 0 - 30         |
| 1923194                  | Gamma-BHC          | 5.92      | Spike             | P         | 0 - 30         |
| 1923194                  | Gamma-Chlordane    | 13.3      | Spike             | P         | 0 - 30         |
| 1923194                  | Heptachlor         | 4.58      | Spike             | P         | 0 - 30         |
| 1923194                  | Heptachlor Epoxide | 14.1      | Spike             | P         | 0 - 30         |
| 1923194                  | Methoxychlor       | 8.95      | Spike             | P         | 0 - 30         |
| 1923194                  | Mirex              | 5.39      | Spike             | P         | 0 - 30         |
| 1923194                  | Permethrin         | 7.12      | Spike             | P         | 0 - 30         |
| 1923194                  | Trifluralin        | 10.8      | Spike             | P         | 0 - 30         |
| LFB                      | Aldrin             | 0.641     | LCS               | P         | 0 - 30         |
| LFB                      | Alpha-BHC          | 11.7      | LCS               | P         | 0 - 30         |
| LFB                      | Alpha-Chlordane    | 0.0879    | LCS               | P         | 0 - 30         |
| LFB                      | Beta-BHC           | 10.0      | LCS               | P         | 0 - 30         |
| LFB                      | Carbophenothion    | 10.6      | LCS               | P         | 0 - 30         |
| LFB                      | Chlorothalonil     | 22.0      | LCS               | P         | 0 - 30         |
| LFB                      | Cypermethrin       | 0.326     | LCS               | P         | 0 - 30         |
| LFB                      | DDD-p,p'           | 0.604     | LCS               | P         | 0 - 30         |
| LFB                      | DDE-p,p'           | 2.99      | LCS               | P         | 0 - 30         |
| LFB                      | DDT-p,p'           | 4.93      | LCS               | P         | 0 - 30         |
| LFB                      | Delta-BHC          | 3.44      | LCS               | P         | 0 - 30         |
| LFB                      | Dicofol            | 6.15      | LCS               | P         | 0 - 30         |
| LFB                      | Dieldrin           | 2.25      | LCS               | P         | 0 - 30         |
| LFB                      | Endosulfan I       | 0.312     | LCS               | P         | 0 - 30         |
| LFB                      | Endosulfan II      | 1.42      | LCS               | P         | 0 - 30         |
| LFB                      | Endosulfan Sulfate | 5.47      | LCS               | P         | 0 - 30         |
| LFB                      | Endrin             | 30.0      | LCS               | F         | 0 - 30         |
| LFB                      | Endrin Aldehyde    | 3.74      | LCS               | P         | 0 - 30         |
| LFB                      | Endrin Ketone      | 10.7      | LCS               | P         | 0 - 30         |
| LFB                      | Gamma-BHC          | 6.08      | LCS               | P         | 0 - 30         |
| LFB                      | Gamma-Chlordane    | 0.535     | LCS               | P         | 0 - 30         |
| LFB                      | Heptachlor         | 5.09      | LCS               | P         | 0 - 30         |
| LFB                      | Heptachlor Epoxide | 1.11      | LCS               | P         | 0 - 30         |
| LFB                      | Methoxychlor       | 2.00      | LCS               | P         | 0 - 30         |
| LFB                      | Mirex              | 1.94      | LCS               | P         | 0 - 30         |
| LFB                      | Permethrin         | 0.242     | LCS               | P         | 0 - 30         |
| LFB                      | Trifluralin        | 5.03      | LCS               | P         | 0 - 30         |

Reference Method: EPA 8276  
Batch ID: P330746

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1922737                  | Chlordane | 7.59      | Spike             | P         | 0 - 30         |
| 1922737                  | Toxaphene | 4.14      | Spike             | P         | 0 - 30         |

## Quality Assurance Report Precision

Reference Method: EPA 8276  
Batch ID: P330746

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| LFB                      | Chlordane | 4.76      | LCS               | P         | 0 - 30         |
| LFB                      | Toxaphene | 8.72      | LCS               | P         | 0 - 30         |

Reference Method: EPA 8321B  
Batch ID: P330680

| Replicated<br>Lab Sample | Component      | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|----------------|-----------|-------------------|-----------|----------------|
| 1923412                  | Pyraclostrobin | 4.19      | Spike             | P         | 0 - 30         |

Reference Method: EPA 8321B  
Batch ID: P330689

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1923138                  | Sucralose | 4.46      | Spike             | P         | 0 - 30         |

Reference Method: EPA 8321B  
Batch ID: P330738

| Replicated<br>Lab Sample | Component  | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|------------|-----------|-------------------|-----------|----------------|
| 1923017                  | Glyphosate | 3.12      | Spike             | P         | 0 - 30         |

Reference Method: SM 2120 B  
Batch ID: P330669

| Replicated<br>Lab Sample | Component    | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|--------------|-----------|-------------------|-----------|----------------|
| 1923252                  | Color (true) | 2.29      | Sample            | P         | 0 - 20         |

Reference Method: SM 2320 B-97  
Batch ID: P330956

| Replicated<br>Lab Sample | Component        | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|------------------|-----------|-------------------|-----------|----------------|
| 1923276                  | Total Alkalinity | 0.0509    | Sample            | P         | 0 - 4.8        |

Reference Method: SM 2540 C-97  
Batch ID: P331042

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1923274                  | TDS       | 4.28      | Sample            | P         | 0 - 10         |

