



A Waters Company

Donny Juarez  
Energy Laboratories  
2393 Salt Creek Hwy  
Casper, WY 82601  
USA

**WP-330**



**Final Report**

# **WatR™ Pollution Proficiency Testing**

**WatR™ Pollution Study**

**Open Date: 07/18/2022**

**Close Date: 09/01/2022**

**Report Issued Date: 09/06/2022**



A Waters Company

September 6, 2022

Donny Juarez  
Energy Laboratories  
2393 Salt Creek Hwy  
Casper, WY 82601

Enclosed is your final report for ERA's WP-330 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-330 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-330 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 "C 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>
Alabama	Benny Laughlin / 334-271-7775	All Analytes
Alaska	Shera Hickman / 907-375-8210	All Analytes
ANAB	Zaneta Popovska / 414-501-5341	All Analytes
Florida	Vanessa Soto / 904-791-1599	All Analytes
Louisiana	Paul Bergeron / 225-219-3247	All Analytes
Texas	Frank Jamison / (512) 239-3754	All Analytes



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# WP-330 Definitions & Study Discussion

Study Dates: 07/18/2022 - 09/01/2022

Report Issued: 09/06/2022

## 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-330 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-330 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-330 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-330 Laboratory Exception Report

**Donny Juarez**  
Quality Assurance Manager  
Energy Laboratories  
2393 Salt Creek Hwy  
Casper, WY 82601  
307-235-0515 x3244

**EPA ID:** WY00002  
**ERA Customer Number:** E772828  
**Report Issued:** 09/06/2022  
**Study Dates:** 07/18/2022 - 09/01/2022

## Not Acceptable Evaluations

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
<b>WP Simple Nutrients (cat# 584, lot# P330-505)</b>							
1820	Nitrate + Nitrite as N	mg/L	10.4	14.4	12.0 - 16.7	Not Acceptable	EPA 300.0 2.1 1993
<b>WP Oil &amp; Grease (cat# 582, lot# P330-518)</b>							
1803	n-Hexane Extractable Material(O&G)(Grav)	mg/L	110	66.6	45.1 - 79.3	Not Acceptable	EPA 1664A 1999
<b>WP Trace Metals (cat# 586, lot# P330-500)</b>							
1010	Arsenic	µg/L	387	319	262 - 373	Not Acceptable	EPA 200.7 4.4 1994
1025	Boron	µg/L	1045	906	769 - 1040	Not Acceptable	EPA 200.7 4.4 1994
1025	Boron	µg/L	1199	906	769 - 1040	Not Acceptable	EPA 6020A 1 2007
1105	Nickel	µg/L	1360	1160	1020 - 1300	Not Acceptable	EPA 200.7 4.4 1994
1150	Silver	µg/L	889	723	615 - 831	Not Acceptable	EPA 200.7 4.4 1994
<b>WP Bromide (cat# 887, lot# P330-769)</b>							
1540	Bromide	mg/L	< 0.56	1.18	0.723 - 1.55	Not Acceptable	EPA 300.0 2.1 1993



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-330



# 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-330





# Final Evaluation Report

## Study: **WP-330**

ERA Customer Number: **E772828**

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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**Energy Laboratories**  
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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 Minerals (cat# 581, lot# P330-506)**

1505	Alkalinity as CaCO3	mg/L	80.7	78.1	66.4 - 89.8	Acceptable	SM2320B 22nd ED 2011	7/23/2022	0.939	77.5	3.42	dmb
1575	Chloride	mg/L	42.9	41.7	36.0 - 47.6	Acceptable	EPA 300.0 2.1 1993	7/30/2022	0.493	42.1	1.64	dmb
1610	Conductivity at 25°C	µmhos/cm	322	325	293 - 358	Acceptable	SM2510B 22nd ED 2011	7/27/2022	-0.107	323	10.8	mmn
1730	Fluoride	mg/L	3.3	3.38	2.73 - 3.89	Acceptable	EPA 300.0 2.1 1993	7/30/2022	-0.218	3.34	0.165	dmb
1125	Potassium	mg/L	16.5	15.6	12.5 - 18.7	Acceptable	EPA 6010B 2 1996	8/9/2022	1.39	15.4	0.768	jcj
1155	Sodium	mg/L	66.1	61.5	49.2 - 73.8	Acceptable	EPA 6010B 2 1996	9/1/2022	1.30	61.5	3.54	jcj
2000	Sulfate	mg/L	9.93	10.6	7.76 - 12.8	Acceptable	EPA 300.0 2.1 1993	7/30/2022	-0.661	10.4	0.766	dmb
1955	Total Dissolved Solids at 180°C	mg/L		272	227 - 317	Not Reported				260	19.1	
1950	Total Solids at 105°C	mg/L		286	241 - 331	Not Reported				275	17.3	

**WP Minerals (cat# 581, lot# P330-506)**

1505	Alkalinity as CaCO3	mg/L		78.1	66.4 - 89.8	Not Reported				77.5	3.42	
1575	Chloride	mg/L		41.7	36.0 - 47.6	Not Reported				42.1	1.64	
1610	Conductivity at 25°C	µmhos/cm		325	293 - 358	Not Reported				323	10.8	
1730	Fluoride	mg/L	3.4	3.38	2.73 - 3.89	Acceptable	SM4500F- C 22nd ED 2011	7/28/2022	0.390	3.34	0.165	slf
1125	Potassium	mg/L	16.4	15.6	12.5 - 18.7	Acceptable	EPA 200.7 4.4 1994	8/9/2022	1.26	15.4	0.768	jcj
1155	Sodium	mg/L	65.3	61.5	49.2 - 73.8	Acceptable	EPA 200.7 4.4 1994	8/9/2022	1.08	61.5	3.54	jcj
2000	Sulfate	mg/L		10.6	7.76 - 12.8	Not Reported				10.4	0.766	
1955	Total Dissolved Solids at 180°C	mg/L		272	227 - 317	Not Reported				260	19.1	
1950	Total Solids at 105°C	mg/L		286	241 - 331	Not Reported				275	17.3	



