



A Waters Company

Thekkekalathil Chandrasekhar
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2600 Blair Stone Road
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SOIL-78



Final Report

Soil/Hazardous Waste Proficiency Testing

Soil Study

Open Date: 04/23/12

Close Date: 06/07/12

Report Issued Date: 06/27/12



A Waters Company

June 27, 2012

Thekkekalathil Chandrasekhar
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Enclosed is your final report for ERA's SOIL-78 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-78 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-78 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-78 Definitions & Study Discussion

Study Dates: 04/23/12 - 06/07/12

Report Issued: 06/27/12

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 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 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 Fields of Proficiency Testing (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-78 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 most current TNI Fields of Proficiency Testing (FoPT) tables.

ERA's SOIL-78 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 most current TNI 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-78 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.



SOIL-78 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.



Final Report Results For Laboratory State of Florida DEP Chemistry Laboratory



2009 TNI Evaluation Report

Study: **SOIL-78**

ERA Customer Number: **S744803**

Laboratory Name: **State of Florida DEP
Chemistry Laboratory**

Inorganic Results



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SOIL-78 2009 TNI Evaluation Final Complete 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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SOIL Cyanide in Soil (cat# 621)

1635	Cyanide, total	mg/kg	104	124	26.9 - 136	Acceptable	EPA 9012B	5/10/2012	0.979	67.7	37.0	BRYANT_V
1923	Reactive Cyanide	mg/kg		< 25.0	0.00 - 25.0	Not Reported						

SOIL Ignitability/Flashpoint (cat# 874)

1780	Ignitability/Flashpoint	°F	143	138	121 - 155	Acceptable	EPA 1010A 2002	5/1/2012	0.195	142	7.12	KAUS_P
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All analytes are included in ERA's A2LA accreditation. Lab Code: 1539-01



2009 TNI Evaluation Report

Study: **SOIL-78**

ERA Customer Number: **S744803**

Laboratory Name: **State of Florida DEP
Chemistry Laboratory**

Organic Results



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SOIL-78 2009 TNI Evaluation Final Complete Report

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SOIL Nitroaromatics & Nitramines in Soil (cat# 871)

9306	4-Amino-2,6-dinitrotoluene	µg/kg		3570	1170 - 3930	Not Reported				2550	458	
9303	2-Amino-4,6-dinitrotoluene	µg/kg		5990	3460 - 6590	Not Reported				4660	397	
6160	1,3-Dinitrobenzene	µg/kg	< 60.0	< 1500	0.00 - 1500	Acceptable	EPA 8270D 3	5/2/2012				GHAFFARI_M
6185	2,4-Dinitrotoluene	µg/kg		9560	2100 - 13200	Not Reported				7670	882	
6190	2,6-Dinitrotoluene	µg/kg		2160	438 - 2860	Not Reported				1650	272	
9522	HMX	µg/kg		2560	793 - 3120	Not Reported				1960	388	
5015	Nitrobenzene	µg/kg		6890	1440 - 9790	Not Reported				5620	674	
9507	2-Nitrotoluene	µg/kg		< 1500	0.00 - 1500	Not Reported						
9510	3-Nitrotoluene	µg/kg		9420	6130 - 10400	Not Reported				8040	636	
9513	4-Nitrotoluene	µg/kg		2500	1520 - 2820	Not Reported				2170	217	
9432	RDX	µg/kg		< 1500	0.00 - 1500	Not Reported						
6415	Tetryl	µg/kg		< 1500	0.00 - 1500	Not Reported						
6885	1,3,5-Trinitrobenzene	µg/kg	4990	4510	1960 - 5390	Acceptable	EPA 8270D 3	5/2/2012	2.29	3680	572	GHAFFARI_M
9651	2,4,6-Trinitrotoluene	µg/kg		7470	1810 - 8320	Not Reported				5060	1080	



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SOIL Organochlorine Pesticides in Soil (cat# 468)