Reference Method: SM 4500 F-C-97  
Batch ID: P330958

| Replicated<br>Lab Sample | Component | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|-----------|-----------|-------------------|-----------|----------------|
| 1923276                  | Fluoride  | 0.473     | Spike             | P         | 0 - 3.0        |

## Quality Assurance Report Precision

Reference Method: SM 5310 B-00  
 Batch ID: P330864

| Replicated<br>Lab Sample | Component      | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|----------------|-----------|-------------------|-----------|----------------|
| 1923055                  | Organic Carbon | 1.04      | Spike             | P         | 0 - 20         |

Reference Method: USGS O-2060-01  
 Batch ID: P330679

| Replicated<br>Lab Sample | Component     | % RSD/RPD | Sample/Spike/LCS* | Pass/Fail | Control Limits |
|--------------------------|---------------|-----------|-------------------|-----------|----------------|
| 1923137                  | 2,4-D         | 5.84      | Spike             | P         | 0 - 30         |
| 1923137                  | Acetaminophen | 2.40      | Spike             | P         | 0 - 30         |
| 1923137                  | Bentazon      | 1.88      | Spike             | P         | 0 - 30         |
| 1923137                  | Carbamazepine | 1.77      | Spike             | P         | 0 - 30         |
| 1923137                  | Diuron        | 7.51      | Spike             | P         | 0 - 30         |
| 1923137                  | Fenuron       | 12.6      | Spike             | P         | 0 - 30         |
| 1923137                  | Fluridone     | 14.7      | Spike             | P         | 0 - 30         |
| 1923137                  | Imidacloprid  | 6.75      | Spike             | P         | 0 - 30         |
| 1923137                  | Linuron       | 13.3      | Spike             | P         | 0 - 30         |
| 1923137                  | MCP           | 11.0      | Spike             | P         | 0 - 30         |
| 1923137                  | Primidone     | 11.3      | Spike             | P         | 0 - 30         |
| 1923137                  | Triclopyr     | 4.49      | Spike             | P         | 0 - 30         |

\* 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: 1923246  
 Field Sample ID: G1TLHR0037-2017-03

| Reference Method | Surrogate          | % Rec. | Pass/Fail | Control Limits |
|------------------|--------------------|--------|-----------|----------------|
| EPA 8321B        | Acetaminophen-d4   | 153    | P         | 30 - 160       |
| EPA 8321B        | Acetaminophen-d4   | 153    | P         | 30 - 160       |
| EPA 8321B        | Carbamazepine-d10  | 86.4   | P         | 30 - 160       |
| EPA 8321B        | Carbamazepine-d10  | 86.4   | P         | 30 - 160       |
| EPA 8321B        | Diuron-d6          | 125    | P         | 30 - 160       |
| EPA 8321B        | Diuron-d6          | 57.4   | P         | 30 - 160       |
| EPA 8321B        | Diuron-d6          | 125    | P         | 30 - 160       |
| EPA 8321B        | Diuron-d6          | 57.4   | P         | 30 - 160       |
| EPA 8321B        | Glyphosate 13C 15N | 91.8   | P         | 40 - 160       |
| EPA 8321B        | Primidone-d5       | 104    | P         | 30 - 160       |
| EPA 8321B        | Primidone-d5       | 104    | P         | 30 - 160       |
| EPA 8321B        | Sucralose-d6       | 59.9   | P         | 40 - 160       |
| EPA 8321B        | Sucralose-d6       | 59.9   | P         | 40 - 160       |
| USGS O-2060-01   | 2,4-D-d3           | 138    | P         | 40 - 160       |
| USGS O-2060-01   | Acetaminophen-d4   | 153    | P         | 30 - 160       |
| USGS O-2060-01   | Carbamazepine-d10  | 86.4   | P         | 30 - 160       |
| USGS O-2060-01   | Diuron-d6          | 125    | P         | 30 - 160       |
| USGS O-2060-01   | Diuron-d6          | 57.4   | P         | 30 - 160       |
| USGS O-2060-01   | Primidone-d5       | 104    | P         | 30 - 160       |
| USGS O-2060-01   | Sucralose-d6       | 59.9   | P         | 40 - 160       |

## Quality Assurance Report Surrogates

Lab Sample ID: 1923247

Field Sample ID: G1TLHR0037-2017-03

| Reference Method | Surrogate            | % Rec. | Pass/Fail | Control Limits |
|------------------|----------------------|--------|-----------|----------------|
| EPA 8270D        | Decachlorobiphenyl   | 83.8   | P         | 39 - 118       |
| EPA 8270D        | Tetrachloro-m-xylene | 65.2   | P         | 32 - 103       |
| EPA 8276         | Decachlorobiphenyl   | 83.2   | P         | 31 - 100       |

Lab Sample ID: 1923248

Field Sample ID: G1TLHR0037-2017-03

| Reference Method | Surrogate    | % Rec. | Pass/Fail | Control Limits |
|------------------|--------------|--------|-----------|----------------|
| EPA 8270D        | Malathion-d7 | 67.0   | P         | 53 - 135       |
| EPA 8270D        | Simazine-d10 | 99.1   | P         | 71 - 126       |

