



A Waters Company

Larry Lem
Calscience Environmental Laboratories
7440 Lincoln Way
Garden Grove, CA 92841-1427

AE-100



Final Report

Air and Emissions Proficiency Testing

Air and Emissions Study

Open Date: 11/19/10

Close Date: 12/20/10

Report Issued Date: 12/28/10



A Waters Company

December 28, 2010

Larry Lem
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Garden Grove, CA 92841-1427

Enclosed is your final report for ERA's AE-100 Air and Emissions Proficiency Testing (PT) study. Your final report includes an evaluation of all results submitted by your laboratory to ERA.

All analytes in ERA's AE-100 Air and Emissions Proficiency Testing (PT) study have been evaluated using the following tiered approach: ERA has gathered proficiency testing data for air and emissions across many national and international studies. Where available the acceptance criteria have been calculated using these studies' data. Where appropriate, ERA has based the acceptance criteria on the study means and study standard deviations. Where these data were not available, the reported results have been evaluated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 0260).

Thank you for your participation in ERA's AE-100 Air and Emissions Proficiency Testing (PT) study. If you have any questions, please contact the proficiency testing department, or myself, at 1-800-372-0122.

Sincerely,

A handwritten signature in black ink that reads "Jay R. McBurney". The signature is written in a cursive, flowing style.

Jay R. McBurney
Quality Program Manager

attachments
jrm



A Waters Company

Report Recipient	Contact/Phone Number	Reporting Type
DoD EDQW	Fred S McLean / 843-764-7266	All Analytes
EPA Region 9	Andrew Lincoff / 510-412-2330	All Analytes
New York	Dan Dickinson / 518-485-5570	All Analytes
Perry Johnson Laboratory Accreditation, Inc.	Tracy Szerszen / 877-369-5227	All Analytes

AE-100 Definitions & Study Discussion

Study Dates: 11/19/10 - 12/20/10

Report Issued: 12/28/10

AE Study Definitions

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

The Assigned Values for ERA's Air and Emissions Proficiency Testing (PT) 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 are directly traceable to the commercially prepared starting materials used to manufacture the PT standards.

The Acceptance Limits are established per the NELAC PT program criteria 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.

AE Study Discussion

ERA's AE-100 Air and Emissions Proficiency Testing (PT) study has been reviewed by ERA senior management.

A full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes in the Air and Emissions study standards met the acceptance criteria contained in the NELAC Proficiency Testing Program Standards, Chapter 2, July 2003. The acceptance limits were calculated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 0260, Rev. 2.0).

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 Air and Emissions 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 Air and Emissions Proficiency Testing program, please contact Jay McBurney, Quality Program Manager, or the proficiency testing department at 1-800-372-0122.





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Study: **AE-100**

ERA Customer Number: **C052701**

Laboratory Name: **Calscience
Environmental
Laboratories**

Organic Results





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AE-100 Final Complete Report

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C052701
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11/19/10 - 12/20/10

Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
AE Volatiles in Gas Cylinder (cat# 1000)							
4375	Benzene	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4395	Bromodichloromethane	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4400	Bromoform	ppbv	14	14.1	6.91 - 17.8	Acceptable	EPA TO-15 GCMS
4950	Bromomethane	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4410	2-Butanone (MEK)	ppbv	< 1.5	0.00		Acceptable	EPA TO-15 GCMS
5000	tert-Butyl methyl ether (MTBE)	ppbv	< 2.0	0.00		Acceptable	EPA TO-15 GCMS
4455	Carbon tetrachloride	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4475	Chlorobenzene	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4575	Chlorodibromomethane	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4485	Chloroethane	ppbv	24	21.6	15.4 - 30.9	Acceptable	EPA TO-15 GCMS
4505	Chloroform	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4960	Chloromethane	ppbv	26	24.9	16.4 - 32.3	Acceptable	EPA TO-15 GCMS
4555	Cyclohexane	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4585	1,2-Dibromoethane (EDB)	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4610	1,2-Dichlorobenzene	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4620	1,4-Dichlorobenzene	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4625	Dichlorodifluoromethane (Freon 12)	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4630	1,1-Dichloroethane	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4635	1,2-Dichloroethane	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4640	1,1-Dichloroethylene	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4645	cis-1,2-Dichloroethylene	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4655	1,2-Dichloropropane	ppbv	8.3	8.12	4.21 - 11.4	Acceptable	EPA TO-15 GCMS
4680	cis-1,3-Dichloropropylene	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4685	trans-1,3-Dichloropropylene	ppbv	< 1.0	0.00		Acceptable	EPA TO-15 GCMS
4695	1,2-Dichlorotetrafluoroethane (Freon 114)	ppbv	< 2.0	0.00		Acceptable	EPA TO-15 GCMS
4765	Ethylbenzene	ppbv	22	20.2	10.5 - 27.8	Acceptable	EPA TO-15 GCMS
4542	p-Ethyltoluene	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
4825	n-Heptane	ppbv	< 2.0	0.00		Acceptable	EPA TO-15 GCMS
4835	Hexachlorobutadiene	ppbv	25	23.4	5.06 - 30.7	Acceptable	EPA TO-15 GCMS
4855	n-Hexane	ppbv	21	18.4	12.9 - 24.7	Acceptable	EPA TO-15 GCMS
4860	2-Hexanone	ppbv	< 1.5	0.00		Acceptable	EPA TO-15 GCMS
4995	4-Methyl-2-pentanone (MIBK)	ppbv	< 1.5	0.00		Acceptable	EPA TO-15 GCMS





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Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
AE Volatiles in Gas Cylinder (cat# 1000) (Continued)							
4836	Propylene	ppbv	< 10	0.00		Acceptable	EPA TO-15 GCMS
5105	1,1,1,2-Tetrachloroethane	ppbv		0.00		Not Reported	
5110	1,1,2,2-Tetrachloroethane	ppbv	< 1.0	0.00		Acceptable	EPA TO-15 GCMS
5115	Tetrachloroethylene	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
5140	Toluene	ppbv	11	10.3	5.20 - 14.3	Acceptable	EPA TO-15 GCMS
5155	1,2,4-Trichlorobenzene	ppbv	4.6	5.42	0.111 - 7.33	Acceptable	EPA TO-15 GCMS
5160	1,1,1-Trichloroethane	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
5165	1,1,2-Trichloroethane	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
5175	Trichlorofluoromethane (Freon 11)	ppbv	< 1.0	0.00		Acceptable	EPA TO-15 GCMS
5195	Trichlorotrifluoroethane (Freon 113)	ppbv	< 1.5	0.00		Acceptable	EPA TO-15 GCMS
5210	1,2,4-Trimethylbenzene	ppbv	8.2	7.82	0.0618 - 15.0	Acceptable	EPA TO-15 GCMS
5215	1,3,5-Trimethylbenzene	ppbv	< 0.50	0.00		Acceptable	EPA TO-15 GCMS
5230	Vinyl bromide	ppbv		0.00		Not Reported	
5235	Vinyl chloride	ppbv	3.2	2.86	1.76 - 3.79	Acceptable	EPA TO-15 GCMS
5260	Xylenes, total	ppbv	< 2.5	0.00		Acceptable	EPA TO-15 GCMS





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