



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

WS-324  **Final Report**

WatR™ Supply Proficiency Testing

WatR™ Supply Study

Open Date: 07/10/2023

Close Date: 08/24/2023

Report Issued Date: 08/28/2023



A Waters Company

August 28, 2023

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

Enclosed is your final report for ERA's WS-324 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-324 WatR™ Supply Proficiency Testing (PT) 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 WS-324 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, appearing to read "Craig Huff", with a horizontal line drawn through it.

Craig Huff
Senior Technical Manager

attachments





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Report Recipient	Contact/Phone Number	Reporting Type
ANAB	Zaneta Popovska / 414-501-5341	All Analytes
Colorado	Thomas Lill / 303-692-3045	All Analytes
EPA Region 8	Marcie Tidd / (303) 462-9476	All Analytes
Florida	Vanessa Soto / 904-791-1599	All Analytes
Montana	Russell Leu / 406-444-5259	All Analytes
Nebraska	Tara Wulfekoetter / 402-471-8439	All Analytes
Nevada	Paige Menicucci / 775-687-9311	All Analytes
New Mexico (WS)	Bethany Anderson / 505-222-9552	All Analytes
North Dakota	Cynthia Auen / 701-328-6172	All Analytes
South Dakota	Rea Riggle / 605-773-3368	All Analytes
Texas	Frank Jamison / (512) 239-3754	All Analytes



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WS-324 Definitions & Study Discussion

Study Dates: 07/10/2023 - 08/24/2023

Report Issued: 08/28/2023

WS 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.

WS Study Discussion

ERA's WS-324 WatR™ Supply 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 WS-324 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 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 WS-324 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-324 Laboratory Exception Report

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307-235-0515 x3244

EPA ID: WY00002
ERA Customer Number: E772828
Report Issued: 08/28/2023
Study Dates: 07/10/2023 - 08/24/2023

Not Acceptable Evaluations

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
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WS Turbidity (cat# 592, lot# S324-699)

2055	Turbidity	NTU	1.64	0.893	0.697 - 1.16	Not Acceptable	SM2130B 22nd ED 2011
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All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01





Final Report Results For Laboratory Energy Laboratories



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

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Study # : WS-324





Final Evaluation Report

Study: **WS-324**

ERA Customer Number: **E772828**

Laboratory Name: **Energy Laboratories**

Inorganic Results



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

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Study # : WS-324





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WS-324 Final Evaluation Report

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Casper, WY 82601
307-235-0515 x3244

EPA ID:
ERA Customer Number:
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WY00002
E772828
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07/10/2023 - 08/24/2023

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, lot# S324-698)

1505	Alkalinity as CaCO3	mg/L	48	46.9	42.2 - 51.6	Acceptable	SM2320B 22nd ED 2011	7/19/2023	0.525	46.9	2.07	dmb
1575	Chloride	mg/L	38	36.9	31.4 - 42.4	Acceptable	EPA 300.0 2.1 1993	7/21/2023	0.173	37.7	1.58	dmb
1610	Conductivity at 25°C	µmhos/cm	323	321	289 - 353	Acceptable	SM2510B 22nd ED 2011	7/17/2023	0.0572	323	7.76	tsa
1730	Fluoride	mg/L	1.14	1.15	1.04 - 1.26	Acceptable	EPA 300.0 2.1 1993	7/21/2023	-0.454	1.17	0.0603	dmb
1820	Nitrate + Nitrite as N	mg/L	3.37	3.37	2.86 - 3.88	Acceptable	EPA 353.2 2 1993	7/20/2023	0.0568	3.36	0.172	dmb
1810	Nitrate as N	mg/L	3.37	3.37	3.03 - 3.71	Acceptable	EPA 353.2 (calc)	7/24/2023	0.244	3.33	0.155	dmb
1125	Potassium	mg/L		11.8	10.0 - 13.6	Not Reported				11.8	0.747	
2000	Sulfate	mg/L	31.8	30.6	26.0 - 35.2	Acceptable	EPA 300.0 2.1 1993	7/21/2023	0.735	30.8	1.31	dmb
1955	Total Dissolved Solids at 180°C	mg/L	231	228	182 - 274	Acceptable	SM2540C 23rd ED 2015	7/17/2023	0.170	228	18.6	tsa

WS Inorganics (cat# 591, lot# S324-698)