## Quality Assurance Report Calibration Verification

Reference Method: EPA 180.1 Rev. 2.0

Run ID: A78571

Included Lab Sample IDs: 1923242

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

Reference Method: SM 2120 B

Run ID: A78573

Included Lab Sample IDs: 1923242

| Component    | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|--------------|---------|---------|------------|----------------|
| Color (true) | 101     | 101     | P/P        | 85 - 115       |

Reference Method: EPA 300.0 Rev. 2.1

Run ID: A78584

Included Lab Sample IDs: 1923242

| Component | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|-----------|---------|---------|------------|----------------|
| Chloride  | 101     | 95.7    | P/P        | 90 - 110       |
| Sulfate   | 100     | 96.7    | P/P        | 90 - 110       |

Reference Method: EPA 365.1 Rev. 2.0 dissolved

Run ID: A78589

Included Lab Sample IDs: 1923244

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

Reference Method: EPA 350.1 Rev. 2.0

Run ID: A78613

Included Lab Sample IDs: 1923243

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

## Quality Assurance Report Calibration Verification

Reference Method: EPA 351.2 Rev. 2.0

Run ID: A78615

Included Lab Sample IDs: 1923243

| Component         | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|-------------------|---------|---------|------------|----------------|
| Kjeldahl Nitrogen | 98.8    | 105     | P/P        | 90 - 110       |

Reference Method: EPA 353.2 Rev. 2.0

Run ID: A78616

Included Lab Sample IDs: 1923243

| Component | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|-----------|---------|---------|------------|----------------|
| NO2NO3-N  | 102     | 103     | P/P        | 90 - 110       |

Reference Method: SM 5310 B-00

Run ID: A78619

Included Lab Sample IDs: 1923243

| Component      | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|----------------|---------|---------|------------|----------------|
| Organic Carbon | 98.6    | 101     | P/P        | 90 - 110       |

Reference Method: EPA 365.1 Rev. 2.0

Run ID: A78622

Included Lab Sample IDs: 1923243

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

Reference Method: EPA 8321B

Run ID: A78653

Included Lab Sample IDs: 1923246

| Component  | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|------------|---------|---------|------------|----------------|
| Glyphosate | 95.9    | 92.4    | P/P        | 70 - 160       |

Reference Method: EPA 200.8 Rev. 5.4

Run ID: A78662

Included Lab Sample IDs: 1923249

| Component | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|-----------|---------|---------|------------|----------------|
| Arsenic   | 101     | 99.9    | P/P        | 90 - 110       |
| Cadmium   | 99.6    | 99.7    | P/P        | 90 - 110       |
| Chromium  | 99.8    | 100     | P/P        | 90 - 110       |
| Copper    | 100     | 100     | P/P        | 90 - 110       |
| Lead      | 100     | 100     | P/P        | 90 - 110       |
| Nickel    | 98.8    | 99.2    | P/P        | 90 - 110       |
| Silver    | 96.7    | 97.7    | P/P        | 90 - 110       |

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A78665

Included Lab Sample IDs: 1923249

| Component | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|-----------|---------|---------|------------|----------------|
| Calcium   | 101     | 101     | P/P        | 90 - 110       |
| Iron      | 102     | 102     | P/P        | 90 - 110       |
| Magnesium | 101     | 101     | P/P        | 90 - 110       |

## Quality Assurance Report Calibration Verification

Reference Method: EPA 200.7 Rev. 4.4

Run ID: A78665

Included Lab Sample IDs: 1923249

| Component | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|-----------|---------|---------|------------|----------------|
| Potassium | 96.6    | 96.1    | P/P        | 90 - 110       |
| Sodium    | 98.3    | 97.3    | P/P        | 90 - 110       |
| Zinc      | 103     | 100     | P/P        | 90 - 110       |

Reference Method: SM 2320 B-97

Run ID: A78669

Included Lab Sample IDs: 1923242

| Component        | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|------------------|---------|---------|------------|----------------|
| Total Alkalinity | 102     | 99.8    | P/P        | 90 - 110       |

Reference Method: SM 4500 F-C-97

Run ID: A78669

Included Lab Sample IDs: 1923242

| Component | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|-----------|---------|---------|------------|----------------|
| Fluoride  | 98.5    | 100     | P/P        | 90 - 110       |

Reference Method: EPA 8321B

Run ID: A78700

Included Lab Sample IDs: 1923246

| Component      | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|----------------|---------|---------|------------|----------------|
| Pyraclostrobin | 149     | 113     | P/P        | 60 - 150       |

Reference Method: EPA 8276

Run ID: A78764

Included Lab Sample IDs: 1923247

| Component | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|-----------|---------|---------|------------|----------------|
| Chlordane | 101     |         | P          | 80 - 120       |
| Toxaphene | 108     |         | P          | 80 - 120       |

Reference Method: USGS O-2060-01

Run ID: A78770

Included Lab Sample IDs: 1923246

| Component     | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|---------------|---------|---------|------------|----------------|
| 2,4-D         | 107     | 133     | P/P        | 50 - 150       |
| Acetaminophen | 78.9    | 80.9    | P/P        | 60 - 150       |
| Bentazon      | 111     | 91.3    | P/P        | 50 - 150       |
| Carbamazepine | 114     | 115     | P/P        | 60 - 150       |
| Diuron        | 117     | 111     | P/P        | 60 - 150       |
| Fenuron       | 124     | 126     | P/P        | 60 - 150       |
| Fluridone     | 74.4    | 79.2    | P/P        | 60 - 160       |
| Imidacloprid  | 118     | 115     | P/P        | 60 - 150       |
| Linuron       | 105     | 117     | P/P        | 60 - 150       |
| MCPP          | 113     | 109     | P/P        | 50 - 150       |
| Primidone     | 122     | 125     | P/P        | 60 - 150       |
| Triclopyr     | 102     | 86.2    | P/P        | 50 - 160       |

## Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D  
 Run ID: A78789  
 Included Lab Sample IDs: 1923247

| Component          | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|--------------------|---------|---------|------------|----------------|
| Aldrin             | 99.5    |         | P          | 80 - 120       |
| Alpha-BHC          | 102     |         | P          | 80 - 120       |
| Alpha-Chlordane    | 97.7    |         | P          | 80 - 120       |
| Beta-BHC           | 97.6    |         | P          | 80 - 120       |
| Carbophenothion    | 95.7    |         | P          | 80 - 120       |
| Chlorothalonil     | 104     |         | P          | 80 - 120       |
| Cypermethrin       | 95.5    |         | P          | 80 - 120       |
| DDD-p,p'           | 99.4    |         | P          | 80 - 120       |
| DDE-p,p'           | 102     |         | P          | 80 - 120       |
| DDT-p,p'           | 106     |         | P          | 80 - 120       |
| Delta-BHC          | 94.4    |         | P          | 80 - 120       |
| Dicofol            | 98.8    |         | P          | 80 - 120       |
| Dieldrin           | 97.2    |         | P          | 80 - 120       |
| Endosulfan I       | 98.2    |         | P          | 80 - 120       |
| Endosulfan II      | 92.9    |         | P          | 80 - 120       |
| Endosulfan Sulfate | 92.2    |         | P          | 80 - 120       |
| Endrin             | 91.9    |         | P          | 80 - 120       |
| Endrin Aldehyde    | 89.4    |         | P          | 80 - 120       |
| Endrin Ketone      | 93.5    |         | P          | 80 - 120       |
| Gamma-BHC          | 103     |         | P          | 80 - 120       |
| Gamma-Chlordane    | 97.3    |         | P          | 80 - 120       |
| Heptachlor         | 94.2    |         | P          | 80 - 120       |
| Heptachlor Epoxide | 99.6    |         | P          | 80 - 120       |
| Methoxychlor       | 103     |         | P          | 80 - 120       |
| Mirex              | 98.7    |         | P          | 80 - 120       |
| Permethrin         | 95.3    |         | P          | 80 - 120       |
| Trifluralin        | 96.7    |         | P          | 80 - 120       |

Reference Method: EPA 8321B  
 Run ID: A78802  
 Included Lab Sample IDs: 1923246

| Component | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|-----------|---------|---------|------------|----------------|
| Sucralose | 143     | 146     | P/P        | 60 - 150       |

Reference Method: EPA 8270D  
 Run ID: A78885  
 Included Lab Sample IDs: 1923248

| Component           | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|---------------------|---------|---------|------------|----------------|
| Acetochlor          | 97.8    |         | P          | 80 - 120       |
| Alachlor            | 102     |         | P          | 80 - 120       |
| Ametryn             | 101     |         | P          | 80 - 120       |
| Atrazine            | 96.5    |         | P          | 80 - 120       |
| Atrazine Desethyl   | 92.6    |         | P          | 80 - 120       |
| Azinphos Methyl     | 87.8    |         | P          | 80 - 120       |
| Bromacil            | 102     |         | P          | 80 - 120       |
| Butylate            | 97.5    |         | P          | 80 - 120       |
| Chlorpyrifos Ethyl  | 98.2    |         | P          | 80 - 120       |
| Chlorpyrifos Methyl | 97.1    |         | P          | 80 - 120       |
| Cyanazine           | 95.4    |         | P          | 80 - 120       |

## Quality Assurance Report Calibration Verification

Reference Method: EPA 8270D  
 Run ID: A78885  
 Included Lab Sample IDs: 1923248

