



A Waters Company

Thekkekalathil Chandrasekhar
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SOIL-75



Final Report

Soil/Hazardous Waste Proficiency Testing

Soil Study

Open Date: 07/18/11

Close Date: 09/01/11

Report Issued Date: 09/22/11



A Waters Company

September 22, 2011

Thekkekalathil Chandrasekhar
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Enclosed is your final report for ERA's SOIL-75 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-75 Proficiency Testing study have been evaluated using the following tiered approach. If the analyte is listed in the current TNI Fields of Proficiency Testing (FoPT) tables, the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the current TNI FoPT tables. If the analyte is not included in the TNI FoPT tables, the reported result has been evaluated using the procedures outlined in ERA's Standard Operating Procedure for the Generation of Performance Acceptance Limits (SOP 0260).

Please note the following changes to our final reports:

- At the request of the TNI Accreditation Council, we have included a Laboratory Exception Report that includes a list of all analytes reported with less than qualifiers when the assigned value was greater than "0." In addition, because we have received many requests from laboratories, this report also includes a list of all analytes with "Not Acceptable" evaluations.
- Some states have elected not to convert to the 2009 TNI Standards at this time. If you have released your results to a state that has retained the 2003 NELAC Evaluation Criteria, your final report will include a section that evaluates the results according to the 2003 Standard in addition to the 2009 TNI Standards.

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 well over three hundred 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 helpful in helping you work through your technical issues.

Thank you for your participation in ERA's SOIL-75 Proficiency Testing study. If you have any questions, please contact our Proficiency Testing Department at 1-800-372-0122.

Sincerely,

Jay R. McBurney
Quality Program Manager

attachments
jrm



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Report Recipient	Contact/Phone Number	Reporting Type	Evaluation Type
Florida	Steve Arms / 904-791-1502	All Analytes	2009 TNI



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SOIL-75 Definitions & Study Discussion

Study Dates: 07/18/11 - 09/01/11

Report Issued: 09/22/11

SOIL Study Definitions

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

The ERA Assigned Value for the Organic Proficiency Testing Standards is 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 ERA assigned value for the Inorganic Proficiency Testing Standards, with the exception of the TCLP Metals in Soil, is equal to the maximum amount of the parameter available in the standard by applicable EPA methodologies. The ERA assigned value for the TCLP metals is equal to the mean of ERA's internal analytical analyses. The assigned values are directly traceable to the commercially prepared starting materials used to manufacture the PT standards. All parameters not added to the standard are given an assigned value of "< PTRL", per the guidelines contained in the 2009 TNI Standards. 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 tables, 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-75 Proficiency Testing (PT) study has been reviewed by ERA senior management and certified compliant with the requirements of the 2009 TNI PT Standard and the criteria contained in the current TNI FoPT tables.

ERA's SOIL-75 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 2009 TNI PT Standard and the criteria contained in the current TNI Fields of Proficiency Testing (FoPT) tables.

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-75 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-75 Laboratory Exception Report

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2009 TNI Evaluation Check: There are no values reported with < where the assigned value was greater than 0.

2009 TNI Not Acceptable Evaluations: There were no Not Acceptable evaluations for this study.



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



2009 TNI Evaluation Report

Study: **SOIL-75**

ERA Customer Number: **S744810**

Laboratory Name: **State of Florida DEP -
Innov Park Lab**

Organic Results





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SOIL-75 2009 TNI Evaluation Final Complete Report

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NELAC 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 Volatiles in Soil (cat# 623)

