



**Julie Weisz**  
**Energy Laboratories**  
**400 West Boxelder Road**  
**Gillette, WY 82718**  
**USA**

**WP-348**  **Final Report**

**WatR™ Pollution Proficiency Testing**

**WatR™ Pollution Study**

**Open Date: 01/16/2024**

**Close Date: 03/01/2024**

**Report Issued Date: 03/05/2024**



A Waters Company

March 5, 2024

Julie Weisz  
Energy Laboratories  
400 West Boxelder Road  
Gillette, WY 82718

Enclosed is your final report for ERA's WP-348 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-348 WatR™ Pollution Proficiency Testing study have been evaluated using the following tiered approach. If the analyte is listed in the most current TNI Fields of Proficiency Testing (FoPT) table the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the table and the evaluation criteria contained in the 2016 TNI Standard, Volume 3. If the analyte is not included in the TNI FoPT table, 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.

Thank you for your participation in ERA's WP-348 WatR™ Pollution 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, appearing to read "Craig Huff", with a horizontal line extending to the right.

Craig Huff  
Senior Technical Manager

attachments





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<b>Report Recipient</b>	<b>Contact/Phone Number</b>	<b>Reporting Type</b>
EPA Region 8	Marcie Tidd / (303) 462-9476	All Analytes
Montana (DMR-QA)	Lisa Tucker / (406) 444-5388	All Analytes
U.S. EPA Region 10	Brian Levo / (509) 376-3748	All Analytes
Wyoming (DMR-QA)	Steve Vien / (307) 777-7654	All Analytes



# WP-348 Definitions & Study Discussion

**Study Dates: 01/16/2024 - 03/01/2024**

**Report Issued: 03/05/2024**

## 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) table. A parameter not added to the standard is given an Assigned Value of "< PTRL" per the guidelines contained in the 2016 TNI Standard. 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 table 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-348 WatR™Pollution Proficiency Testing study has been reviewed by ERA senior management and certified compliant with the requirements of the 2016 TNI Standard and the criteria contained in the most current TNI Fields of Proficiency Testing (FoPT) table.

ERA's WP-348 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 2016 TNI Standard and the criteria contained in the most current TNI FoPT table.

All activities associated with this proficiency testing study were performed by Waters/ERA with the exception of those noted below. The following physical samples/products were manufactured for Waters/ERA by a subcontractor:

Microbiology products with the following catalog numbers:  
880, 935, 079, 077, 080, 595, 595A, 576, 576A

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-348 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-348 Laboratory Exception Report

**Julie Weisz**  
QA Officer  
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400 West Boxelder Road  
Gillette, WY 82718  
(307) 686-7175-2044

<b>EPA ID:</b>	<b>WY00006</b>
<b>ERA Customer Number:</b>	<b>E351102</b>
<b>Report Issued:</b>	<b>03/05/2024</b>
<b>Study Dates:</b>	<b>01/16/2024 - 03/01/2024</b>

## Not Acceptable Evaluations

There were no Not Acceptable evaluations for this study.



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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Study # : WP-348

# Final Report Results For Laboratory Energy Laboratories

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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Study # : WP-348





# Final Evaluation Report

## Study: **WP-348**

ERA Customer Number: **E351102**

Laboratory Name: **Energy Laboratories**

## Inorganic Results

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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# WP-348 Final Evaluation Report

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**QA Officer**  
**Energy Laboratories**  
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**Gillette, WY 82718**  
**(307) 686-7175-2044**

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**WY00006**  
**E351102**  
**03/05/2024**  
**01/16/2024 - 03/01/2024**

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 Minerals (cat# 581, lot# P348-506)**

