



A Waters Company

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

***RAD-120***  ***Final Report***

The RadChem logo is a circular emblem with a radiation symbol (three black blades around a central dot) in the center, all within a white border. A small "TM" trademark symbol is located at the bottom right of the emblem.

**RadChem™ Proficiency Testing**

**RadChem™ Study**

**Reference Date: 01/06/20**

**Open Date: 01/06/20**

**Close Date: 02/20/20**

**Report Issued Date: 02/24/20**



A Waters Company

February 24, 2020

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

Enclosed is your final report for ERA's RadCheM™ Proficiency Testing (PT) study, RAD-120. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

Data Evaluation Protocols: All of the analytes in ERA's RAD-120 study have been evaluated by comparing the reported result to the acceptance limits generated using the criteria contained in the NELAC Fields of Proficiency Testing (FoPT) table and the evaluation criteria contained in the 2016 TNI Standard, Volume 3.

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. If you need help, 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 RadCheM™ Proficiency Testing study, RAD-120. 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 "Matthew Seebeck".

Matthew Seebeck  
Quality Officer

attachments



A Waters Company

<b>Report Recipient</b>	<b>Contact/Phone Number</b>	<b>Reporting Type</b>
California ELAP	Christine Sotelo / 916-341-5175	All Analytes
Colorado	Ben Chouaf / 303-692-3045	All Analytes
EPA Region 8	Marcie Tidd / (303) 462-9476	All Analytes
Florida	Vanessa Soto / 904-791-1599	All Analytes
Georgia	Lynne Grubb / 404-657-3189	All Analytes
Idaho	Ernie Bader / 208-334-2235 x 290	All Analytes
Montana	Russell Leu / 406-444-5259	All Analytes
Nebraska	Laurie Wieting / 402-471-8407	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
Oregon	Stephanie Ringsage / 503-693-4126	All Analytes
South Dakota	Stacy Ellwanger / 605-773-4757	All Analytes
Texas	Frank Jamison / (512) 239-3754	All Analytes
Utah	Cathy Mitchell / (801) 965-2588	All Analytes
Washington	Rebecca Wood / 360-871-8811	All Analytes



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# RAD-120 Definitions & Study Discussion

Study Dates: 01/06/20 - 02/20/20

Report Issued: 02/24/20

## RAD Study Definitions

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

The ERA Assigned Values are compliant with the most current NELAC Fields of Proficiency Testing (FoPT) table. 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 NELAC FoPT table or ERA's SOP for the Generation of Performance Acceptance Limits™ as applicable. This report is scored by the criteria in the 2016 TNI Standard, Volume 3, instead of by the criteria in the 2009 TNI Standard to which the Proficiency Testing Provider is accredited. This is a planned change and is endorsed by the TNI Proficiency Testing Program Executive Committee for transition to the 2016 TNI Standard.

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.

## RAD Study Discussion

ERA's RAD-120 RadCheM™ Proficiency Testing (PT) study has been reviewed by ERA senior management and certified compliant with the requirements of the 2009 TNI PT Standards and the 2016 TNI Standard, Volume 3, Section 5.9 and the criteria contained in the most current NELAC Fields of Proficiency Testing (FoPT) table.

ERA's RAD-120 RadCheM™ PT 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 NELAC FoPT tables.

All analytes are included in ERA's A2LA accreditation, certification number 1539.01.

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 RAD-120 RadCheM™ 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 RadCheM™ Proficiency Testing program, please contact our Proficiency Testing Department at 1-800-372-0122.





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# RAD-120 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: 02/24/20  
Study Dates: 01/06/20 - 02/20/20

## Not Acceptable Evaluations

TNI Analyte Code	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
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*RAD NaturalS™ (cat# 811, lot# R120-751)*

2965	Radium-226	pCi/L	21.0	17.4	12.9 - 19.9	Not Acceptable	EPA 903.0 GPC 1980
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This report is scored by the criteria in the 2016 TNI Standard, Volume 3, instead of by the criteria in the 2009 TNI Standard to which the Proficiency Testing Provider is accredited. This is a planned change and is endorsed by the TNI Proficiency Testing Program Executive Committee for transition to the 2016 TNI Standard.





# Final Report Results For Laboratory Energy Laboratories





## Final Evaluation Report

Study: **RAD-120**

ERA Customer Number: **E772828**

Laboratory Name: **Energy Laboratories**

## RAD Results





# RAD-120 Final Evaluation Report

A Waters Company

**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**  
**02/24/20**  
**01/06/20 - 02/20/20**

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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**RAD GroSS™ Alpha/Beta (cat# 809, lot# R120-759)**

2830	Gross Alpha	pCi/L	45.8	58.9	30.8 - 73.3	Acceptable	EPA 900.0 GPC 1980	1/17/2020	-0.515	52.3	12.7	
2840	Gross Beta	pCi/L	19.5	21.0	12.6 - 29.1	Acceptable	EPA 900.0 GPC 1980	1/17/2020	-0.150	19.9	2.92	

**RAD NaturalS™ (cat# 811, lot# R120-751)**

2965	Radium-226	pCi/L	21.0	17.4	12.9 - 19.9	Not Acceptable	EPA 903.0 GPC 1980	1/30/2020	1.88	17.5	1.85	
2970	Radium-228	pCi/L	8.89	7.95	5.06 - 10.1	Acceptable	EPA Ra-05	1/28/2020	1.09	7.37	1.39	
3055	Uranium (Nat)	pCi/L	63.7	68.2	55.7 - 75.0	Acceptable	SM 7500-U C-2000 2000	1/20/2020	-0.126	64.1	3.10	
3055	Uranium (Nat) mass	µg/L	96.8	99.4	81.2 - 109	Acceptable	SM 7500-U C-2000 2000	1/20/2020	0.209	96.1	3.50	

**RAD NaturalS™ (cat# 811, lot# R120-751)**

2965	Radium-226	pCi/L		17.4	12.9 - 19.9	Not Reported				17.5	1.85	
2970	Radium-228	pCi/L		7.95	5.06 - 10.1	Not Reported				7.37	1.39	
3055	Uranium (Nat)	pCi/L	58.8	68.2	55.7 - 75.0	Acceptable	EPA 200.8 5.4 1994	1/14/2020	-1.71	64.1	3.10	
3055	Uranium (Nat) mass	µg/L	87.8	99.4	81.2 - 109	Acceptable	EPA 200.8 5.4 1994	1/14/2020	-2.36	96.1	3.50	



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# CERTIFICATE OF RECOGNITION

ERA congratulates  
Energy Laboratories  
RAD-120

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

GroSS™ Alpha/Beta



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Matthew Seebeck  
Quality Officer