4315	Acetone	µg/kg	123	346	40.0 - 626	Acceptable	EPA 8260C	8/25/2011	-1.34	278	116	BOOESHAG_F
4320	Acetonitrile	µg/kg		640	145 - 1080	Not Reported				612	155	
4325	Acrolein	µg/kg		< 2.00	0.00 - 2.00	Not Reported				0.00	0.00	
4375	Benzene	µg/kg	69.5	76.0	44.7 - 105	Acceptable	EPA 8260C	8/25/2011	-0.854	75.3	6.77	BOOESHAG_F
4385	Bromobenzene	µg/kg		< 10.0	0.00 - 10.0	Not Reported				0.00	0.00	
4395	Bromodichloromethane	µg/kg	155	155	102 - 213	Acceptable	EPA 8260C	8/25/2011	-0.323	160	14.4	BOOESHAG_F
4400	Bromoform	µg/kg	88.3	92.1	46.4 - 137	Acceptable	EPA 8260C	8/25/2011	-0.531	94.9	12.5	BOOESHAG_F
4950	Bromomethane	µg/kg	< 2.00	< 20.0	0.00 - 20.0	Acceptable	EPA 8260C	8/25/2011		8.44	0.00	BOOESHAG_F
4410	2-Butanone (MEK)	µg/kg	181	390	63.8 - 612	Acceptable	EPA 8260C	8/25/2011	-1.72	338	91.4	BOOESHAG_F
5000	tert-Butyl methyl ether (MTBE)	µg/kg	189	192	81.3 - 280	Acceptable	EPA 8260C	8/25/2011	-0.142	192	23.2	BOOESHAG_F
4450	Carbon disulfide	µg/kg		< 12.0	0.00 - 12.0	Not Reported				0.00	0.00	
4455	Carbon tetrachloride	µg/kg	150	157	76.5 - 232	Acceptable	EPA 8260C	8/25/2011	-0.686	162	17.2	BOOESHAG_F
4475	Chlorobenzene	µg/kg	99.0	105	59.0 - 145	Acceptable	EPA 8260C	8/25/2011	-0.585	105	10.1	BOOESHAG_F
4575	Chlorodibromomethane	µg/kg	172	169	104 - 232	Acceptable	EPA 8260C	8/25/2011	-0.0763	173	17.8	BOOESHAG_F
4485	Chloroethane	µg/kg	< 2.00	< 20.0	0.00 - 20.0	Acceptable	EPA 8260C	8/25/2011		162	0.00	BOOESHAG_F
4500	2-Chloroethylvinylether	µg/kg		< 2.00	0.00 - 2.00	Not Reported				0.00	0.00	
4505	Chloroform	µg/kg	205	197	120 - 274	Acceptable	EPA 8260C	8/25/2011	0.515	195	19.1	BOOESHAG_F
4960	Chloromethane	µg/kg	< 2.00	< 20.0	0.00 - 20.0	Acceptable	EPA 8260C	8/25/2011		0.00	0.00	BOOESHAG_F
4570	1,2-Dibromo-3-chloropropane (DBCP)	µg/kg		185	87.5 - 256	Not Reported				172	28.1	
4585	1,2-Dibromoethane (EDB)	µg/kg		< 10.0	0.00 - 10.0	Not Reported				0.00	0.00	
4595	Dibromomethane	µg/kg		< 12.0	0.00 - 12.0	Not Reported				10.6	0.00	



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





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SOIL Volatiles in Soil (cat# 623) (Continued)

