



A Waters Company

Kelley E. Keenan
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WS-186



Final Report

WatR™ Supply Proficiency Testing

WatR™ Supply Study

Open Date: 01/09/12

Close Date: 02/23/12

Report Issued Date: 03/15/12



A Waters Company

March 15, 2012

Kelley E. Keenan
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Enclosed is your final report for ERA's WS-186 WatR™Supply 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 WS-186 WatR™Supply Proficiency Testing (PT) study have been evaluated using the following tiered approach. If the analyte is listed in the current TNI Fields of Proficiency Testing (FoPT) tables, the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the TNI FoPT tables. If the analyte is not included in the TNI 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).

Please note the following changes to our final reports:

- At the request of the TNI Accreditation Council, we have included a Laboratory Exception Report that includes a list of all analytes reported with less than qualifiers when the assigned value was greater than "0." In addition, because we have received many requests from laboratories, this report also includes a list of all analytes with "Not Acceptable" evaluations.
- Some states have elected not to convert to the 2009 TNI Standards at this time. If you have released your results to a state that has retained the 2003 NELAC Evaluation Criteria, your final report will include a section that evaluates the results according to the 2003 Standard in addition to the 2009 TNI Standards.

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™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 WS-186 WatR™Supply Proficiency Testing study. If you have any questions, please contact our Proficiency Testing Department at 1-800-372-0122.

Sincerely,

A handwritten signature in black ink that reads "Jay R. McBurney". The signature is written in a cursive, flowing style.

Jay R. McBurney
Quality Program Manager

attachments
jrm



A Waters Company

Report Recipient	Contact/Phone Number	Reporting Type	Evaluation Type
North Carolina (WS)	Chris Goforth / 919-807-8871	All Analytes	2009 TNI

WS-186 Definitions & Study Discussion

Study Dates: 01/09/12 - 02/23/12

Report Issued: 03/15/12

WS Study Definitions

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

The ERA Assigned Values are compliant with the current TNI Fields of Proficiency Testing (FoPT) tables. A parameter not added to the standard is given an Assigned Value of "< PTRL" per the guidelines contained in the 2009 TNI Standards. The assigned values are directly traceable to the commercially prepared starting materials used to manufacture the PT standards.

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

The Performance Evaluation:

Acceptable	= Reported Value falls within the Acceptance Limits.
Not Acceptable	= Reported Value falls outside the Acceptance Limits.
No Evaluation	= Reported Value cannot be evaluated.
Not Reported	= No Value reported.

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

WS Study Discussion

ERA's WS-186 WatR™ Supply Proficiency Testing study has been reviewed by ERA senior management and certified compliant with the requirements of the 2009 TNI PT Standards and the criteria contained in the most current TNI Fields of Proficiency Testing (FoPT) tables.

ERA's WS-186 WatR™ Supply 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 in the standards met the acceptance criteria contained in the 2009 TNI PT Standard and the criteria contained in the most current TNI 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 WS-186 WatR™ Supply 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™ Supply Proficiency Testing program, please contact our Proficiency Testing Department at 1-800-372-0122.





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WS-186 Laboratory Exception Report

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EPA ID:
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NC01230
E559701
03/15/12
01/09/12 - 02/23/12

2009 TNI Evaluation Check: There are no values reported with < where the assigned value was greater than 0.

2009 TNI Not Acceptable Evaluations

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
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WS Inorganics (cat# 591)

1810	Nitrate as N	mg/L	7.2	6.43	5.79 - 7.07	Not Acceptable	SM4500NO3- D 21st ED 2005
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Final Report Results For Laboratory Environmental Testing Solutions, Inc.

2009 TNI Evaluation Report

Study: **WS-186**

ERA Customer Number: **E559701**

Laboratory Name: **Environmental Testing
Solutions, Inc.**

Inorganic Results





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WS-186 2009 TNI Evaluation Final Complete Report

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TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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WS Inorganics (cat# 591)

1505	Alkalinity as CaCO3	mg/L		56.2	50.6 - 61.8	Not Reported				56.3	2.19	
1575	Chloride	mg/L		58.1	49.4 - 66.8	Not Reported				57.2	1.90	
1610	Conductivity at 25°C	µmhos/cm		509	458 - 560	Not Reported				523	11.0	
1730	Fluoride	mg/L		6.55	5.90 - 7.20	Not Reported				6.44	0.280	
1820	Nitrate + Nitrite as N	mg/L		6.43	5.46 - 7.39	Not Reported				6.36	0.254	
1810	Nitrate as N	mg/L	7.2	6.43	5.79 - 7.07	Not Acceptable	SM4500NO3- D 21st ED 2005	1/26/2012	3.30	6.32	0.265	Kelley E. Keenan
1125	Potassium	mg/L		31.4	26.7 - 36.1	Not Reported				30.8	1.56	
2000	Sulfate	mg/L		55.8	47.4 - 64.2	Not Reported				54.8	2.11	
1955	Total Dissolved Solids at 180°C	mg/L		359	287 - 431	Not Reported				350	18.2	