| Component        | % Rec.1 | % Rec.2 | Pass/Fail* | Control Limits |
|------------------|---------|---------|------------|----------------|
| Demeton          | 83.2    |         | P          | 80 - 120       |
| Diazinon         | 101     |         | P          | 80 - 120       |
| Disulfoton       | 94.5    |         | P          | 80 - 120       |
| EPTC             | 98.5    |         | P          | 80 - 120       |
| Ethion           | 92.9    |         | P          | 80 - 120       |
| Ethoprop         | 97.5    |         | P          | 80 - 120       |
| Fenamiphos       | 93.3    |         | P          | 80 - 120       |
| Fipronil         | 90.9    |         | P          | 80 - 120       |
| Fipronil Sulfide | 95.9    |         | P          | 80 - 120       |
| Fipronil Sulfone | 95.3    |         | P          | 80 - 120       |
| Fonofos          | 97.9    |         | P          | 80 - 120       |
| Hexazinone       | 98.1    |         | P          | 80 - 120       |
| Malathion        | 94.5    |         | P          | 80 - 120       |
| Metaxyl          | 94.9    |         | P          | 80 - 120       |
| Metolachlor      | 101     |         | P          | 80 - 120       |
| Metribuzin       | 79.1*   |         | F          | 80 - 120       |
| Mevinphos        | 93.6    |         | P          | 80 - 120       |
| Molinate         | 106     |         | P          | 80 - 120       |
| Norflurazon      | 93.1    |         | P          | 80 - 120       |
| Parathion Ethyl  | 94.4    |         | P          | 80 - 120       |
| Parathion Methyl | 96.8    |         | P          | 80 - 120       |
| Pendimethalin    | 90.3    |         | P          | 80 - 120       |
| Phorate          | 92.9    |         | P          | 80 - 120       |
| Prometon         | 95.4    |         | P          | 80 - 120       |
| Prometryn        | 101     |         | P          | 80 - 120       |
| Simazine         | 88.8    |         | P          | 80 - 120       |
| Terbufos         | 101     |         | P          | 80 - 120       |
| Terbutylazine    | 97.2    |         | 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 |      |      | LCS | Precision<br>SMP | MS     |
|--------------------|-----------|----------------|---------------|------|------|-----|------------------|--------|
| EPA 180.1 Rev. 2.0 | Turbidity |                |               |      |      |     | 0.275            |        |
| EPA 200.7 Rev. 4.4 | Calcium   | 101            | 98.9          | 104  |      |     |                  | 0.0484 |
|                    | Iron      | 108            | 107           | 110  | 110  |     |                  | 0.316  |
|                    | Magnesium | 101            | 102           | 104  |      |     |                  | 0.0659 |
|                    | Potassium | 95.7           | 98.0          | 94.6 |      |     |                  | 0.0070 |
|                    | Sodium    | 98.5           | 98.3          | 99.2 |      |     |                  | 0.278  |
|                    | Zinc      | 102            | 101           | 102  | 103  |     |                  | 0.746  |
| EPA 200.8 Rev. 5.4 | Arsenic   | 104            | 108           | 106  | 107  |     |                  | 1.37   |
|                    | Cadmium   | 98.4           | 104           | 104  | 105  |     |                  | 1.13   |
|                    | Chromium  | 97.4           | 98.7          | 98.7 | 101  |     |                  | 1.91   |
|                    | Copper    | 99.5           | 98.1          | 97.7 | 99.8 |     |                  | 2.04   |
|                    | Lead      | 99.5           | 103           | 104  | 105  |     |                  | 0.962  |