7025	Aldrin	µg/kg	212	308	88.8 - 392	Acceptable	EPA 8081B	5/8/2012	-0.529	240	53.5	NAGAR_V
7110	alpha-BHC	µg/kg	123	180	43.6 - 223	Acceptable	EPA 8081B	5/8/2012	-0.333	133	31.0	NAGAR_V
7115	beta-BHC	µg/kg	127	182	29.5 - 258	Acceptable	EPA 8081B	5/8/2012	-0.65	144	25.5	NAGAR_V
7105	delta-BHC	µg/kg	298	401	102 - 542	Acceptable	EPA 8081B	5/8/2012	-0.363	322	66.2	NAGAR_V
7120	gamma-BHC(Lindane)	µg/kg	158	232	59.2 - 314	Acceptable	EPA 8081B	5/8/2012	-0.765	187	37.7	NAGAR_V
7240	alpha-Chlordane	µg/kg	310	407	132 - 511	Acceptable	EPA 8081B	5/8/2012	-0.166	322	69.1	NAGAR_V
7245	gamma-Chlordane	µg/kg	158	217	84.5 - 276	Acceptable	EPA 8081B	5/8/2012	-0.775	180	28.6	NAGAR_V
7355	4,4'-DDD	µg/kg	397	482	172 - 629	Acceptable	EPA 8081B	5/8/2012	-0.0436	401	83.8	NAGAR_V
7360	4,4'-DDE	µg/kg	345	443	154 - 581	Acceptable	EPA 8081B	5/8/2012	-0.32	368	70.5	NAGAR_V
7365	4,4'-DDT	µg/kg	178	218	49.4 - 301	Acceptable	EPA 8081B	5/8/2012	0.0616	175	43.1	NAGAR_V
7470	Dieldrin	µg/kg	298	398	138 - 497	Acceptable	EPA 8081B	5/8/2012	-0.341	318	57.9	NAGAR_V
7540	Endrin	µg/kg	135	152	53.2 - 209	Acceptable	EPA 8081B	5/8/2012	0.126	131	30.6	NAGAR_V
7530	Endrin aldehyde	µg/kg	242	359	42.8 - 433	Acceptable	EPA 8081B	5/8/2012	0.0659	238	64.5	NAGAR_V
7535	Endrin ketone	µg/kg	339	492	124 - 645	Acceptable	EPA 8081B	5/14/2012	-0.529	384	85.7	NAGAR_V
7510	Endosulfan I	µg/kg	202	419	79.9 - 461	Acceptable	EPA 8081B	5/8/2012	-0.149	210	54.1	NAGAR_V
7515	Endosulfan II	µg/kg	271	489	94.8 - 538	Acceptable	EPA 8081B	5/8/2012	0.0633	266	73.2	NAGAR_V
7520	Endosulfan sulfate	µg/kg	366	461	97.5 - 623	Acceptable	EPA 8081B	5/8/2012	0.0723	360	82.4	NAGAR_V
7685	Heptachlor	µg/kg	131	174	48.5 - 228	Acceptable	EPA 8081B	5/8/2012	-0.286	138	26.0	NAGAR_V
7690	Heptachlor epoxide	µg/kg	220	290	98.5 - 376	Acceptable	EPA 8081B	5/8/2012	-0.431	237	40.4	NAGAR_V
7810	Methoxychlor	µg/kg	340	488	58.6 - 746	Acceptable	EPA 8081B	5/14/2012	-0.513	402	122	NAGAR_V



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SOIL Chlordane in Soil (cat# 628)

7250	Chlordane, technical	µg/kg	393	429	86.0 - 591	Acceptable	EPA 8081B	5/9/2012	0.768	338	71.2	NAGAR_V
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SOIL Toxaphene in Soil (cat# 627)

8250	Toxaphene	µg/kg	711	1160	160 - 1770	Acceptable	EPA 8081B	5/9/2012	-0.943	963	268	NAGAR_V
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SOIL Organophosphorus Pesticides in Soil (cat# 878)

7075	Azinphos-methyl (Guthion)	µg/kg	647	774	216 - 926	Acceptable	EPA 8141B	5/15/2012	0.642	571	118	PREAMPLU_G
7300	Chlorpyrifos	µg/kg	< 1.70	< 100	0.00 - 100	Acceptable	EPA 8141B	5/15/2012				PREAMPLU_G
7395	Demeton-O	µg/kg		< 100	0.00 - 100	Not Reported						
7385	Demeton-S	µg/kg		< 100	0.00 - 100	Not Reported						
7410	Diazinon	µg/kg	< 1.70	< 100	0.00 - 100	Acceptable	EPA 8141B	5/15/2012				PREAMPLU_G
8610	Dichlorvos (DDVP)	µg/kg		< 100	0.00 - 100	Not Reported						
8625	Disulfoton	µg/kg	402	505	96.4 - 556	Acceptable	EPA 8141B	5/15/2012	1.76	289	64.2	PREAMPLU_G
7955	Ethyl Parathion	µg/kg	915	785	287 - 1120	Acceptable	EPA 8141B	5/15/2012	1.51	705	139	PREAMPLU_G
7770	Malathion	µg/kg	521	630	85.0 - 749	Acceptable	EPA 8141B	5/15/2012	0.939	417	111	PREAMPLU_G
7825	Methyl Parathion	µg/kg	432	534	150 - 587	Acceptable	EPA 8141B	5/15/2012	1.07	358	69.3	PREAMPLU_G
7985	Phorate	µg/kg	720	833	184 - 955	Acceptable	EPA 8141B	5/15/2012	1.17	569	128	PREAMPLU_G
8110	Ronnel	µg/kg		785	210 - 864	Not Reported				441	77.2	
8200	Stirophos (tetrachlorovinphos)	µg/kg		< 100	0.00 - 100	Not Reported						
8185	Terbufos	µg/kg	205	220	77.8 - 301	Acceptable	EPA 8141B	5/15/2012	0.180	179	146	PREAMPLU_G



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SOIL PCBs in Soil (cat# 624)

8880	Aroclor 1016	mg/kg	< 0.00330	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	5/5/2012				NAGAR_V
8885	Aroclor 1221	mg/kg	< 0.00670	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	5/5/2012				NAGAR_V
8890	Aroclor 1232	mg/kg	< 0.00330	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	5/5/2012				NAGAR_V
8895	Aroclor 1242	mg/kg	< 0.00330	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	5/5/2012				NAGAR_V
8900	Aroclor 1248	mg/kg	< 0.00330	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	5/5/2012				NAGAR_V
8905	Aroclor 1254	mg/kg	7.72	7.96	1.87 - 11.7	Acceptable	EPA 8082A	5/5/2012	0.440	6.80	2.09	NAGAR_V
8910	Aroclor 1260	mg/kg	< 0.00330	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	5/5/2012				NAGAR_V



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

