Kelley E. Keenan Environmental Testing Solutions, Inc. PO Box 7565 Asheville, NC 28802-7565



WatR<sup>™</sup>Pollution Study

Open Date: 03/15/10

Close Date: 04/29/10

Report Issued Date: 05/18/10

May 18, 2010

Kelley E. Keenan Environmental Testing Solutions, Inc. PO Box 7565 Asheville, NC 28802-7565

Enclosed is your final report for ERA's WP-182 WatR<sup>™</sup>Pollution Proficiency Testing (PT) study. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

Data Evaluation Protocols: All analytes in ERA's WP-182 WatR<sup>™</sup>Pollution Proficiency Testing study have been evaluated using the following tiered approach. If the analyte is listed in the most current National Environmental Laboratory Accreditation Conference (NELAC) PT Field of Testing tables, the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the NELAC FoPT tables. If the analyte is not included in the NELAC FoPT tables, the reported result has been evaluated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 0260).

Corrective Action Help: As part of your accreditation(s), you may be required to identify the root cause of any "Not Acceptable" results, implement the necessary corrective actions, and then satisfy your PT requirements by participating in a Supplemental (QuiK<sup>™</sup> Response) or future ERA PT study. ERA's technical staff is available to help your laboratory resolve any technical issues that may be impairing your PT performance and possibly affecting your routine data quality. Our laboratory and technical staff have well over three hundred years of collective experience in performing the full range of environmental analyses. As part of our technical support, ERA offers QC samples that can be helpful in helping you work through your technical issues.

Thank you for your participation in ERA's WP-182 WatR<sup>™</sup>Pollution Proficiency Testing study. If you have any questions, please contact myself, or Curtis Wood, Director of Regulatory Affairs and Business Development, at 1-800-372-0122.

Sincerely,

Shawn Kasmu

Shawn Kassner Proficiency Testing Manager

attachments smk

Jay & MiBreney

Jay R. McBurney Quality Program Manager

| Report Recipient    | Contact/Phone Number                 | Reporting Type |  |
|---------------------|--------------------------------------|----------------|--|
| North Carolina (WP) | Patrick Donnelly / 919-733-3908 x207 | All Analytes   |  |
| South Carolina      | Carol Smith / 803-896-0992           | All Analytes   |  |

# WP-182 Definitions & Study Discussion

### Study Dates: 03/15/10 - 04/29/10

#### WP Study Definitions

The Reported Value is the value that the laboratory reported to ERA.

The ERA Assigned Values are compliant with the most current USEPA/NELAC FoPT tables. A parameter not added to the standard is given an Assigned Value of "0" per the guidelines contained in the USEPA's Criteria Document and NELAC standards.

The Acceptance Limits are established per the criteria contained in the most current USEPA/NELAC FoPT tables, or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable.

The Performance Evaluation:

| Acceptable     | <ul> <li>Reported Value falls within the<br/>Acceptance Limits.</li> </ul>  |
|----------------|---|
| Not Acceptable | <ul> <li>Reported Value falls outside the<br/>Acceptance Limits.</li> </ul> |
| No Evaluation  | = Reported Value cannot be evaluated.                                       |
| Not Reported   | = No Value reported.  |

The Method Description is the method the laboratory reported to ERA.

### Report Issued: 05/18/10

#### WP Study Discussion

ERA's WP-182 WatR™Pollution Proficiency Testing study has been reviewed by ERA senior management and certified compliant with the requirements of the USEPA's National Standards for Water Proficiency Testing Studies Criteria Document (December 1998), and the criteria contained in the most current NELAC FoPT tables.

ERA's WP-182 WatR™Pollution study standards were examined for any anomalies. A full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes met the acceptance criteria contained in the USEPA's National Criteria Document for Water Proficiency Testing Studies, December 1998, and the criteria contained in the most current NELAC FoPT tables.

The data submitted by participating laboratories was also examined for study anomalies. There were no anomalies observed during the statistical review of the data.