1505	Alkalinity as CaCO3	mg/L		46.9	42.2 - 51.6	Not Reported				46.9	2.07	
1575	Chloride	mg/L		36.9	31.4 - 42.4	Not Reported				37.7	1.58	
1610	Conductivity at 25°C	µmhos/cm		321	289 - 353	Not Reported				323	7.76	
1730	Fluoride	mg/L	1.24	1.15	1.04 - 1.26	Acceptable	SM4500F- C 22nd ED 2011	7/22/2023	1.20	1.17	0.0603	dmb
1820	Nitrate + Nitrite as N	mg/L		3.37	2.86 - 3.88	Not Reported				3.36	0.172	
1810	Nitrate as N	mg/L		3.37	3.03 - 3.71	Not Reported				3.33	0.155	
1125	Potassium	mg/L		11.8	10.0 - 13.6	Not Reported				11.8	0.747	
2000	Sulfate	mg/L		30.6	26.0 - 35.2	Not Reported				30.8	1.31	
1955	Total Dissolved Solids at 180°C	mg/L		228	182 - 274	Not Reported				228	18.6	

WS pH (cat# 552, lot# S324-779)

1900	pH	S.U.	6.29	6.29	6.09 - 6.49	Acceptable	SM4500H+ B 22nd ED 2011	7/17/2023	-0.118	6.29	0.0345	tsa
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All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01





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WS Inorganic Disinfection #2 (cat# 5260, lot# S324-5262)

1535	Bromate	µg/L		43.8	30.7 - 56.9	Not Reported				42.8	4.02	
1540	Bromide	µg/L	271	238	202 - 274	Acceptable	EPA 300.0 2.1 1993	7/21/2023	2.61	241	11.3	dmb

WS Nitrite (cat# 594, lot# S324-695)

1840	Nitrite as N	mg/L	1.87	1.82	1.55 - 2.09	Acceptable	SM4500NO2- B 22nd ED 2011	7/20/2023	0.295	1.84	0.0864	dmb
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WS o-Phosphate Nutrients (cat# 558, lot# S324-667)

1870	ortho-Phosphate as P	mg/L	1.34	1.22	1.04 - 1.40	Acceptable	EPA 365.1 2 1993	7/20/2023	1.37	1.23	0.0803	dmb
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WS Organic Carbon (cat# 557, lot# S324-669)

1710	Dissolved Organic Carbon (DOC)	mg/L		9.32	8.29 - 10.3	Not Reported				9.33	0.373	
2040	Total Organic Carbon (TOC)	mg/L	8.71	9.32	7.46 - 11.2	Acceptable	EPA 9060A 2004	7/25/2023	-1.72	9.37	0.384	dmb

WS Organic Carbon (cat# 557, lot# S324-669)

1710	Dissolved Organic Carbon (DOC)	mg/L	8.67	9.32	8.29 - 10.3	Acceptable	SM 5310 C-2014 2014	7/23/2023	-1.77	9.33	0.373	dmb
2040	Total Organic Carbon (TOC)	mg/L	9.04	9.32	7.46 - 11.2	Acceptable	SM 5310 C-2014 2014	7/23/2023	-0.855	9.37	0.384	dmb

WS Turbidity (cat# 592, lot# S324-699)

2055	Turbidity	NTU	1.64	0.893	0.697 - 1.16	Not Acceptable	SM2130B 22nd ED 2011	8/7/2023	5.39	0.955	0.127	dmb
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All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01





Final Evaluation Report

Study: **WS-324**

ERA Customer Number: **E772828**

Laboratory Name: **Energy Laboratories**

Microbiology Results



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

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Study # : WS-324





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WS-324 Final Evaluation 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 MicrobE™ (Coliforms) (cat# 080A, lot# S324-085A)

2500	Total Coliforms - Sample 1	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 2	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 3	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 4	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 5	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 6	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 7	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 8	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 9	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 10	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf

Total Coliforms Evaluation : Acceptable
Fecal Coliforms Evaluation : Not Reported
E.coli Evaluation : Acceptable

Fecal Coliform Organism - Escherichia coli (ATCC 35421), Samples 3, 4 and 6
 Total Coliform Organism - Enterobacter cloacae (ATCC 35030), Samples 7, 8 and 9
 Negative (1) Coliform Organism - Pseudomonas putida (ATCC 31483), Sample 5
 Negative (2) Coliform Organism - Staphylococcus capitis (ATCC 35661), Sample 2
 Blank - Blank Pellet (Qualitative), Samples 1 and 10

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





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WS MicrobE™ (Coliforms) (cat# 080A, lot# S324-085A) (Continued)

2530	Fecal Coliforms - Sample 1	CFU/100mL		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 2	CFU/100mL		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 3	CFU/100mL		Presence	Presence	Not Reported						
2530	Fecal Coliforms - Sample 4	CFU/100mL		Presence	Presence	Not Reported						
2530	Fecal Coliforms - Sample 5	CFU/100mL		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 6	CFU/100mL		Presence	Presence	Not Reported						
2530	Fecal Coliforms - Sample 7	CFU/100mL		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 8	CFU/100mL		Absence	Absence	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 (ATCC 35421), Samples 3, 4 and 6
 Total Coliform Organism - Enterobacter cloacae (ATCC 35030), Samples 7, 8 and 9
 Negative (1) Coliform Organism - Pseudomonas putida (ATCC 31483), Sample 5
 Negative (2) Coliform Organism - Staphylococcus capitis (ATCC 35661), Sample 2
 Blank - Blank Pellet (Qualitative), Samples 1 and 10



