



A Waters Company

Anne Antin
Hawaii Analytical Laboratory
3615 Harding Ave
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USA

SOIL-131



Final Report

Soil/Hazardous Waste Proficiency Testing

Soil Study

Open Date: 07/21/2025

Close Date: 09/04/2025

Report Issued Date: 09/08/2025



A Waters Company

September 8, 2025

Anne Antin
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Enclosed is your final report for ERA's SOIL-131 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 SOIL-131 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 SOIL-131 Proficiency Testing study. If you have any questions, please contact our Proficiency Testing Department at 1-800-372-0122.

Sincerely,

A handwritten signature in cursive script, appearing to read "Emily Devers".

Emily Devers
Quality Assurance Manager

attachments





A Waters Company

Report Recipient	Contact/Phone Number	Reporting Type
Perry Johnson Laboratory Accreditation, Inc.	Tracy Szerszen / 248-519-2603	All Analytes

SOIL-131 Definitions & Study Discussion

Study Dates: 07/21/2025 - 09/04/2025

Report Issued: 09/08/2025

SOIL 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. The Assigned Values for the Organic Proficiency Testing Standards are equal to 100% of the parameter present in the standard as determined by gravimetric and/or volumetric measurements made during standard preparation as applicable. The assigned values for the Inorganic Proficiency Testing Standards, with the exception of the TCLP Metals in Soil and Total Organic Carbon (TOC) in the Nutrients in Soil sample, are equal to the maximum amount of the parameter available in the standard by applicable EPA methodologies. The assigned values for the TCLP metals and TOC are equal to the mean of the study data, after the removal of outliers. All parameters not added to the standard are 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.

SOIL Study Discussion

ERA's SOIL-131 Proficiency Testing (PT) 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 SOIL-131 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.

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 SOIL-131 Proficiency Testing study reports shall not be reproduced except in its entirety and not without the permission of the participating laboratory. The report must not be used by the participating laboratories to claim product endorsement 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 SOIL Proficiency Testing program, please contact our Proficiency Testing Department at 1-800-372-0122.





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SOIL-131 Laboratory Exception Report

Anne Antin
QA/QC Manager
Hawaii Analytical Laboratory
3615 Harding Ave
Ste 102
Honolulu, HI 96816
(808) 735-0422

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

Not Reported
I519301
09/08/2025
07/21/2025 - 09/04/2025

Not Acceptable Evaluations

There were no Not Acceptable evaluations for this study.



All analytes except for 1,1-Biphenyl, Acetophenone, Atrazine, Benzaldehyde and Caprolactam in the Base/Neutrals & Acids, catalog # 467, Lithium in the Metals, cat # 620, and Nitrite as N and Nitrate + Nitrite as N in the Anions, cat # 873, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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Study # : SOIL-131





Final Report Results For Laboratory Hawaii Analytical Laboratory



All analytes except for 1,1-Biphenyl, Acetophenone, Atrazine, Benzaldehyde and Caprolactam in the Base/Neutrals & Acids, catalog # 467, Lithium in the Metals, cat # 620, and Nitrite as N and Nitrate + Nitrite as N in the Anions, cat # 873, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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Final Evaluation Report

Study: **SOIL-131**

ERA Customer Number: **I519301**

Laboratory Name: **Hawaii Analytical
Laboratory**

Inorganic Results



All analytes except for 1,1-Biphenyl, Acetophenone, Atrazine, Benzaldehyde and Caprolactam in the Base/Neutrals & Acids, catalog # 467, Lithium in the Metals, cat # 620, and Nitrite as N and Nitrate + Nitrite as N in the Anions, cat # 873, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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Not Reported
I519301
09/08/2025
07/21/2025 - 09/04/2025

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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SOIL TCLP Metals in Soil (cat# 629, lot# D131-544)