4610	1,2-Dichlorobenzene	µg/kg	132	135	65.2 - 191	Acceptable	EPA 8260C	8/25/2011	-0.493	138	12.9	BOOESHAG_F
4615	1,3-Dichlorobenzene	µg/kg	146	160	62.6 - 236	Acceptable	EPA 8260C	8/25/2011	-0.636	159	20.1	BOOESHAG_F
4620	1,4-Dichlorobenzene	µg/kg	69.8	72.9	25.2 - 104	Acceptable	EPA 8260C	8/25/2011	-0.376	72.7	7.72	BOOESHAG_F
4625	Dichlorodifluoromethane (Freon 12)	µg/kg	< 2.00	< 20.0	0.00 - 20.0	Acceptable	EPA 8260C	8/25/2011		0.00	0.00	BOOESHAG_F
4630	1,1-Dichloroethane	µg/kg	199	187	106 - 269	Acceptable	EPA 8260C	8/25/2011	0.401	191	19.3	BOOESHAG_F
4635	1,2-Dichloroethane	µg/kg	72.0	70.4	41.2 - 98.7	Acceptable	EPA 8260C	8/25/2011	0.330	70.1	5.65	BOOESHAG_F
4640	1,1-Dichloroethylene	µg/kg	155	145	102 - 204	Acceptable	EPA 8260C	8/25/2011	0.123	153	17.1	BOOESHAG_F
4645	cis-1,2-Dichloroethylene	µg/kg	158	154	104 - 204	Acceptable	EPA 8260C	8/25/2011	0.240	154	16.8	BOOESHAG_F
4700	trans-1,2-Dichloroethylene	µg/kg	70.3	72.9	49.5 - 101	Acceptable	EPA 8260C	8/25/2011	-0.583	75.3	8.59	BOOESHAG_F
4655	1,2-Dichloropropane	µg/kg	152	161	94.1 - 215	Acceptable	EPA 8260C	8/25/2011	-0.775	162	13.3	BOOESHAG_F
4680	cis-1,3-Dichloropropylene	µg/kg	< 2.00	< 10.0	0.00 - 10.0	Acceptable	EPA 8260C	8/25/2011		0.00	0.00	BOOESHAG_F
4685	trans-1,3-Dichloropropylene	µg/kg	< 0.800	< 10.0	0.00 - 10.0	Acceptable	EPA 8260C	8/25/2011		0.00	0.00	BOOESHAG_F
4765	Ethylbenzene	µg/kg	167	162	90.9 - 230	Acceptable	EPA 8260C	8/25/2011	0.333	161	18.2	BOOESHAG_F
4860	2-Hexanone	µg/kg	184	378	98.2 - 583	Acceptable	EPA 8260C	8/25/2011	-1.94	341	80.8	BOOESHAG_F
4900	Isopropylbenzene	µg/kg		107	66.9 - 161	Not Reported				114	15.7	
4975	Methylene chloride	µg/kg	204	186	87.1 - 267	Acceptable	EPA 8260C	8/25/2011	0.804	184	25.0	BOOESHAG_F
4995	4-Methyl-2-pentanone (MIBK)	µg/kg	146	254	112 - 368	Acceptable	EPA 8260C	8/25/2011	-2.1	244	46.7	BOOESHAG_F
5005	Naphthalene	µg/kg		149	63.3 - 236	Not Reported				150	28.8	
5100	Styrene	µg/kg	115	116	77.7 - 159	Acceptable	EPA 8260C	8/25/2011	-0.241	118	13.5	BOOESHAG_F
5105	1,1,1,2-Tetrachloroethane	µg/kg		68.1	44.0 - 94.3	Not Reported				69.9	6.10	
5110	1,1,2,2-Tetrachloroethane	µg/kg	167	198	104 - 286	Acceptable	EPA 8260C	8/25/2011	-1.06	189	20.8	BOOESHAG_F



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





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SOIL Volatiles in Soil (cat# 623) (Continued)

5115	Tetrachloroethylene	µg/kg	78.5	83.9	37.4 - 121	Acceptable	EPA 8260C	8/25/2011	-0.339	82.5	11.7	BOOESHAG_F
5140	Toluene	µg/kg	102	108	62.0 - 152	Acceptable	EPA 8260C	8/25/2011	-0.366	106	10.4	BOOESHAG_F
5155	1,2,4-Trichlorobenzene	µg/kg		128	67.3 - 180	Not Reported				124	18.8	
5160	1,1,1-Trichloroethane	µg/kg	132	139	79.3 - 198	Acceptable	EPA 8260C	8/25/2011	-0.446	138	14.7	BOOESHAG_F
5165	1,1,2-Trichloroethane	µg/kg	152	152	88.7 - 208	Acceptable	EPA 8260C	8/25/2011	0.0334	152	12.6	BOOESHAG_F
5170	Trichloroethylene	µg/kg	136	128	65.8 - 182	Acceptable	EPA 8260C	8/25/2011	0.508	129	12.8	BOOESHAG_F
5175	Trichlorofluoromethane	µg/kg	< 2.00	< 20.0	0.00 - 20.0	Acceptable	EPA 8260C	8/25/2011		0.00	0.00	BOOESHAG_F
5180	1,2,3-Trichloropropane (TCP)	µg/kg		73.0	36.7 - 108	Not Reported				72.2	11.8	
5225	Vinyl acetate	µg/kg		< 2.00	0.00 - 2.00	Not Reported				0.00	0.00	
5235	Vinyl chloride	µg/kg	< 2.00	< 20.0	0.00 - 20.0	Acceptable	EPA 8260C	8/25/2011		0.00	0.00	BOOESHAG_F
5260	Xylenes, total	µg/kg	246	259	128 - 380	Acceptable	EPA 8260C	8/25/2011	-0.265	253	25.8	BOOESHAG_F



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