ERA's WP-182 WatR<sup>™</sup>Pollution study reports shall not be reproduced except in their entirety and not without the permission of the participating laboratories. The report must not be used by the participating laboratories to claim product endorsement by any agency of the U. S. government.

The data contained herein are confidential and intended for your use only.

If you have any questions or concerns regarding your assessment in ERA's WatR<sup>™</sup>Pollution Proficiency Testing program, please contact Shawn Kassner, Proficiency Testing Manager, or Curtis Wood, Director of Regulatory Affairs and Business Development, at 1-800-372-0122.





# Study: WP-182

## ERA Customer Number: E559701

# Laboratory Name: Environmental Testing Solutions, Inc.

**Inorganic Results** 





## WP-182 Final Complete Report

### Kelley E. Keenan Supervisor Environmental Testing Solutions, Inc. PO Box 7565 Asheville, NC 28802-7565 828-350-9364

| EPA ID:                 | NC01230             |
|-------------------------|---------------------|
| <b>ERA Customer Num</b> | ber: E559701        |
| Report Issued:          | 05/18/10            |
| Study Dates:            | 03/15/10 - 04/29/10 |

| Anal.<br>No. | Analyte                           | Units    | Reported<br>Value | Assigned<br>Value | Acceptance<br>Limits | Performance<br>Evaluation | Method Description |
|--------------|-----------------------------------|----------|-------------------|-------------------|----------------------|---------------------------|--------------------|
| WP Mi        | inerals (cat# 581)                |          |                   |                   |                      |                           |                    |
| 0027         | Alkalinity as CaCO3               | mg/L     | 63                | 58.6              | 51.0 - 66.0          | Acceptable                | SM2320B            |
| 0028         | Chloride                          | mg/L     | 66                | 67.8              | 57.9 - 78.1          | Acceptable                | SM4500CI- C VIS    |
| 0020         | Conductivity at 25°C              | µmhos/cm | 396               | 383               | 342 - 424            | Acceptable                | SM2510B            |
| 0029         | Fluoride                          | mg/L     | I                 | 3.12              | 2.61 - 3.64          | Not Reported              |                    |
| 0026         | Potassium                         | mg/L     |                   | 19.2              | 15.7 - 23.0          | Not Reported              |                    |
| 0025         | Sodium                            | mg/L     | I                 | 69.6              | 59.1 - 79.8          | Not Reported              |                    |
| 0030         | Sulfate                           | mg/L     | 14.2              | 15.7              | 11.9 - 19.1          | Acceptable                | HACH 8051          |
| 0021         | Total Dissolved Solids at 180°C   | mg/L     | 278               | 264               | 196 - 331            | Acceptable                | SM2540C            |
| 1950         | Total Solids at 105°C             | mg/L     |                   | 281               | 241 - 317            | Not Reported              |                    |
| WP Ha        | ardness (cat# 580)                |          |                   |                   |                      |                           |                    |
| 0072         | Non-Filterable Residue (TSS)      | mg/L     | 49                | 57.0              | 44.9 - 64.7          | Acceptable                | SM2540D            |
| 0023         | Calcium                           | mg/L     |                   | 43.1              | 38.4 - 49.0          | Not Reported              |                    |
| 0024         | Magnesium                         | mg/L     | 1                 | 10.9              | 9.28 - 12.5          | Not Reported              |                    |
| 1550         | Calcium Hardness as CaCO3         | mg/L     |                   | 108               | 96.2 - 123           | Not Reported              |                    |
| 0022         | Total Hardness as CaCO3           | mg/L     | 143               | 152               | 134 - 174            | Acceptable                | SM2340C            |
| WP pł        | l (cat# 577)                      |          |                   |                   |                      |                           |                    |
| 0019         | рН                                | S.U.     | 6.52              | 6.60              | 6.40 - 6.80          | Acceptable                | SM4500H+ B         |
| WP Se        | ettleable Solids (cat# 883)       |          |                   |                   |                      |                           |                    |
| 1965         | Settleable Solids                 | mL/L     | 38                | 33.1              | 26.2 - 42.4          | Acceptable                | SM2540F            |
| WP Si        | mple Nutrients (cat# 584)         |          |                   |                   | •                    |                           |                    |
| 0031         | Ammonia as N                      | mg/L     | 8.7               | 9.03              | 6.67 - 11.3          | Acceptable                | SM4500NH3 D        |
| 1820         | Nitrate + Nitrite as N            | mg/L     |                   | 9.03              | 7.36 - 10.5          | Not Reported              |                    |
| 0032         | Nitrate as N                      | mg/L     | 1                 | 9.03              | 7.04 - 10.9          | Not Reported              |                    |
| 0033         | ortho-Phosphate as P              | mg/L     | 1                 | 4.05              | 3.33 - 4.80          | Not Reported              |                    |
| WP De        | emand (cat# 578)                  |          |                   |                   |                      |                           |                    |
| 0038         | BOD                               | mg/L     | 42                | 58.1              | 29.2 - 87.0          | Acceptable                | SM5210B            |
| 0102         | CBOD                              | mg/L     | 40                | 50.0              | 22.4 - 77.6          | Acceptable                | SM5210B            |
| 0036         | COD                               | mg/L     | 94.6              | 93.8              | 69.1 - 110           | Acceptable                | HACH 8000 VIS      |
| 0037         | тос                               | mg/L     |                   | 37.1              | 30.9 - 42.9          | Not Reported              |                    |
| WP Tu        | urbidity (cat# 893)               |          |                   |                   | •                    | ••••••                    | •                  |
| 2055         | Turbidity                         | NTU      | 2.7               | 2.54              | 1.97 - 3.13          | Acceptable                | SM2130B            |
|              | otal Residual Chlorine (cat# 587) |          | <b>_</b>          | L                 |                      |                           |                    |
| 0098         | Total Residual Chlorine           | mg/L     | 0.773             | 0.760             | 0.550 - 0.953        | Acceptable                | ORION 97-70        |
|              |                                   |          | 0.110             | 0.700             | 0.000 - 0.000        | 7.000010000               |                    |