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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**Quality Assurance Manager**  
**Energy Laboratories**  
**2393 Salt Creek Hwy**  
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**307-235-0515 x3244**

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**E772828**  
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**WP Minerals (cat# 581, lot# P330-506)**

1505	Alkalinity as CaCO3	mg/L		78.1	66.4 - 89.8	Not Reported				77.5	3.42	
1575	Chloride	mg/L		41.7	36.0 - 47.6	Not Reported				42.1	1.64	
1610	Conductivity at 25°C	µmhos/cm		325	293 - 358	Not Reported				323	10.8	
1730	Fluoride	mg/L		3.38	2.73 - 3.89	Not Reported				3.34	0.165	
1125	Potassium	mg/L	14.3	15.6	12.5 - 18.7	Acceptable	EPA 200.8 5.4 1994	8/5/2022	-1.48	15.4	0.768	jcj
1155	Sodium	mg/L	61.6	61.5	49.2 - 73.8	Acceptable	EPA 200.8 5.4 1994	8/9/2022	0.0318	61.5	3.54	jcj
2000	Sulfate	mg/L		10.6	7.76 - 12.8	Not Reported				10.4	0.766	
1955	Total Dissolved Solids at 180°C	mg/L		272	227 - 317	Not Reported				260	19.1	
1950	Total Solids at 105°C	mg/L		286	241 - 331	Not Reported				275	17.3	

**WP Minerals (cat# 581, lot# P330-506)**

1505	Alkalinity as CaCO3	mg/L		78.1	66.4 - 89.8	Not Reported				77.5	3.42	
1575	Chloride	mg/L		41.7	36.0 - 47.6	Not Reported				42.1	1.64	
1610	Conductivity at 25°C	µmhos/cm		325	293 - 358	Not Reported				323	10.8	
1730	Fluoride	mg/L		3.38	2.73 - 3.89	Not Reported				3.34	0.165	
1125	Potassium	mg/L	14.1	15.6	12.5 - 18.7	Acceptable	EPA 6020A 1 2007	8/6/2022	-1.74	15.4	0.768	jcj
1155	Sodium	mg/L	62.6	61.5	49.2 - 73.8	Acceptable	EPA 6020A 1 2007	8/9/2022	0.314	61.5	3.54	jcj
2000	Sulfate	mg/L		10.6	7.76 - 12.8	Not Reported				10.4	0.766	
1955	Total Dissolved Solids at 180°C	mg/L		272	227 - 317	Not Reported				260	19.1	
1950	Total Solids at 105°C	mg/L		286	241 - 331	Not Reported				275	17.3	



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 Hardness (cat# 580, lot# P330-507)**

1960	Total Suspended Solids	mg/L		69.9	56.3 - 78.4	Not Reported				68.1	3.42	
1035	Calcium	mg/L	82.2	80.0	68.0 - 92.0	Acceptable	EPA 6010B 2 1996	8/9/2022	0.663	79.3	4.45	jcg
1085	Magnesium	mg/L	25.7	24.4	20.7 - 28.1	Acceptable	EPA 6010B 2 1996	8/9/2022	0.576	24.8	1.58	jcg
1550	Calcium Hardness as CaCO3	mg/L	212	200	170 - 230	Acceptable	SM2340B 22nd ED 2011	8/17/2022	1.19	198	11.9	tlf
1755	Total Hardness as CaCO3	mg/L	321	300	255 - 345	Acceptable	SM2340B 22nd ED 2011	8/17/2022	1.40	300	15.2	tlf

**WP Hardness (cat# 580, lot# P330-507)**

1960	Total Suspended Solids	mg/L		69.9	56.3 - 78.4	Not Reported				68.1	3.42	
1035	Calcium	mg/L	84.9	80.0	68.0 - 92.0	Acceptable	EPA 200.7 4.4 1994	8/9/2022	1.27	79.3	4.45	jcg
1085	Magnesium	mg/L	26.6	24.4	20.7 - 28.1	Acceptable	EPA 200.7 4.4 1994	8/9/2022	1.15	24.8	1.58	jcg
1550	Calcium Hardness as CaCO3	mg/L		200	170 - 230	Not Reported				198	11.9	
1755	Total Hardness as CaCO3	mg/L		300	255 - 345	Not Reported				300	15.2	

**WP Hardness (cat# 580, lot# P330-507)**

1960	Total Suspended Solids	mg/L		69.9	56.3 - 78.4	Not Reported				68.1	3.42	
1035	Calcium	mg/L	73.8	80.0	68.0 - 92.0	Acceptable	EPA 200.8 5.4 1994	8/25/2022	-1.23	79.3	4.45	jcg
1085	Magnesium	mg/L	24	24.4	20.7 - 28.1	Acceptable	EPA 200.8 5.4 1994	8/25/2022	-0.498	24.8	1.58	jcg
1550	Calcium Hardness as CaCO3	mg/L		200	170 - 230	Not Reported				198	11.9	
1755	Total Hardness as CaCO3	mg/L		300	255 - 345	Not Reported				300	15.2	