## Quality Assurance Report Summary

| Ref. Method                  | Analyte                            | LCS % Recovery |      | MS % Recovery |      |        | Precision |       |
|------------------------------|------------------------------------|----------------|------|---------------|------|--------|-----------|-------|
|                              |                                    |                |      |               |      |        | LCS       | SMP   |
| EPA 200.8 Rev. 5.4           | Nickel                             | 101            |      | 100           | 100  | 102    |           |       |
|                              | Silver                             | 103            |      | 107           | 105  | 106    |           |       |
| EPA 300.0 Rev. 2.1           | Chloride                           | 100            |      | 96.5          | 100  |        |           | 3.90  |
|                              | Sulfate                            | 101            |      | 98.2          | 101  |        |           | 2.52  |
| EPA 350.1 Rev. 2.0           | Ammonia-N                          | 101            |      | 102           | 100  |        |           | 1.16  |
| EPA 351.2 Rev. 2.0           | Kjeldahl Nitrogen                  | 100            |      | 98.0          | 95.2 |        |           | 1.94  |
| EPA 353.2 Rev. 2.0           | NO <sub>2</sub> NO <sub>3</sub> -N | 104            |      | 106           | 106  |        |           | 0.261 |
| EPA 365.1 Rev. 2.0           | Total-P                            | 100            |      | 95.4          | 101  |        |           | 4.93  |
| EPA 365.1 Rev. 2.0 dissolved | O-Phosphate-P                      | 97.6           |      | 95.4          | 97.2 |        |           | 1.38  |
| EPA 8270D                    | Acetochlor                         | 98.0           | 89.3 | 89.2          | 95.3 | 9.29   |           | 6.70  |
|                              | Alachlor                           | 97.6           | 92.7 | 86.7          | 92.3 | 5.10   |           | 6.24  |
|                              | Aldrin                             | 49.5           | 49.1 | 62.2          | 61.7 | 0.641  |           | 0.764 |
|                              | Alpha-BHC                          | 84.5           | 75.1 | 82.8          | 94.4 | 11.7   |           | 13.1  |
|                              | Alpha-Chlordane                    | 85.1           | 85.0 | 85.5          | 97.1 | 0.0879 |           | 11.7  |
|                              | Ametryn                            | 92.2           | 106  | 94.8          | 97.1 | 13.5   |           | 2.40  |
|                              | Atrazine                           | 87.5           | 87.1 | 88.0          | 94.0 | 0.505  |           | 5.43  |
|                              | Atrazine Desethyl                  | 90.8           | 97.4 | 76.4          | 87.2 | 6.95   |           | 13.3  |
|                              | Azinphos Methyl                    | 113            | 109  | 103           | 104  | 4.19   |           | 1.26  |
|                              | Beta-BHC                           | 91.6           | 101  | 102           | 134  | 10.0   |           | 27.6  |
|                              | Bromacil                           | 93.9           | 90.9 | 105           | 94.0 | 3.27   |           | 10.7  |
|                              | Butylate                           | 50.3           | 51.0 | 24.8          | 38.7 | 1.39   |           | 43.9  |
|                              | Carbophenothion                    | 75.6           | 84.1 | 91.3          | 105  | 10.6   |           | 13.6  |
|                              | Chlorothalonil                     | 99.2           | 79.5 | 116           | 117  | 22.0   |           | 1.36  |
|                              | Chlorpyrifos Ethyl                 | 87.9           | 83.5 | 76.8          | 84.1 | 5.14   |           | 6.79  |
|                              | Chlorpyrifos Methyl                | 90.8           | 88.7 | 83.5          | 86.9 | 2.34   |           | 4.05  |
|                              | Cyanazine                          | 156            | 146  | 115           | 127  | 6.39   |           | 10.1  |
|                              | Cypermethrin                       | 88.3           | 88.6 | 95.3          | 108  | 0.326  |           | 12.5  |
|                              | DDD-p,p'                           | 92.7           | 92.1 | 89.9          | 109  | 0.604  |           | 18.7  |
|                              | DDE-p,p'                           | 83.9           | 86.5 | 88.3          | 96.9 | 2.99   |           | 9.31  |
|                              | DDT-p,p'                           | 83.9           | 79.8 | 81.4          | 88.1 | 4.93   |           | 7.97  |
|                              | Delta-BHC                          | 118            | 123  | 143           | 164  | 3.44   |           | 13.1  |
|                              | Demeton                            | 75.7           | 68.3 | 82.7          | 84.3 | 10.2   |           | 1.91  |
|                              | Diazinon                           | 92.7           | 89.5 | 92.9          | 99.7 | 3.53   |           | 6.99  |
|                              | Dicofol                            | 42.2           | 44.9 | 23.2          | 36.3 | 6.15   |           | 44.1  |
|                              | Dieldrin                           | 87.8           | 89.8 |               |      | 2.25   |           | 16.1  |
|                              | Disulfoton                         | 86.7           | 87.7 | 90.6          | 100  | 1.21   |           | 10.1  |
|                              | Endosulfan I                       | 94.2           | 94.5 | 99.9          | 113  | 0.312  |           | 12.0  |
|                              | Endosulfan II                      | 96.4           | 97.8 | 103           | 121  | 1.42   |           | 16.5  |
|                              | Endosulfan Sulfate                 | 91.5           | 86.6 | 77.4          | 104  | 5.47   |           | 29.7  |
|                              | Endrin                             | 90.4           | 66.7 | 78.5          | 99.4 | 30.0   |           | 23.5  |
|                              | Endrin Aldehyde                    | 108            | 112  | 68.3          | 118  | 3.74   |           | 53.3  |
|                              | Endrin Ketone                      | 86.6           | 96.5 | 86.8          | 103  | 10.7   |           | 17.3  |
|                              | EPTC                               | 45.6           | 47.4 | 24.9          | 35.5 | 3.76   |           | 35.1  |
|                              | Ethion                             | 85.5           | 82.3 | 87.3          | 91.9 | 3.81   |           | 5.12  |
|                              | Ethoprop                           | 69.4           | 70.7 | 72.5          | 77.8 | 1.94   |           | 6.94  |
|                              | Fenamiphos                         | 93.5           | 91.0 | 86.3          | 80.8 | 2.65   |           | 6.63  |
|                              | Fipronil                           | 102            | 96.6 | 104           | 105  | 5.34   |           | 0.945 |
|                              | Fipronil Sulfide                   | 92.2           | 82.8 | 88.4          | 89.9 | 10.7   |           | 1.63  |
|                              | Fipronil Sulfone                   | 78.3           | 74.4 | 74.4          | 76.0 | 5.19   |           | 2.20  |
|                              | Fonofos                            | 78.3           | 84.5 | 75.3          | 88.6 | 7.61   |           | 16.2  |
|                              | Gamma-BHC                          | 87.5           | 93.0 | 117           | 110  | 6.08   |           | 5.92  |
|                              | Gamma-Chlordane                    | 83.3           | 83.8 | 83.0          | 95.7 | 0.535  |           | 13.3  |
|                              | Heptachlor                         | 70.7           | 67.1 | 67.7          | 70.8 | 5.09   |           | 4.58  |
|                              | Heptachlor Epoxide                 | 86.3           | 85.4 | 92.4          | 106  | 1.11   |           | 14.1  |

