



A Waters Company

Michael W Scheetz
Timpanogos Special Service District
P.O. Box 923
American Fork, UT 84003
USA

WP-268



Final Report

WatR™ Pollution Proficiency Testing

WatR™ Pollution Study

Open Date: 05/15/17

Close Date: 06/29/17

Report Issued Date: 07/05/17



A Waters Company

July 5, 2017

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Enclosed is your final report for ERA's WP-268 WatR™ 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-268 WatR™ Pollution Proficiency Testing 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 current 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 730002268).

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 many 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 useful in helping you work through your technical issues.

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.

Thank you for your participation in ERA's WP-268 WatR™ Pollution Proficiency Testing study. If you have any questions, please contact our Proficiency Testing Department at 1-800-372-0122.

Sincerely,

Patrick Larson
Quality Officer

attachments



A Waters Company

Report Recipient	Contact/Phone Number	Reporting Type	Evaluation Type
Utah	Cathy Mitchell /	All Analytes	2009 TNI



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WP-268 Definitions & Study Discussion

Study Dates: 05/15/17 - 06/29/17

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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 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 USEPA/NELAC 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.

WP Study Discussion

ERA's WP-268 WatR™Pollution Proficiency Testing study has been reviewed by ERA senior management and certified compliant with the requirements of the 2009 TNI PT Standard and the criteria contained in the most current TNI Fields of Proficiency Testing (FoPT) tables.

ERA's WP-268 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 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 WP-268 WatR™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™Pollution Proficiency Testing program, please contact our Proficiency Testing Department at 1-800-372-0122.





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WP-268 Laboratory Exception Report

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(801) 763-5936

EPA ID:
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Report Issued:
Study Dates:

UT00043
T349901
07/05/17
05/15/17 - 06/29/17

2009 TNI Evaluation Checks

There are no values reported with < where the assigned value was greater than 0.

2009 TNI Not Acceptable Evaluations

There were no Not Acceptable evaluations for this study.



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

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Study # : WP-268



Final Report Results For Laboratory Timpanogos Special Service District





2009 TNI Evaluation Report

Study: **WP-268**

ERA Customer Number: **T349901**

Laboratory Name: **Timpanogos Special
Service District**

Inorganic Results





A Waters Company

WP-268 2009 TNI Evaluation Final Complete Report

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EPA ID:
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UT00043
T349901
07/05/17
05/15/17 - 06/29/17

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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WP Hardness (cat# 580, lot# P268-507)

1960	Total Suspended Solids	mg/L	67.7	69.1	55.6 - 77.5	Acceptable	SM2540D 22nd ED 2011	6/20/2017	0.734	65.5	2.93	MWS
1035	Calcium	mg/L		20.4	17.3 - 23.5	Not Reported				20.4	0.971	
1085	Magnesium	mg/L		13.1	11.1 - 15.1	Not Reported				13.0	0.563	
1550	Calcium Hardness as CaCO ₃	mg/L		50.9	43.3 - 58.5	Not Reported				51.3	2.18	
1755	Total Hardness as CaCO ₃	mg/L		105	89.2 - 121	Not Reported				104	3.51	

WP pH (cat# 577, lot# P268-977)

1900	pH	S.U.	6.70	6.69	6.49 - 6.89	Acceptable	SM4500H+ B 22nd ED 2011	6/20/2017	0.0281	6.70	0.0441	MWS
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WP Simple Nutrients (cat# 584, lot# P268-505)

1515	Ammonia as N	mg/L	14.4	16.2	13.0 - 19.2	Acceptable	HACH 10205 5th ED 2008	6/25/2017	-1.69	16.1	0.985	MWS
1820	Nitrate + Nitrite as N	mg/L		9.03	7.49 - 10.5	Not Reported				9.05	0.342	
1810	Nitrate as N	mg/L	9.05	9.03	7.44 - 10.6	Acceptable	HACH 10206 6th ED 2011	6/26/2017	-0.0977	9.09	0.363	MWS
1870	ortho-Phosphate as P	mg/L	0.619	0.603	0.513 - 0.693	Acceptable	HACH 10209 5th ED 2008	6/25/2017	0.438	0.604	0.0344	MWS

WP Complex Nutrients (cat# 579, lot# P268-525)

1795	Total Kjeldahl Nitrogen	mg/L	9.88	10.1	7.39 - 12.7	Acceptable	HACH 10242 3 2014	6/25/2017	0.0741	9.81	0.890	MWS
1910	Total phosphorus as P	mg/L	6.88	6.65	5.53 - 7.70	Acceptable	HACH 10210 8th ED 2014	6/25/2017	0.383	6.73	0.390	MWS

WP Nitrite (cat# 888, lot# P268-770)

1840	Nitrite as N	mg/L	1.536	1.50	1.25 - 1.74	Acceptable	HACH 10207 5th ED 2008	6/26/2017	0.215	1.52	0.0787	MWS
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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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WP Demand (cat# 578, lot# P268-516)

1530	BOD	mg/L	125.0	111	59.8 - 162	Acceptable	SM5210B 22nd ED 2011	6/20/2017	0.834	111	17.0	MWS-CP
1555	CBOD	mg/L		101	46.9 - 154	Not Reported				105	17.2	
1565	COD	mg/L		181	145 - 210	Not Reported				179	11.7	
2040	TOC	mg/L		71.5	59.9 - 82.3	Not Reported				70.9	2.67	



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Study # : WP-268





2009 TNI Evaluation Report

Study: **WP-268**

ERA Customer Number: **T349901**

Laboratory Name: **Timpanogos Special
Service District**

Microbiology Results





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WP-268 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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WP WasteWatTM Coliform MicrobETM (cat# 576, lot# P268-083)

2500	Total Coliforms (MF)	CFU/100mL		150	100 - 225	Not Reported				150	20.7	
2530	Fecal Coliforms (MF)	CFU/100mL		150	21.0 - 309	Not Reported				81.0	48.0	
2525	E.coli (MF)	CFU/100mL		150	24.0 - 396	Not Reported				97.6	62.0	
2500	Total Coliforms (MPN)	MPN/100mL		181	80.5 - 349	Not Reported				168	44.7	
2530	Fecal Coliforms (MPN)	MPN/100mL		181	84.1 - 216	Not Reported				135	22.1	
2525	E.coli (MPN)	MPN/100mL	141.4	181	86.0 - 340	Acceptable	SM9223B 22nd ED 2004	6/19/2017	-0.0509	171	42.3	MWS

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.



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

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CERTIFICATE OF EXCELLENCE

In recognition of the quality of your laboratory in proficiency testing for
WP-268

Timpanogos Special Service District

is issued this certificate of achievement by ERA. This laboratory has been recognized as a Laboratory of Excellence for achieving 100% acceptable data in this study which included 554 participating laboratories. This achievement is a demonstration of the superior quality of the laboratory in evaluation of the standards listed below.

Complex Nutrients

Hardness

pH

WasteWatR™ Coliform

MicrobE™

Demand

Nitrite

Simple Nutrients



Patrick Larson
Quality Officer