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 Hardness (cat# 580, lot# P330-507)**

1960	Total Suspended Solids	mg/L		69.9	56.3 - 78.4	Not Reported				68.1	3.42	
1035	Calcium	mg/L	72.8	80.0	68.0 - 92.0	Acceptable	EPA 6020A 1 2007	8/6/2022	-1.45	79.3	4.45	jcg
1085	Magnesium	mg/L	25.3	24.4	20.7 - 28.1	Acceptable	EPA 6020A 1 2007	8/9/2022	0.324	24.8	1.58	jcg
1550	Calcium Hardness as CaCO3	mg/L		200	170 - 230	Not Reported				198	11.9	
1755	Total Hardness as CaCO3	mg/L		300	255 - 345	Not Reported				300	15.2	

**WP pH (cat# 577, lot# P330-977)**

1900	pH	S.U.	7.9	7.84	7.64 - 8.04	Acceptable	SM4500H+ B 22nd ED 2011	7/27/2022	0.756	7.86	0.0578	mnm
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**WP Solids (cat# 241, lot# P330-499)**

1960	Total Suspended Solids	mg/L	69.5	69.0	55.5 - 77.4	Acceptable	SM 2540 D-2015 2015	7/28/2022	0.536	67.5	3.80	mnm
1955	Total Dissolved Solids at 180°C	mg/L	417	427	382 - 472	Acceptable	SM2540C 23rd ED 2015	7/28/2022	0.520	405	22.8	mnm
1950	Total Solids at 105°C	mg/L		502	452 - 552	Not Reported				488	22.4	

**WP Simple Nutrients (cat# 584, lot# P330-505)**

1515	Ammonia as N	mg/L	4.12	4.30	3.30 - 5.35	Acceptable	EPA 350.1 2 1993	7/29/2022	-0.545	4.30	0.326	dmb
1820	Nitrate + Nitrite as N	mg/L	10.4	14.4	12.0 - 16.7	Not Acceptable	EPA 300.0 2.1 1993	8/3/2022	-5.28	14.3	0.736	slf
1810	Nitrate as N	mg/L	14.2	14.4	12.0 - 16.7	Acceptable	EPA 353.2 (calc)	8/10/2022	-0.0983	14.3	0.723	tlf
1870	ortho-Phosphate as P	mg/L	4.38	4.31	3.66 - 4.96	Acceptable	EPA 365.1 2 1993	7/25/2022	0.405	4.28	0.244	dmb
1827	Total Nitrogen	mg/L		18.7	10.7 - 26.7	Not Reported				18.9	1.36	



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 Simple Nutrients (cat# 584, lot# P330-505)**

1515	Ammonia as N	mg/L		4.30	3.30 - 5.35	Not Reported				4.30	0.326	
1820	Nitrate + Nitrite as N	mg/L	14.2	14.4	12.0 - 16.7	Acceptable	EPA 353.2 2 1993	8/5/2022	-0.118	14.3	0.736	erc
1810	Nitrate as N	mg/L		14.4	12.0 - 16.7	Not Reported				14.3	0.723	
1870	ortho-Phosphate as P	mg/L		4.31	3.66 - 4.96	Not Reported				4.28	0.244	
1827	Total Nitrogen	mg/L		18.7	10.7 - 26.7	Not Reported				18.9	1.36	

**WP Complex Nutrients (cat# 579, lot# P330-525)**

1795	Total Kjeldahl Nitrogen	mg/L		23.3	17.5 - 28.2	Not Reported				23.0	1.84	
1910	Total phosphorus as P	mg/L	4.35	4.34	3.58 - 5.05	Acceptable	EPA 6010B 2 1996	8/9/2022	-0.104	4.37	0.214	jcg

**WP Complex Nutrients (cat# 579, lot# P330-525)**

1795	Total Kjeldahl Nitrogen	mg/L		23.3	17.5 - 28.2	Not Reported				23.0	1.84	
1910	Total phosphorus as P	mg/L	4.36	4.34	3.58 - 5.05	Acceptable	EPA 200.7 4.4 1994	8/9/2022	-0.0578	4.37	0.214	jcg

**WP Complex Nutrients (cat# 579, lot# P330-525)**

1795	Total Kjeldahl Nitrogen	mg/L		23.3	17.5 - 28.2	Not Reported				23.0	1.84	
1910	Total phosphorus as P	mg/L	4.25	4.34	3.58 - 5.05	Acceptable	EPA 365.1 2 1993	7/30/2022	-0.571	4.37	0.214	dmb

**WP Nitrite (cat# 888, lot# P330-770)**

1840	Nitrite as N	mg/L	1.9	2.07	1.76 - 2.38	Acceptable	SM4500NO2- B 22nd ED 2011	7/28/2022	-1.38	2.07	0.127	nts
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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-330



A Waters Company

# WP-330 Final Evaluation Report

**Donny Juarez**  
Quality Assurance Manager  
Energy Laboratories  
2393 Salt Creek Hwy  
Casper, WY 82601  
307-235-0515 x3244