## Quality Assurance Report Summary

| Ref. Method    | Analyte          | LCS % Recovery |      | MS % Recovery |      | Precision |        |
|----------------|------------------|----------------|------|---------------|------|-----------|--------|
|                |                  |                |      |               |      | LCS       | MS     |
|                |                  |                |      |               |      | SMP       |        |
| EPA 8270D      | Hexazinone       | 87.2           | 81.7 | 88.9          | 91.1 | 6.58      | 2.44   |
|                | Malathion        | 87.3           | 83.3 | 78.1          | 82.9 | 4.73      | 6.05   |
|                | Metalaxyl        | 92.5           | 83.9 | 87.8          | 88.0 | 9.75      | 0.166  |
|                | Methoxychlor     | 95.9           | 94.0 | 90.7          | 99.2 | 2.00      | 8.95   |
|                | Metolachlor      | 91.1           | 85.7 | 87.1          | 91.1 | 6.13      | 3.99   |
|                | Metribuzin       | 98.4           | 122  | 150           | 161  | 21.7      | 6.59   |
|                | Mevinphos        | 70.7           | 72.1 | 66.3          | 73.6 | 1.96      | 10.5   |
|                | Mirex            | 66.1           | 64.8 | 68.7          | 72.5 | 1.94      | 5.39   |
|                | Molinate         | 48.4           | 49.0 | 33.0          | 41.4 | 1.21      | 22.4   |
|                | Norflurazon      | 93.7           | 89.3 | 98.0          | 93.3 | 4.77      | 4.98   |
|                | Parathion Ethyl  | 85.3           | 85.4 | 86.0          | 86.1 | 0.129     | 0.0871 |
|                | Parathion Methyl | 98.4           | 96.3 | 96.7          | 100  | 2.08      | 3.42   |
|                | Pendimethalin    | 75.7           | 72.5 | 80.5          | 81.4 | 4.30      | 1.20   |
|                | Permethrin       | 76.3           | 76.5 | 80.6          | 86.6 | 0.242     | 7.12   |
|                | Phorate          | 68.9           | 75.1 | 70.8          | 76.5 | 8.62      | 7.85   |
|                | Prometon         | 90.6           | 83.2 | 92.2          | 100  | 8.61      | 8.08   |
|                | Prometryn        | 101            | 90.5 | 96.3          | 101  | 10.5      | 5.08   |
|                | Simazine         | 89.6           | 95.1 | 95.0          | 103  | 5.88      | 8.15   |
|                | Terbufos         | 79.1           | 79.6 | 79.5          | 88.6 | 0.640     | 10.8   |
|                | Terbutylazine    | 82.5           | 81.1 | 82.4          | 84.6 | 1.78      | 2.69   |
|                | Trifluralin      | 113            | 108  | 140           | 156  | 5.03      | 10.8   |
| EPA 8276       | Chlordane        | 101            | 106  | 92.6          | 101  | 4.76      | 7.59   |
|                | Toxaphene        | 108            | 118  | 104           | 109  | 8.72      | 4.14   |
| EPA 8321B      | Glyphosate       | 102            |      | 92.6          | 95.6 |           | 3.12   |
|                | Pyraclostrobin   | 119            |      | 120           | 115  |           | 4.19   |
|                | Sucralose        | 93.5           |      | 111           | 106  |           | 4.46   |
| SM 2120 B      | Color (true)     |                |      |               |      | 2.29      |        |
| SM 2320 B-97   | Total Alkalinity | 103            |      |               |      | 0.0509    |        |
| SM 2540 C-97   | TDS              |                |      |               |      | 4.28      |        |
| SM 4500 F-C-97 | Fluoride         | 97.5           |      | 101           | 102  |           | 0.473  |
| SM 5310 B-00   | Organic Carbon   | 101            |      | 92.5          | 94.2 |           | 1.04   |
| USGS O-2060-01 | 2,4-D            | 134            |      | 138           | 130  |           | 5.84   |
|                | Acetaminophen    | 117            |      | 109           | 112  |           | 2.40   |
|                | Bentazon         | 87.2           |      | 51.6          | 52.6 |           | 1.88   |
|                | Carbamazepine    | 128            |      | 155           | 153  |           | 1.77   |
|                | Diuron           | 141            |      | 113           | 122  |           | 7.51   |
|                | Fenuron          | 144            |      | 113           | 128  |           | 12.6   |
|                | Fluridone        | 126            |      | 94.5          | 110  |           | 14.7   |
|                | Imidacloprid     | 137            |      | 220           | 235  |           | 6.75   |
|                | Linuron          | 119            |      | 110           | 126  |           | 13.3   |
|                | MCPP             | 103            |      | 99.5          | 111  |           | 11.0   |
|                | Primidone        | 133            |      | 129           | 145  |           | 11.3   |
|                | Triclopyr        | 85.6           |      | 101           | 106  |           | 4.49   |

## Reference Method Descriptions

| Method / DoH Cert #         | Description                                                                                                               | Associated Samples |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------|--------------------|
| EPA 180.1 Rev. 2.0 / E31780 | Turbidity in aqueous matrices                                                                                             | 1923242            |
| EPA 200.7 Rev. 4.4 / E31780 | Total Recoverable Metals analysis using ICP emission spectroscopy for aqueous samples supporting Clean Water Act Projects | 1923249            |
| EPA 200.8 Rev. 5.4 / E31780 | Total Recoverable Metals analysis using ICP-MS for aqueous samples supporting Clean Water Act Projects                    | 1923249            |