1505	Alkalinity as CaCO3	mg/L	36.7	33.5	26.8 - 40.2	Acceptable	SM 2320 B-2011 2011	1/26/2024	1.06	33.9	2.66	Brandon Bowe
1575	Chloride	mg/L	102	100	87.7 - 112	Acceptable	EPA 300.0 2.1 1993	1/30/2024	0.0576	102	4.35	Brandon Bowe
1610	Conductivity at 25°C	µmhos/cm	460	462	416 - 508	Acceptable	SM 2510 B-2011 2011	1/25/2024	-0.224	463	15.0	Brandon Bowe
1730	Fluoride	mg/L	2.75	2.74	2.20 - 3.17	Acceptable	EPA 300.0 2.1 1993	1/30/2024	-0.246	2.79	0.149	Brandon Bowe
1125	Potassium	mg/L		17.1	13.7 - 20.5	Not Reported				17.5	0.780	
1155	Sodium	mg/L		79.1	63.3 - 94.9	Not Reported				79.7	4.22	
2000	Sulfate	mg/L	14.5	14.1	10.7 - 16.7	Acceptable	EPA 300.0 2.1 1993	1/30/2024	0.554	14.0	0.849	Brandon Bowe
1955	Total Dissolved Solids at 180°C	mg/L		274	229 - 319	Not Reported				270	14.8	
1950	Total Solids at 105°C	mg/L		271	226 - 316	Not Reported				279	16.5	

**WP pH (cat# 577, lot# P348-977)**

1900	pH	S.U.	6.28	6.30	6.10 - 6.50	Acceptable	SM 4500-H+ B-2011 2011	1/25/2024	-0.463	6.30	0.0428	Brandon Bowe
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**WP Solids (cat# 241, lot# P348-499)**

1960	Total Suspended Solids	mg/L	63	62.0	49.4 - 70.0	Acceptable	SM 2540 D-2015 2015	1/25/2024	0.154	62.6	2.77	Brandon Bowe
1955	Total Dissolved Solids at 180°C	mg/L	494	484	436 - 532	Acceptable	SM 2540 C-2015 2015	1/29/2024	0.438	484	22.0	Brandon Bowe
1950	Total Solids at 105°C	mg/L		562	506 - 618	Not Reported				554	19.2	

**WP Simple Nutrients (cat# 584, lot# P348-505)**

1515	Ammonia as N	mg/L		17.4	14.0 - 20.6	Not Reported				17.4	1.00	
1820	Nitrate + Nitrite as N	mg/L		15.6	13.0 - 18.0	Not Reported				15.7	0.798	
1810	Nitrate as N	mg/L	16	15.6	13.0 - 18.1	Acceptable	EPA 300.0 2.1 1993	2/2/2024	0.452	15.6	0.814	Brandon Bowe
1870	ortho-Phosphate as P	mg/L		3.73	3.17 - 4.29	Not Reported				3.77	0.201	
1827	Total Nitrogen	mg/L		33.0	18.8 - 47.2	Not Reported				33.1	2.32	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.







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# WP-348 Final Evaluation Report

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QA Officer  
Energy Laboratories  
400 West Boxelder Road  
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(307) 686-7175-2044

EPA ID:  
ERA Customer Number:  
Report Issued:  
Study Dates:

WY00006  
E351102  
03/05/2024  
01/16/2024 - 03/01/2024

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 Nitrite (cat# 888, lot# P348-770)**

1840	Nitrite as N	mg/L	1.54	1.59	1.33 - 1.84	Acceptable	EPA 300.0 2.1 1993	2/2/2024	-0.522	1.58	0.0770	Brandon Bowe
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**WP Demand (cat# 578, lot# P348-516)**

1530	BOD	mg/L	78.7	72.4	38.4 - 106	Acceptable	SM 5210 B-2016 2016	2/19/2024	0.639	70.1	13.4	Brandon Bowe
1555	CBOD	mg/L	77.5	65.6	29.9 - 101	Acceptable	SM 5210 B-2016 2016	2/19/2024	0.651	68.8	13.4	Brandon Bowe
1565	COD	mg/L	112	118	91.5 - 140	Acceptable	HACH 8000 1979	2/19/2024	-0.428	116	8.70	Brandon Bowe
2040	TOC	mg/L		46.6	38.7 - 54.1	Not Reported				46.8	2.25	

**WP Oil & Grease (cat# 582, lot# P348-518)**

1803	n-Hexane Extractable Material(O&G)(Grav)	mg/L	116	123	88.9 - 142	Acceptable	EPA 1664A 1999	1/29/2024	0.477	109	15.2	Brandon Bowe
1803	n-Hexane Extractable Material(O&G)(IR)	mg/L		151	111 - 172	Not Reported				115	17.9	