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

**WY00002**  
**E772828**  
**09/06/2022**  
**07/18/2022 - 09/01/2022**

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# P330-516)**

1530	BOD	mg/L	51.9	55.5	29.0 - 81.9	Acceptable	SM 5210 B-2016 2016	8/3/2022	-0.367	55.0	8.50	slf
1555	CBOD	mg/L	52.8	50.3	22.4 - 78.1	Acceptable	SM 5210 B-2016 2016	8/4/2022	0.271	50.3	9.25	slf
1565	COD	mg/L		89.8	67.4 - 109	Not Reported				88.2	6.79	
2040	TOC	mg/L	35.6	35.4	29.2 - 41.4	Acceptable	EPA 9060A 2004	8/11/2022	-0.0829	35.8	2.35	mnm

**WP Demand (cat# 578, lot# P330-516)**

1530	BOD	mg/L		55.5	29.0 - 81.9	Not Reported				55.0	8.50	
1555	CBOD	mg/L		50.3	22.4 - 78.1	Not Reported				50.3	9.25	
1565	COD	mg/L		89.8	67.4 - 109	Not Reported				88.2	6.79	
2040	TOC	mg/L	38.6	35.4	29.2 - 41.4	Acceptable	SM 5310 C-2014 2014	8/5/2022	1.19	35.8	2.35	mnm

**WP Oil & Grease (cat# 582, lot# P330-518)**

1803	n-Hexane Extractable Material(O&G)(Grav)	mg/L	110	66.6	45.1 - 79.3	Not Acceptable	EPA 1664A 1999	7/29/2022	5.80	61.8	8.31	
1803	n-Hexane Extractable Material(O&G)(IR)	mg/L		81.9	56.9 - 96.2	Not Reported				72.5	19.2	



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 Trace Metals (cat# 586, lot# P330-500)**

1000	Aluminum	µg/L	1121	1170	960 - 1360	Acceptable	EPA 6010B 2 1996	8/11/2022	-0.969	1190	72.1	jcj
1005	Antimony	µg/L	376	371	294 - 436	Acceptable	EPA 6010B 2 1996	8/11/2022	-0.000230	376	22.2	jcj
1010	Arsenic	µg/L	288	319	262 - 373	Acceptable	EPA 6010B 2 1996	8/11/2022	-2.03	327	19.4	jcj
1015	Barium	µg/L	1802	1870	1590 - 2150	Acceptable	EPA 6010B 2 1996	8/11/2022	-0.721	1870	93.1	jcj
1020	Beryllium	µg/L	209	226	192 - 260	Acceptable	EPA 6010B 2 1996	8/11/2022	-1.15	222	11.5	jcj
1025	Boron	µg/L	1034	906	769 - 1040	Acceptable	EPA 6010B 2 1996	8/11/2022	2.11	914	56.7	jcj
1030	Cadmium	µg/L	265	289	246 - 332	Acceptable	EPA 6010B 2 1996	8/11/2022	-1.46	284	13.3	jcj
1040	Chromium	µg/L	581	625	531 - 719	Acceptable	EPA 6010B 2 1996	8/11/2022	-1.79	633	29.0	jcj
1050	Cobalt	µg/L	876	891	757 - 1020	Acceptable	EPA 6010B 2 1996	9/1/2022	-0.800	911	43.4	jcj
1055	Copper	µg/L	747	702	597 - 807	Acceptable	EPA 6010B 2 1996	8/9/2022	1.22	706	33.6	jcj
1070	Iron	µg/L	3214	3040	2580 - 3500	Acceptable	EPA 6010B 2 1996	8/9/2022	1.15	3050	145	jcj
1075	Lead	µg/L	399	379	322 - 436	Acceptable	EPA 6010B 2 1996	8/9/2022	0.820	383	18.9	jcj
1090	Manganese	µg/L	1608	1630	1390 - 1870	Acceptable	EPA 6010B 2 1996	8/11/2022	-0.883	1670	69.4	jcj
1100	Molybdenum	µg/L	69.7	80.8	63.6 - 96.9	Acceptable	EPA 6010B 2 1996	8/11/2022	-2.56	80.0	4.01	jcj
1105	Nickel	µg/L	1043	1160	1020 - 1300	Acceptable	EPA 6010B 2 1996	9/1/2022	-2.05	1160	57.0	jcj
1140	Selenium	µg/L	741	692	588 - 796	Acceptable	EPA 6010B 2 1996	8/11/2022	1.19	686	46.0	jcj
1150	Silver	µg/L	633	723	615 - 831	Acceptable	EPA 6010B 2 1996	9/1/2022	-2.26	725	40.5	jcj
1160	Strontium	µg/L	451	436	371 - 501	Acceptable	EPA 6010B 2 1996	8/9/2022	0.627	440	17.3	jcj
1165	Thallium	µg/L		571	471 - 661	Not Reported				577	36.0	
1185	Vanadium	µg/L	1703	1740	1480 - 2000	Acceptable	EPA 6010B 2 1996	8/11/2022	-0.350	1730	75.2	jcj



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-330 Final Evaluation Report

**Donny Juarez**  
**Quality Assurance Manager**  
**Energy Laboratories**  
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**Casper, WY 82601**  
**307-235-0515 x3244**

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

**WY00002**  
**E772828**  
**09/06/2022**  
**07/18/2022 - 09/01/2022**

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**WP Trace Metals (cat# 586, lot# P330-500) (Continued)**

1190	Zinc	µg/L	1845	1710	1450 - 1970	Acceptable	EPA 6010B 2 1996	8/9/2022	1.76	1700	83.7	jcg
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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-330



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# WP-330 Final Evaluation Report

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**WP Trace Metals (cat# 586, lot# P330-500)**