## Reference Method Descriptions

| Method / DoH Cert #                   | Description                                                                                | Associated Samples |
|---------------------------------------|--------------------------------------------------------------------------------------------|--------------------|
| EPA 300.0 Rev. 2.1 / E31780           | Chloride in aqueous matrices                                                               | 1923242            |
| EPA 300.0 Rev. 2.1 / E31780           | Sulfate in aqueous matrices                                                                | 1923242            |
| EPA 350.1 Rev. 2.0 / E31780           | Ammonia in aqueous matrices as mg N/L                                                      | 1923243            |
| EPA 351.2 Rev. 2.0 / E31780           | Total Kjeldahl Nitrogen in aqueous matrices                                                | 1923243            |
| EPA 353.2 Rev. 2.0 / E31780           | Nitrite/Nitrate in aqueous matrices as mg N/L                                              | 1923243            |
| EPA 365.1 Rev. 2.0 / E31780           | Total Phosphorus in aqueous matrices as mg P/L                                             | 1923243            |
| EPA 365.1 Rev. 2.0 dissolved / E31780 | Ortho-phosphate, dissolved, in filtered, aqueous matrices as mg P/L                        | 1923244            |
| EPA 8270D / E31780                    | Organochlorine pesticides in water matrices by GC/MS-SIM                                   | 1923247            |
| EPA 8270D / E31780                    | Organonitrogen and phosphorus pesticides (ultra trace level) in water matrices by GC/MS/MS | 1923248            |
| EPA 8276 / E31780                     | Organochlorine pesticides in water matrices by GC/MS with Negative Chemical Ionization     | 1923247            |
| EPA 8321B / E31780                    | Analysis of sucralose in water matrices by HPLC/MS/MS                                      | 1923246            |
| EPA 8321B / E31780                    | Glyphosate in water matrices by HPLC/MS/MS                                                 | 1923246            |
| EPA 8321B / E31780                    | Pyraclostrobin in water matrices by HPLC/MS/MS                                             | 1923246            |
| SM 2120 B / E31780                    | True Color measured at 450 nm                                                              | 1923242            |
| SM 2320 B-97 / E31780                 | Alkalinity in aqueous matrices as mg CaCO <sub>3</sub> /L                                  | 1923242            |
| SM 2540 C-97 / E31780                 | Total Dissolved Solids in aqueous matrices                                                 | 1923242            |
| SM 2540 D-97 / E31780                 | Total Suspended Solids in aqueous matrices                                                 | 1923242            |
| SM 4500 F-C-97 / E31780               | Fluoride in aqueous matrices, without distillation (not valid for NPDES monitoring)        | 1923242            |
| SM 5310 B-00 / E31780                 | Nonpurgeable Organic Carbon in aqueous matrices                                            | 1923243            |
| USGS O-2060-01 / E31780               | Chlorinated (phenoxy acid) herbicides in water matrices by HPLC/MS/MS                      | 1923246            |
| USGS O-2060-01 / E31780               | Urea herbicides and other chemicals in water matrices by HPLC/MS/MS                        | 1923246            |

## 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           | 08/22/2017    |                |                      | 08/22/2017 17:11   | Tanya Welborn        | 1923242            |
| EPA 200.7 Rev. 4.4           | 08/22/2017    | 08/23/2017     | Elliott D. Healy     | 08/28/2017         | Betina Topolski      | 1923249            |
| EPA 200.8 Rev. 5.4           | 08/22/2017    | 08/23/2017     | Elliott D. Healy     | 08/28/2017         | Nadine Brooks        | 1923249            |
| EPA 300.0 Rev. 2.1           | 08/22/2017    |                |                      | 08/24/2017         | Julia Storbeck       | 1923242            |
| EPA 350.1 Rev. 2.0           | 08/22/2017    |                |                      | 08/24/2017         | Sofia Elnemr         | 1923243            |
| EPA 351.2 Rev. 2.0           | 08/22/2017    | 08/24/2017     | Adrian Shelby        | 08/25/2017         | Joseph Suarez        | 1923243            |
| EPA 353.2 Rev. 2.0           | 08/22/2017    |                |                      | 08/25/2017         | Beverly Y. Sanders   | 1923243            |
| EPA 365.1 Rev. 2.0           | 08/22/2017    | 08/24/2017     | Sima Feizi           | 08/25/2017         | Lipi Saha            | 1923243            |
| EPA 365.1 Rev. 2.0 dissolved | 08/22/2017    |                |                      | 08/23/2017 14:36   | Megan Treadwell      | 1923244            |
| EPA 8270D                    | 08/22/2017    | 08/24/2017     | John Kaba            | 08/31/2017         | Marek Topolski       | 1923247            |
|                              | 08/22/2017    | 08/25/2017     | John Kaba            | 08/29/2017         | Irina Carbone        | 1923248            |
| EPA 8276                     | 08/22/2017    | 08/24/2017     | John Kaba            | 09/01/2017         | Vandana T. Nagar     | 1923247            |
| EPA 8321B                    | 08/22/2017    | 08/24/2017     | Julie Michelle Frank | 08/24/2017         | Julie Michelle Frank | 1923246            |
|                              | 08/22/2017    | 08/28/2017     | Julie Michelle Frank | 09/05/2017         | Julie Michelle Frank | 1923246            |
|                              | 08/22/2017    | 08/29/2017     | Hoor Shaik           | 08/30/2017         | Juyoung Kim          | 1923246            |
| SM 2120 B                    | 08/22/2017    |                |                      | 08/22/2017 16:13   | Tanya Welborn        | 1923242            |
| SM 2320 B-97                 | 08/22/2017    |                |                      | 08/29/2017         | Dale L. Simmons      | 1923242            |
| SM 2540 C-97                 | 08/22/2017    |                |                      | 08/25/2017         | Yijie Li             | 1923242            |
| SM 2540 D-97                 | 08/22/2017    |                |                      | 08/25/2017         | Yijie Li             | 1923242            |
| SM 4500 F-C-97               | 08/22/2017    |                |                      | 08/29/2017         | Dale L. Simmons      | 1923242            |
| SM 5310 B-00                 | 08/22/2017    |                |                      | 08/25/2017         | Ping Hua             | 1923243            |
| USGS O-2060-01               | 08/22/2017    | 08/24/2017     | Hoor Shaik           | 08/26/2017         | Juyoung Kim          | 1923246            |