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# 080A, lot# S324-085A) (Continued)

2525	E.coli - Sample 1	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 2	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 3	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 4	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 5	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 6	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 7	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 8	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 9	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 10	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLILERT 23rd ED 2016	7/19/2023				dmf

Total Coliforms Evaluation : Acceptable
Fecal Coliforms Evaluation : Not Reported
E.coli Evaluation : Acceptable

Fecal Coliform Organism - Escherichia coli (ATCC 35421), Samples 3, 4 and 6
 Total Coliform Organism - Enterobacter cloacae (ATCC 35030), Samples 7, 8 and 9
 Negative (1) Coliform Organism - Pseudomonas putida (ATCC 31483), Sample 5
 Negative (2) Coliform Organism - Staphylococcus capitis (ATCC 35661), Sample 2
 Blank - Blank Pellet (Qualitative), Samples 1 and 10

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WS MicrobE™ (Coliforms) (cat# 080B, lot# S324-085B)

2500	Total Coliforms - Sample 1	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 2	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 3	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 4	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 5	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 6	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 7	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 8	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 9	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2500	Total Coliforms - Sample 10	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf

Total Coliforms Evaluation : Acceptable
Fecal Coliforms Evaluation : Not Reported
E.coli Evaluation : Acceptable

Fecal Coliform Organism - Escherichia coli (ATCC 35421), Samples 2, 6 and 7
 Total Coliform Organism - Enterobacter cloacae (ATCC 35030), Samples 1, 3 and 9
 Negative (1) Coliform Organism - Pseudomonas putida (ATCC 31483), Sample 10
 Negative (2) Coliform Organism - Staphylococcus capitis (ATCC 35661), Sample 5
 Blank - Blank Pellet (Qualitative), Samples 4 and 8

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





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WS MicrobE™ (Coliforms) (cat# 080B, lot# S324-085B) (Continued)

2530	Fecal Coliforms - Sample 1	CFU/100mL		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 2	CFU/100mL		Presence	Presence	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		Absence	Absence	Not Reported						
2530	Fecal Coliforms - Sample 6	CFU/100mL		Presence	Presence	Not Reported						
2530	Fecal Coliforms - Sample 7	CFU/100mL		Presence	Presence	Not Reported						
2530	Fecal Coliforms - Sample 8	CFU/100mL		Absence	Absence	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 (ATCC 35421), Samples 2, 6 and 7
 Total Coliform Organism - Enterobacter cloacae (ATCC 35030), Samples 1, 3 and 9
 Negative (1) Coliform Organism - Pseudomonas putida (ATCC 31483), Sample 10
 Negative (2) Coliform Organism - Staphylococcus capitis (ATCC 35661), Sample 5
 Blank - Blank Pellet (Qualitative), Samples 4 and 8

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





A Waters Company

WS-324 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
08/28/2023
07/10/2023 - 08/24/2023

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# 080B, lot# S324-085B) (Continued)

2525	E.coli - Sample 1	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 2	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 3	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 4	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 5	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 6	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 7	CFU/100mL	Presence	Presence	Presence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 8	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 9	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf
2525	E.coli - Sample 10	CFU/100mL	Absence	Absence	Absence	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023				dmf

Total Coliforms Evaluation : Acceptable
Fecal Coliforms Evaluation : Not Reported
E.coli Evaluation : Acceptable

Fecal Coliform Organism - Escherichia coli (ATCC 35421), Samples 2, 6 and 7
 Total Coliform Organism - Enterobacter cloacae (ATCC 35030), Samples 1, 3 and 9
 Negative (1) Coliform Organism - Pseudomonas putida (ATCC 31483), Sample 10
 Negative (2) Coliform Organism - Staphylococcus capitis (ATCC 35661), Sample 5
 Blank - Blank Pellet (Qualitative), Samples 4 and 8

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





A Waters Company

WS-324 Final Evaluation Report

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WY00002
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08/28/2023
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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 WS SourceWatR™ MicrobE™ (cat# 595, lot# S324-078)

2500	Total Coliforms (MF)	CFU/100mL		53.0	31.0 - 90.0	Not Reported				52.9	14.8	
2530	Fecal Coliforms (MF)	CFU/100mL		30.0	13.0 - 67.0	Not Reported				29.9	13.4	
2525	E.coli (MF)	CFU/100mL		43.0	18.0 - 105	Not Reported				43.4	21.7	
2500	Total Coliform (MPN-Multiple Well)	MPN/100mL	74.9	64.0	41.0 - 99.9	Acceptable	SM9223 COLertQT 23rd ED 2016	7/19/2023	0.708	64.0	14.7	
2530	Fecal Coliform (MPN-Multiple Well)	MPN/100mL		45.0	27.4 - 73.8	Not Reported				45.0	11.6	
2525	E.coli (MPN-Multiple Well)	MPN/100mL	74.9	63.9	41.3 - 98.8	Acceptable	SM9223 COLertQT 23rd ED 2016	7/19/2023	0.730	63.9	14.4	