1000	Aluminum	µg/L	1268	1170	960 - 1360	Acceptable	EPA 200.7 4.4 1994	8/9/2022	1.07	1190	72.1	jcj
1005	Antimony	µg/L	372	371	294 - 436	Acceptable	EPA 200.7 4.4 1994	8/11/2022	-0.180	376	22.2	jcj
1010	Arsenic	µg/L	387	319	262 - 373	Not Acceptable	EPA 200.7 4.4 1994	8/9/2022	3.08	327	19.4	jcj
1015	Barium	µg/L	1836	1870	1590 - 2150	Acceptable	EPA 200.7 4.4 1994	8/11/2022	-0.356	1870	93.1	jcj
1020	Beryllium	µg/L	212	226	192 - 260	Acceptable	EPA 200.7 4.4 1994	8/11/2022	-0.887	222	11.5	jcj
1025	Boron	µg/L	1045	906	769 - 1040	Not Acceptable	EPA 200.7 4.4 1994	8/11/2022	2.31	914	56.7	jcj
1030	Cadmium	µg/L	274	289	246 - 332	Acceptable	EPA 200.7 4.4 1994	8/11/2022	-0.776	284	13.3	jcj
1040	Chromium	µg/L	605	625	531 - 719	Acceptable	EPA 200.7 4.4 1994	8/11/2022	-0.959	633	29.0	jcj
1050	Cobalt	µg/L	888	891	757 - 1020	Acceptable	EPA 200.7 4.4 1994	8/11/2022	-0.523	911	43.4	jcj
1055	Copper	µg/L	778	702	597 - 807	Acceptable	EPA 200.7 4.4 1994	8/9/2022	2.15	706	33.6	jcj
1070	Iron	µg/L	3352	3040	2580 - 3500	Acceptable	EPA 200.7 4.4 1994	8/9/2022	2.10	3050	145	jcj
1075	Lead	µg/L	376	379	322 - 436	Acceptable	EPA 200.7 4.4 1994	8/11/2022	-0.396	383	18.9	jcj
1090	Manganese	µg/L	1630	1630	1390 - 1870	Acceptable	EPA 200.7 4.4 1994	8/11/2022	-0.566	1670	69.4	jcj
1100	Molybdenum	µg/L	75.7	80.8	63.6 - 96.9	Acceptable	EPA 200.7 4.4 1994	8/11/2022	-1.06	80.0	4.01	jcj
1105	Nickel	µg/L	1360	1160	1020 - 1300	Not Acceptable	EPA 200.7 4.4 1994	8/9/2022	3.51	1160	57.0	jcj
1140	Selenium	µg/L	742	692	588 - 796	Acceptable	EPA 200.7 4.4 1994	8/11/2022	1.21	686	46.0	jcj
1150	Silver	µg/L	889	723	615 - 831	Not Acceptable	EPA 200.7 4.4 1994	9/1/2022	4.06	725	40.5	jcj
1160	Strontium	µg/L	456	436	371 - 501	Acceptable	EPA 200.7 4.4 1994	8/9/2022	0.916	440	17.3	jcj
1165	Thallium	µg/L		571	471 - 661	Not Reported				577	36.0	
1185	Vanadium	µg/L	1716	1740	1480 - 2000	Acceptable	EPA 200.7 4.4 1994	8/11/2022	-0.177	1730	75.2	jcj



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.







A Waters Company

# WP-330 Final Evaluation Report

**Donny Juarez**  
**Quality Assurance Manager**  
**Energy Laboratories**  
**2393 Salt Creek Hwy**  
**Casper, WY 82601**  
**307-235-0515 x3244**

**EPA ID:**  
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**Report Issued:**  
**Study Dates:**

**WY00002**  
**E772828**  
**09/06/2022**  
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**WP Trace Metals (cat# 586, lot# P330-500) (Continued)**

1190	Zinc	µg/L	1956	1710	1450 - 1970	Acceptable	EPA 200.7 4.4 1994	8/9/2022	3.08	1700	83.7	jcg
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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-330



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# WP-330 Final Evaluation Report

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**Quality Assurance Manager**  
**Energy Laboratories**  
**2393 Salt Creek Hwy**  
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**WP Trace Metals (cat# 586, lot# P330-500)**