2009 TNI Evaluation Report

Study: **WS-186**

ERA Customer Number: **E559701**

Laboratory Name: **Environmental Testing
Solutions, Inc.**

Microbiology Results





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WS-186 2009 TNI Evaluation Final Complete Report

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WS MicrobE™ (Coliforms) (cat# 080D)

2500	Total Coliforms - Sample 1	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2500	Total Coliforms - Sample 2	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2500	Total Coliforms - Sample 3	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2500	Total Coliforms - Sample 4	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2500	Total Coliforms - Sample 5	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2500	Total Coliforms - Sample 6	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2500	Total Coliforms - Sample 7	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2500	Total Coliforms - Sample 8	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2500	Total Coliforms - Sample 9	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2500	Total Coliforms - Sample 10	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan

Total Coliforms Evaluation : Acceptable

Fecal Coliforms Evaluation : Not Reported

E.coli Evaluation : Acceptable

Fecal Coliform Organism - Escherichia coli, Samples 1, 5 and 8

Total Coliform Organism - Enterobacter cloacae, Samples 3, 6 and 10

Negative (1) Coliform Organism - Proteus mirabilis, Sample 9

Negative (2) Coliform Organism - Pseudomonas aeruginosa, Sample 7

Blank - No Organism, Samples 2 and 4



All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01





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TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description	Analysis Date	Z Score	Study Mean	Study Standard Deviation	Analyst Name
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WS MicrobE™ (Coliforms) (cat# 080D) (Continued)

2530	Fecal Coliforms - Sample 1	CFU/100mL		Presence	Presence	Not Reported						
2530	Fecal Coliforms - Sample 2	CFU/100mL		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 3	CFU/100mL		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 4	CFU/100mL		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 5	CFU/100mL		Presence	Presence	Not Reported						
2530	Fecal Coliforms - Sample 6	CFU/100mL		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 7	CFU/100mL		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 8	CFU/100mL		Presence	Presence	Not Reported						
2530	Fecal Coliforms - Sample 9	CFU/100mL		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 10	CFU/100mL		Absence	Absence	Not Reported						

Total Coliforms Evaluation : Acceptable

Fecal Coliforms Evaluation : Not Reported

E.coli Evaluation : Acceptable

Fecal Coliform Organism - Escherichia coli, Samples 1, 5 and 8

Total Coliform Organism - Enterobacter cloacae, Samples 3, 6 and 10

Negative (1) Coliform Organism - Proteus mirabilis, Sample 9

Negative (2) Coliform Organism - Pseudomonas aeruginosa, Sample 7

Blank - No Organism, Samples 2 and 4



All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01





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WS MicrobE™ (Coliforms) (cat# 080D) (Continued)

2525	E.coli - Sample 1	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2525	E.coli - Sample 2	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2525	E.coli - Sample 3	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2525	E.coli - Sample 4	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2525	E.coli - Sample 5	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2525	E.coli - Sample 6	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2525	E.coli - Sample 7	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2525	E.coli - Sample 8	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2525	E.coli - Sample 9	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan
2525	E.coli - Sample 10	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 21st ED 2005	1/12/2012	0			Kelley E. Keenan

Total Coliforms Evaluation : Acceptable

Fecal Coliforms Evaluation : Not Reported

E.coli Evaluation : Acceptable

Fecal Coliform Organism - Escherichia coli, Samples 1, 5 and 8

Total Coliform Organism - Enterobacter cloacae, Samples 3, 6 and 10

Negative (1) Coliform Organism - Proteus mirabilis, Sample 9

Negative (2) Coliform Organism - Pseudomonas aeruginosa, Sample 7

Blank - No Organism, Samples 2 and 4





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WS WS SourceWatR™ MicrobE™ (cat# 595)

2500	Total Coliforms (MF)	CFU/100mL		41.0	13.0 - 74.0	Not Reported				30.8	15.2	
2530	Fecal Coliforms (MF)	CFU/100mL		41.0	2.00 - 79.0	Not Reported				14.1	19.2	
2525	E.coli (MF)	CFU/100mL		41.0	14.0 - 67.0	Not Reported				30.2	13.4	
2500	Total Coliforms (MPN)	MPN/100mL		67.0	31.0 - 90.8	Not Reported				53.1	15.0	
2530	Fecal Coliforms (MPN)	MPN/100mL		67.0	23.4 - 86.2	Not Reported				44.9	15.7	
2525	E.coli (MPN)	MPN/100mL	54.8	67.0	31.9 - 86.2	Acceptable	SM9223 COLertQIT 21st ED 2005	1/12/2012	0.171	52.5	13.6	Kelley E. Keenan

Per Section 6.4.3 a of the 2009 TNI Standard, "The assigned values for quantitative microbiology analytes shall be equal to the mean of the assigned value verification and/or homogeneity testing per Sections 7.1 and 7.2". The final acceptance limits are derived from the calculated study mean and study standard deviation from laboratory-reported results. Disagreement between the assigned values and study means/acceptance limits are due to the inherent variability of microbiology methods and differences in the methods used by ERA and participant laboratories. For quantitative microbiology analytes, the assigned value is not used in the evaluation of laboratories.