WS WS SourceWatR™ MicrobE™ (cat# 595, lot# S324-078)

2500	Total Coliforms (MF)	CFU/100mL		53.0	31.0 - 90.0	Not Reported				52.9	14.8	
2530	Fecal Coliforms (MF)	CFU/100mL		30.0	13.0 - 67.0	Not Reported				29.9	13.4	
2525	E.coli (MF)	CFU/100mL		43.0	18.0 - 105	Not Reported				43.4	21.7	
2500	Total Coliform (MPN-Multiple Well)	MPN/100mL	93.3	64.0	41.0 - 99.9	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023	1.69	64.0	14.7	
2530	Fecal Coliform (MPN-Multiple Well)	MPN/100mL		45.0	27.4 - 73.8	Not Reported				45.0	11.6	
2525	E.coli (MPN-Multiple Well)	MPN/100mL	93.9	63.9	41.3 - 98.8	Acceptable	SM9223 COLert18 23rd ED 2016	7/19/2023	1.76	63.9	14.4	



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



Final Evaluation Report

Study: **WS-324**

ERA Customer Number: **E772828**

Laboratory Name: **Energy Laboratories**

Organic Results





A Waters Company

WS-324 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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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 Carbamate/Carbamoyloxime Pesticides (cat# 846, lot# S324-707)

7010	Aldicarb	µg/L	44.6	50.4	37.8 - 63.0	Acceptable	EPA 531.1 3.1 1995	7/24/2023	-1.95	51.7	3.66	ljl
7015	Aldicarb sulfone	µg/L	31	37.1	27.8 - 46.4	Acceptable	EPA 531.1 3.1 1995	7/24/2023	-1.10	35.7	4.28	ljl
7020	Aldicarb sulfoxide	µg/L	46.3	55.8	41.8 - 69.8	Acceptable	EPA 531.1 3.1 1995	7/24/2023	-1.30	53.3	5.42	ljl
8080	Baygon	µg/L	76.1	86.7	71.1 - 102	Acceptable	EPA 531.1 3.1 1995	7/24/2023	-2.11	83.8	3.67	ljl
7195	Carbaryl	µg/L	69.4	83.1	62.3 - 104	Acceptable	EPA 531.1 3.1 1995	7/24/2023	-1.21	80.1	8.86	ljl
7205	Carbofuran	µg/L	85	97.1	53.4 - 141	Acceptable	EPA 531.1 3.1 1995	7/24/2023	-0.755	93.4	11.2	ljl
7710	3-Hydroxycarbofuran	µg/L	25.2	30.2	24.2 - 36.2	Acceptable	EPA 531.1 3.1 1995	7/24/2023	-1.50	27.8	1.77	ljl
7800	Methiocarb	µg/L	53.7	65.2	50.6 - 76.6	Acceptable	EPA 531.1 3.1 1995	7/24/2023	-1.86	61.9	4.41	ljl
7805	Methomyl	µg/L	69.8	79.8	63.8 - 95.8	Acceptable	EPA 531.1 3.1 1995	7/24/2023	-0.925	78.6	9.53	ljl
7940	Oxamyl (vydate)	µg/L	26.3	29.4	22.0 - 36.8	Acceptable	EPA 531.1 3.1 1995	7/24/2023	-0.622	28.6	3.68	ljl

WS Regulated Semivolatiles #2 Herbicides (cat# 849, lot# S324-691)

9390	Diquat	µg/L	10.1	18.6	9.30 - 27.9	Acceptable	EPA 549.2 1 1997	7/20/2023	-1.53	15.6	3.59	ljl
7525	Endothall	µg/L		92.0	46.0 - 138	Not Reported				88.9	8.28	
9411	Glyphosate	µg/L	535	517	414 - 620	Acceptable	EPA 547 1990	7/19/2023	-0.157	544	59.3	ljl
9528	Paraquat	µg/L		73.2	34.8 - 81.6	Not Reported				42.6	4.44	



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



CERTIFICATE OF RECOGNITION

ERA congratulates
Energy Laboratories
WS-324

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

Carbamate/Carbamoxyl Pesticides	Inorganic Disinfection #2
Inorganics	MicrobE™ (Coliforms)
Nitrite	o-Phosphate Nutrients
Organic Carbon	pH
Regulated Semivolatiles #2	WS SourceWatR™
Herbicides	MicrobE™



Craig Huff
Senior Technical Manager