1000	Aluminum	µg/L	1309	1170	960 - 1360	Acceptable	EPA 200.8 5.4 1994	8/6/2022	1.64	1190	72.1	jcg
1005	Antimony	µg/L	394	371	294 - 436	Acceptable	EPA 200.8 5.4 1994	8/6/2022	0.811	376	22.2	jcg
1010	Arsenic	µg/L	346	319	262 - 373	Acceptable	EPA 200.8 5.4 1994	8/6/2022	0.963	327	19.4	jcg
1015	Barium	µg/L	1883	1870	1590 - 2150	Acceptable	EPA 200.8 5.4 1994	8/6/2022	0.149	1870	93.1	jcg
1020	Beryllium	µg/L	218	226	192 - 260	Acceptable	EPA 200.8 5.4 1994	8/9/2022	-0.368	222	11.5	jcg
1025	Boron	µg/L	966	906	769 - 1040	Acceptable	EPA 200.8 5.4 1994	8/25/2022	0.913	914	56.7	jcg
1030	Cadmium	µg/L	277	289	246 - 332	Acceptable	EPA 200.8 5.4 1994	8/6/2022	-0.550	284	13.3	jcg
1040	Chromium	µg/L	633	625	531 - 719	Acceptable	EPA 200.8 5.4 1994	8/6/2022	0.00506	633	29.0	jcg
1050	Cobalt	µg/L	932	891	757 - 1020	Acceptable	EPA 200.8 5.4 1994	8/6/2022	0.490	911	43.4	jcg
1055	Copper	µg/L	740	702	597 - 807	Acceptable	EPA 200.8 5.4 1994	8/6/2022	1.02	706	33.6	jcg
1070	Iron	µg/L	3117	3040	2580 - 3500	Acceptable	EPA 200.8 5.4 1994	8/6/2022	0.487	3050	145	jcg
1075	Lead	µg/L	386	379	322 - 436	Acceptable	EPA 200.8 5.4 1994	8/6/2022	0.133	383	18.9	jcg
1090	Manganese	µg/L	1560	1630	1390 - 1870	Acceptable	EPA 200.8 5.4 1994	8/6/2022	-1.57	1670	69.4	jcg
1100	Molybdenum	µg/L	76.2	80.8	63.6 - 96.9	Acceptable	EPA 200.8 5.4 1994	8/6/2022	-0.940	80.0	4.01	jcg
1105	Nickel	µg/L	1207	1160	1020 - 1300	Acceptable	EPA 200.8 5.4 1994	8/6/2022	0.827	1160	57.0	jcg
1140	Selenium	µg/L	617	692	588 - 796	Acceptable	EPA 200.8 5.4 1994	8/6/2022	-1.51	686	46.0	jcg
1150	Silver	µg/L	736	723	615 - 831	Acceptable	EPA 200.8 5.4 1994	8/9/2022	0.282	725	40.5	jcg
1160	Strontium	µg/L	436	436	371 - 501	Acceptable	EPA 200.8 5.4 1994	8/6/2022	-0.242	440	17.3	jcg
1165	Thallium	µg/L	521	571	471 - 661	Acceptable	EPA 200.8 5.4 1994	8/9/2022	-1.55	577	36.0	jcg
1185	Vanadium	µg/L	1666	1740	1480 - 2000	Acceptable	EPA 200.8 5.4 1994	8/9/2022	-0.842	1730	75.2	jcg



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-330



A Waters Company

# WP-330 Final Evaluation Report

**Donny Juarez**  
**Quality Assurance Manager**  
**Energy Laboratories**  
**2393 Salt Creek Hwy**  
**Casper, WY 82601**  
**307-235-0515 x3244**

**EPA ID:** WY00002  
**ERA Customer Number:** E772828  
**Report Issued:** 09/06/2022  
**Study Dates:** 07/18/2022 - 09/01/2022

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 Trace Metals (cat# 586, lot# P330-500) (Continued)**

1190	Zinc	µg/L	1719	1710	1450 - 1970	Acceptable	EPA 200.8 5.4 1994	8/6/2022	0.251	1700	83.7	jcg
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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 Trace Metals (cat# 586, lot# P330-500)**

1000	Aluminum	µg/L	1231	1170	960 - 1360	Acceptable	EPA 6020A 1 2007	8/9/2022	0.556	1190	72.1	jcg
1005	Antimony	µg/L	383	371	294 - 436	Acceptable	EPA 6020A 1 2007	8/6/2022	0.315	376	22.2	jcg
1010	Arsenic	µg/L	330	319	262 - 373	Acceptable	EPA 6020A 1 2007	8/6/2022	0.137	327	19.4	jcg
1015	Barium	µg/L	1799	1870	1590 - 2150	Acceptable	EPA 6020A 1 2007	8/9/2022	-0.753	1870	93.1	jcg
1020	Beryllium	µg/L	221	226	192 - 260	Acceptable	EPA 6020A 1 2007	8/9/2022	-0.108	222	11.5	jcg
1025	Boron	µg/L	1199	906	769 - 1040	Not Acceptable	EPA 6020A 1 2007	8/6/2022	5.02	914	56.7	jcg
1030	Cadmium	µg/L	262	289	246 - 332	Acceptable	EPA 6020A 1 2007	8/9/2022	-1.68	284	13.3	jcg
1040	Chromium	µg/L	645	625	531 - 719	Acceptable	EPA 6020A 1 2007	8/9/2022	0.418	633	29.0	jcg
1050	Cobalt	µg/L	882	891	757 - 1020	Acceptable	EPA 6020A 1 2007	8/6/2022	-0.661	911	43.4	jcg
1055	Copper	µg/L	700	702	597 - 807	Acceptable	EPA 6020A 1 2007	8/9/2022	-0.177	706	33.6	jcg
1070	Iron	µg/L	3028	3040	2580 - 3500	Acceptable	EPA 6020A 1 2007	8/9/2022	-0.126	3050	145	jcg
1075	Lead	µg/L	387	379	322 - 436	Acceptable	EPA 6020A 1 2007	8/6/2022	0.186	383	18.9	jcg
1090	Manganese	µg/L	1639	1630	1390 - 1870	Acceptable	EPA 6020A 1 2007	8/9/2022	-0.436	1670	69.4	jcg
1100	Molybdenum	µg/L	76.5	80.8	63.6 - 96.9	Acceptable	EPA 6020A 1 2007	8/6/2022	-0.865	80.0	4.01	jcg
1105	Nickel	µg/L	1103	1160	1020 - 1300	Acceptable	EPA 6020A 1 2007	8/6/2022	-0.999	1160	57.0	jcg
1140	Selenium	µg/L	663	692	588 - 796	Acceptable	EPA 6020A 1 2007	8/9/2022	-0.508	686	46.0	jcg
1150	Silver	µg/L	719	723	615 - 831	Acceptable	EPA 6020A 1 2007	8/9/2022	-0.138	725	40.5	jcg
1160	Strontium	µg/L	438	436	371 - 501	Acceptable	EPA 6020A 1 2007	8/6/2022	-0.126	440	17.3	jcg
1165	Thallium	µg/L	513	571	471 - 661	Acceptable	EPA 6020A 1 2007	8/6/2022	-1.77	577	36.0	jcg
1185	Vanadium	µg/L	1660	1740	1480 - 2000	Acceptable	EPA 6020A 1 2007	8/9/2022	-0.922	1730	75.2	jcg



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.