**WP Turbidity (cat# 893, lot# P348-777)**

2055	Turbidity	NTU	24.9	23.6	19.8 - 27.5	Acceptable	SM 2130 B-2011 2011	2/2/2024	0.277	24.5	1.34	Brandon Bowe
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**WP Acidity (cat# 885, lot# P348-915)**

1500	Acidity as CaCO3	mg/L	1621	1710	1540 - 1880	Acceptable	SM 2310 B-2011 2011	2/27/2024	-0.950	1670	55.9	Brandon Bowe
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**WP Bromide (cat# 887, lot# P348-769)**

1540	Bromide	mg/L	5.02	4.91	4.04 - 5.77	Acceptable	EPA 300.0 2.1 1993	2/2/2024	0.346	4.91	0.332	Brandon Bowe
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**WP Total Residual Chlorine (cat# 587, lot# P348-501)**

1945	Free Residual Chlorine	mg/L		1.72	1.27 - 2.02	Not Reported				1.68	0.145	
1940	Total Residual Chlorine	mg/L	1.88	1.80	1.33 - 2.11	Acceptable	SM 4500-Cl G-2011 2011	2/5/2024	1.17	1.73	0.128	Brandon Bowe



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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Study # : WP-348



# Final Evaluation Report

## Study: **WP-348**

ERA Customer Number: **E351102**

Laboratory Name: **Energy Laboratories**

## Microbiology Results

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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**QA Officer**  
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**Study Dates:**

**WY00006**  
**E351102**  
**03/05/2024**  
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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 WasteWatR™ Coliform MicrobE™ (cat# 576, lot# P348-083)**

2500	Total Coliforms (MF)	CFU/100mL		1120	505 - 2500	Not Reported				1120	333	
2530	Fecal Coliforms (MF)	CFU/100mL		715	350 - 1460	Not Reported				715	185	
2525	E.coli (MF)	CFU/100mL		877	296 - 2600	Not Reported				877	385	
2500	Total Coliform (MPN-Multiple Well)	MPN/100mL	1414	1560	764 - 3190	Acceptable	SM 9223 B (Colilert Quanti-Tray)-2016 2016	2/21/2024	-0.416	1560	405	Julie Weisz
2530	Fecal Coliform (MPN-Multiple Well)	MPN/100mL	1300	1190	610 - 2310	Acceptable	Colilert®-18 (Fecal Coliforms) 2010	2/21/2024	0.415	1190	283	Julie Weisz
2525	E.coli (MPN-Multiple Well)	MPN/100mL	1414	1570	783 - 3150	Acceptable	SM 9223 B (Colilert Quanti-Tray)-2016 2016	2/21/2024	-0.453	1570	394	Julie Weisz



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.



## Final Evaluation Report

Study: **WP-348**

ERA Customer Number: **E351102**

Laboratory Name: **Energy Laboratories**

## Organic Results

All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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**WP Total Petroleum Hydrocarbons (TPH) in Water (cat# 642, lot# P348-642)**

1853	TPH (Gravimetric)	mg/L	51.3	73.0	33.7 - 105	Acceptable	EPA 1664A SGT 1999	1/30/2024	-0.0276	51.5	8.51	Brandon Bowe
1853	TPH (IR)	mg/L		89.8	42.0 - 130	Not Reported				73.9	12.7	



All analytes except for 1,1-Biphenyl, 1,2-Diphenylhydrazine, 1,3-Dinitrobenzene, 2,3-Dichloroaniline, Acetophenone, Atrazine, Azobenzene, Benzaldehyde, Caprolactam, n-Decane and n-Octadecane in the Base/Neutrals, catalog # 833, 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-348

Energy Laboratories

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 718 participating laboratories. This achievement is a demonstration of the superior quality of the laboratory in evaluation of the standards listed below.

Acidity

Minerals

pH

Total Petroleum  
Hydrocarbons (TPH) in  
Water

WasteWatR™ Coliform  
MicrobE™

Bromide

Nitrite

Simple Nutrients

Total Residual Chlorine

Demand

Oil & Grease

Solids

Turbidity



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Craig Huff  
Senior Technical Manager