1005	Antimony	mg/L		3.44	2.48 - 4.40	Not Reported				3.44	0.320	
1010	Arsenic	mg/L	5.6	5.15	3.75 - 6.56	Acceptable	EPA 1311 1992	8/25/2025	0.953	5.15	0.469	
1015	Barium	mg/L	5.5	5.82	4.82 - 6.83	Acceptable	EPA 1311 1992	8/25/2025	-0.962	5.82	0.336	
1020	Beryllium	mg/L		2.27	1.21 - 3.32	Not Reported				2.27	0.351	
1030	Cadmium	mg/L	2.49	2.40	1.79 - 3.02	Acceptable	EPA 1311 1992	8/25/2025	0.422	2.40	0.205	
1040	Chromium	mg/L	2.43	2.72	1.96 - 3.48	Acceptable	EPA 1311 1992	8/25/2025	-1.15	2.72	0.254	
1075	Lead	mg/L	3.8	3.29	1.57 - 5.02	Acceptable	EPA 1311 1992	8/25/2025	0.882	3.29	0.574	
1095	Mercury	mg/L	0.306	0.304	0.121 - 0.487	Acceptable	EPA 1311 1992	8/25/2025	0.0333	0.304	0.0609	
1105	Nickel	mg/L		4.36	3.18 - 5.53	Not Reported				4.36	0.392	
1140	Selenium	mg/L	7.68	7.43	4.94 - 9.92	Acceptable	EPA 1311 1992	8/25/2025	0.301	7.43	0.830	
1150	Silver	mg/L	1.79	2.20	0.0386 - 4.35	Acceptable	EPA 1311 1992	8/25/2025	-0.565	2.20	0.719	
1190	Zinc	mg/L		3.03	2.15 - 3.91	Not Reported				3.03	0.293	



All analytes except for 1,1-Biphenyl, Acetophenone, Atrazine, Benzaldehyde and Caprolactam in the Base/Neutrals & Acids, catalog # 467, Lithium in the Metals, cat # 620, and Nitrite as N and Nitrate + Nitrite as N in the Anions, cat # 873, are included in ERA's A2LA accreditation. Lab Code 1539.01.

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Study # : SOIL-131





Final Evaluation Report

Study: **SOIL-131**

ERA Customer Number: **I519301**

Laboratory Name: **Hawaii Analytical
Laboratory**

Organic Results



All analytes except for 1,1-Biphenyl, Acetophenone, Atrazine, Benzaldehyde and Caprolactam in the Base/Neutrals & Acids, catalog # 467, Lithium in the Metals, cat # 620, and Nitrite as N and Nitrate + Nitrite as N in the Anions, cat # 873, 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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SOIL PCBs in Soil (cat# 624, lot# D131-726)

8880	Aroclor 1016	mg/kg	< 0.1	< 0.100	0.00 - 0.100	Acceptable	EPA 8082 1996	8/21/2025				
8885	Aroclor 1221	mg/kg	< 0.1	< 0.100	0.00 - 0.100	Acceptable	EPA 8082 1996	8/21/2025				
8890	Aroclor 1232	mg/kg	2.445	3.18	0.344 - 3.94	Acceptable	EPA 8082 1996	8/21/2025	0.658	2.14	0.461	
8895	Aroclor 1242	mg/kg	< 0.1	< 0.100	0.00 - 0.100	Acceptable	EPA 8082 1996	8/21/2025				
8900	Aroclor 1248	mg/kg	< 0.1	< 0.100	0.00 - 0.100	Acceptable	EPA 8082 1996	8/21/2025				
8905	Aroclor 1254	mg/kg	< 0.1	< 0.100	0.00 - 0.100	Acceptable	EPA 8082 1996	8/21/2025				
8910	Aroclor 1260	mg/kg	< 0.1	< 0.100	0.00 - 0.100	Acceptable	EPA 8082 1996	8/21/2025				



All analytes except for 1,1-Biphenyl, Acetophenone, Atrazine, Benzaldehyde and Caprolactam in the Base/Neutrals & Acids, catalog # 467, Lithium in the Metals, cat # 620, and Nitrite as N and Nitrate + Nitrite as N in the Anions, cat # 873, 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

SOIL-131

Hawaii Analytical Laboratory

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

PCBs in Soil

TCLP Metals in Soil



Emily Devers
Quality Assurance Manager