A Waters Company

# WP-330 Final Evaluation Report

**Donny Juarez**  
Quality Assurance Manager  
Energy Laboratories  
2393 Salt Creek Hwy  
Casper, WY 82601  
307-235-0515 x3244

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

**WY00002**  
**E772828**  
**09/06/2022**  
**07/18/2022 - 09/01/2022**

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 Trace Metals (cat# 586, lot# P330-500) (Continued)**

1190	Zinc	µg/L	1652	1710	1450 - 1970	Acceptable	EPA 6020A 1 2007	8/6/2022	-0.549	1700	83.7	jcg
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**WP Hexavalent Chromium (cat# 898, lot# P330-984)**

1045	Hexavalent Chromium	µg/L	211	213	175 - 249	Acceptable	SM3500Cr B 22nd ED 2011	8/12/2022	-0.0693	212	9.98	dmb
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**WP Tin & Titanium (cat# 573, lot# P330-517)**

1175	Tin	µg/L		1660	1160 - 2160	Not Reported				1640	116	
1180	Titanium	µg/L	74.5	81.6	69.4 - 93.8	Acceptable	EPA 6010B 2 1996	8/11/2022	-1.92	81.9	3.86	jcg

**WP Tin & Titanium (cat# 573, lot# P330-517)**

1175	Tin	µg/L		1660	1160 - 2160	Not Reported				1640	116	
1180	Titanium	µg/L	92.9	81.6	69.4 - 93.8	Acceptable	EPA 200.7 4.4 1994	8/9/2022	2.85	81.9	3.86	jcg

**WP Tin & Titanium (cat# 573, lot# P330-517)**

1175	Tin	µg/L	1551	1660	1160 - 2160	Acceptable	EPA 200.8 5.4 1994	8/9/2022	-0.729	1640	116	jcg
1180	Titanium	µg/L	73.3	81.6	69.4 - 93.8	Acceptable	EPA 200.8 5.4 1994	8/15/2022	-2.23	81.9	3.86	jcg

**WP Tin & Titanium (cat# 573, lot# P330-517)**

1175	Tin	µg/L	1547	1660	1160 - 2160	Acceptable	EPA 6020A 1 2007	8/9/2022	-0.764	1640	116	jcg
1180	Titanium	µg/L	73.4	81.6	69.4 - 93.8	Acceptable	EPA 6020A 1 2007	8/15/2022	-2.21	81.9	3.86	jcg

**WP Uranium (cat# 4400, lot# P330-4402)**

1184	Uranium (mass)	µg/L	140	149	112 - 174	Acceptable	EPA 200.8 5.4 1994	8/9/2022	-1.16	149	8.07	jcg
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**WP Uranium (cat# 4400, lot# P330-4402)**

1184	Uranium (mass)	µg/L	145	149	112 - 174	Acceptable	EPA 6020A 1 2007	8/9/2022	-0.538	149	8.07	jcg
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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-330 Final Evaluation Report

**Donny Juarez**  
**Quality Assurance Manager**  
**Energy Laboratories**  
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**307-235-0515 x3244**

**EPA ID:**  
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**Study Dates:**

**WY00002**  
**E772828**  
**09/06/2022**  
**07/18/2022 - 09/01/2022**

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
<b>WP Silica (cat# 890, lot# P330-775)</b>												
1990	Silica as SiO2	mg/L	51.4	51.4	38.6 - 64.2	Acceptable	EPA 6010B 2 1996	8/11/2022	-0.108	51.8	3.50	jcg
<b>WP Silica (cat# 890, lot# P330-775)</b>												
1990	Silica as SiO2	mg/L	50.5	51.4	38.6 - 64.2	Acceptable	EPA 200.7 4.4 1994	8/11/2022	-0.366	51.8	3.50	jcg
<b>WP Silica (cat# 890, lot# P330-775)</b>												
1990	Silica as SiO2	mg/L	53.9	51.4	38.6 - 64.2	Acceptable	EPA 6020A 1 2007	8/9/2022	0.606	51.8	3.50	jcg
<b>WP Sulfide (cat# 891, lot# P330-071)</b>												
2005	Sulfide	mg/L	4.72	5.28	2.22 - 7.73	Acceptable	SM 4500-S2 F-2011 2011	8/9/2022	-0.0230	4.74	0.954	erc
<b>WP Sulfide (cat# 891, lot# P330-071)</b>												
2005	Sulfide	mg/L	4.43	5.28	2.22 - 7.73	Acceptable	SM 4500-S2 D-2011 2011	8/9/2022	-0.327	4.74	0.954	erc
<b>WP Acidity (cat# 885, lot# P330-915)</b>												
1500	Acidity as CaCO3	mg/L	1680	1630	1470 - 1790	Acceptable	SM2310B 22nd ED 2011	7/28/2022	1.18	1610	63.2	nts
<b>WP Bromide (cat# 887, lot# P330-769)</b>												
1540	Bromide	mg/L	< 0.56	1.18	0.723 - 1.55	Not Acceptable	EPA 300.0 2.1 1993	7/29/2022		1.19	0.108	slf