# Study: WP-182

## ERA Customer Number: E559701

# Laboratory Name: Environmental Testing Solutions, Inc.

**Microbiology Results** 





# WP-182 Final Complete Report

#### Kelley E. Keenan Supervisor Environmental Testing Solutions, Inc. PO Box 7565 Asheville, NC 28802-7565 828-350-9364

 EPA ID:
 NC01230

 ERA Customer Number:
 E559701

 Report Issued:
 05/18/10

 Study Dates:
 03/15/10 - 04/29/10

| Anal.<br>No. | Analyte                                    | Units     | Reported<br>Value | Assigned<br>Value | Acceptance<br>Limits | Performance<br>Evaluation | Method Description |
|--------------|--|-----------|-------------------|-------------------|----------------------|---------------------------|--------------------|
| WP Wa        | WP WasteWatR™ Coliform MicrobE™ (cat# 576) |           |                   |                   |                      |                           |                    |
| 2500         | Total Coliforms (MF)                       | CFU/100mL |                   | 697               | 352 - 1380           | Not Reported              |                    |
| 2530         | Fecal Coliforms (MF)                       | CFU/100mL | 550               | 345               | 68.0 - 1750          | Acceptable                | SM9222D m FC       |
| 2525         | E.coli (MF)                                | CFU/100mL | I                 | 525               | 191 - 1440           | Not Reported              |                    |
| 2500         | Total Coliforms (MPN)                      | MPN/100mL | [                 | 667               | 141 - 3160           | Not Reported              |                    |
| 2530         | Fecal Coliforms (MPN)                      | MPN/100mL | 1700              | 635               | 64.5 - 6250          | Acceptable                | SM9221E A1         |
| 2525         | E.coli (MPN)                               | MPN/100mL |                   | 859               | 393 - 1880           | Not Reported              |                    |