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-330**

ERA Customer Number: **E772828**

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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Study # : WP-330





A Waters Company

# WP-330 Final Evaluation Report

**Donny Juarez**  
**Quality Assurance Manager**  
**Energy Laboratories**  
**2393 Salt Creek Hwy**  
**Casper, WY 82601**  
**307-235-0515 x3244**

**EPA ID:**  
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**E772828**  
**09/06/2022**  
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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# P330-083)**

2500	Total Coliforms (MF)	CFU/100mL		1130	598 - 2130	Not Reported				1130	256	
2530	Fecal Coliforms (MF)	CFU/100mL		716	248 - 2060	Not Reported				716	302	
2525	E.coli (MF)	CFU/100mL		655	31.0 - 14000	Not Reported				655	2330	
2500	Total Coliform (MPN-Multiple Well)	MPN/100mL	1990	1350	659 - 2750	Acceptable	SM9223 COL118QT 23rd ED 2016	7/25/2022	0.0667	1350	349	
2530	Fecal Coliform (MPN-Multiple Well)	MPN/100mL	1120	1000	493 - 2040	Acceptable	Colilert®-18 (Fecal Coliforms) 2010	7/25/2022	0.0201	1000	257	
2525	E.coli (MPN-Multiple Well)	MPN/100mL	1990	1340	631 - 2830	Acceptable	SM9223 COL118QT 23rd ED 2016	7/25/2022	0.0675	1340	366	

**WP WasteWatR™ Coliform MicrobE™ (cat# 576, lot# P330-083)**

2500	Total Coliforms (MF)	CFU/100mL		1130	598 - 2130	Not Reported				1130	256	
2530	Fecal Coliforms (MF)	CFU/100mL		716	248 - 2060	Not Reported				716	302	
2525	E.coli (MF)	CFU/100mL		655	31.0 - 14000	Not Reported				655	2330	
2500	Total Coliform (MPN-Multiple Well)	MPN/100mL	1550	1350	659 - 2750	Acceptable	SM9223 COLertQT 23rd ED 2016	7/25/2022	0.0240	1350	349	
2530	Fecal Coliform (MPN-Multiple Well)	MPN/100mL		1000	493 - 2040	Not Reported				1000	257	
2525	E.coli (MPN-Multiple Well)	MPN/100mL	1550	1340	631 - 2830	Acceptable	SM9223 COLertQT 23rd ED 2016	7/25/2022	0.0252	1340	366	



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-330



# Final Evaluation Report

Study: **WP-330**

ERA Customer Number: **E772828**

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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Study # : WP-330





A Waters Company

# WP-330 Final Evaluation Report

**Donny Juarez**  
**Quality Assurance Manager**  
**Energy Laboratories**  
**2393 Salt Creek Hwy**  
**Casper, WY 82601**  
**307-235-0515 x3244**

**EPA ID:**  
**ERA Customer Number:**  
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**Study Dates:**

**WY00002**  
**E772828**  
**09/06/2022**  
**07/18/2022 - 09/01/2022**

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 Gasoline Range Organics (GRO) in Water (cat# 640, lot# P330-762)**

9408	Gasoline Range Organics (GRO)	µg/L	2499	2310	857 - 4060	Acceptable	EPA 8015C 3 2007	8/1/2022	-0.453	2740	538	adw
4375	Benzene in GRO	µg/L		10.2	5.13 - 16.2	Not Reported				11.5	1.67	
4765	Ethylbenzene in GRO	µg/L		38.8	24.1 - 54.3	Not Reported				40.5	0.802	
5140	Toluene in GRO	µg/L		118	65.9 - 154	Not Reported				124	7.41	
5260	Xylenes, total in GRO	µg/L		199	125 - 276	Not Reported				194	44.0	

**WP Diesel Range Organics (DRO) in Water (cat# 641, lot# P330-764)**

9369	Diesel Range Organics (DRO)	µg/L	1940	3780	949 - 4750	Acceptable	EPA 8015C 3 2007	7/27/2022	-1.24	2780	677	adw
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**WP Total Petroleum Hydrocarbons (TPH) in Water (cat# 642, lot# P330-642)**

1853	TPH (Gravimetric)	mg/L	110	117	55.5 - 169	Acceptable	EPA 1664A SGT 1999	7/29/2022	1.42	79.1	21.7	
1853	TPH (IR)	mg/L		144	68.8 - 208	Not Reported				110	29.0	



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.



# CERTIFICATE OF RECOGNITION

ERA congratulates  
Energy Laboratories  
WP-330

For your participation and successful evaluation, we recognize the performance of this laboratory for achieving acceptable evaluation in the following standards.

Acidity	Complex Nutrients	Demand	Diesel Range Organics (DRO) in Water
Gasoline Range Organics (GRO) in Water	Hardness	Hexavalent Chromium	Minerals
Nitrite	pH	Silica	Solids
Sulfide	Tin & Titanium	Total Petroleum Hydrocarbons (TPH) in Water	Uranium

WasteWatR™  
Coliform MicrobE™



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Craig Huff  
Senior Technical Manager