



A Waters Company

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SOIL-80



Final Report

Soil/Hazardous Waste Proficiency Testing

Soil Study

Open Date: 10/22/12

Close Date: 12/06/12

Report Issued Date: 12/26/12



A Waters Company

December 26, 2012

Thekkekalathil Chandrasekhar
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Enclosed is your final report for ERA's SOIL-80 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-80 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).

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 useful in helping you work through your technical issues.

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.

Thank you for your participation in ERA's SOIL-80 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-80 Definitions & Study Discussion

Study Dates: 10/22/12 - 12/06/12

Report Issued: 12/26/12

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 and Total Organic Carbon (TOC) in the Nutrients in Soil sample, 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 and TOC 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-80 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-80 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-80 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-80 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-80**

ERA Customer Number: **S744803**

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

Inorganic Results



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SOIL-80 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	47.3	60.7	10.0 - 66.8	Acceptable	EPA 9012B	11/7/2012	0.728	33.3	19.3	BRYANT_V
1923	Reactive Cyanide	mg/kg		< 25.0	0.00 - 25.0	Not Reported						

SOIL Ignitability/Flashpoint (cat# 874)

1780	Ignitability/Flashpoint	°F	124	120	103 - 137	Acceptable	EPA 1010A	10/30/2012	0.330	122	5.90	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-80**

ERA Customer Number: **S744803**

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

Organic Results



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SOIL-80 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		5550	3260 - 6100	Not Reported				4510	417	
9303	2-Amino-4,6-dinitrotoluene	µg/kg		5450	3130 - 6200	Not Reported				4660	512	
6160	1,3-Dinitrobenzene	µg/kg	< 60.0	< 1500	0.00 - 1500	Acceptable	EPA 8270D 3	11/7/2012				GHAFFARI_M
6185	2,4-Dinitrotoluene	µg/kg		12300	3290 - 19200	Not Reported				11200	1360	
6190	2,6-Dinitrotoluene	µg/kg		6370	2300 - 8990	Not Reported				5640	738	
9522	HMX	µg/kg		< 1500	0.00 - 1500	Not Reported						
5015	Nitrobenzene	µg/kg		2240	263 - 3750	Not Reported				2000	272	
9507	2-Nitrotoluene	µg/kg		8590	5420 - 11200	Not Reported				8300	962	
9510	3-Nitrotoluene	µg/kg		9420	5910 - 11500	Not Reported				8700	929	
9513	4-Nitrotoluene	µg/kg		9890	6200 - 11900	Not Reported				9050	950	
9432	RDX	µg/kg		1710	792 - 2100	Not Reported				1440	217	
6415	Tetryl	µg/kg		< 1500	0.00 - 1500	Not Reported						
6885	1,3,5-Trinitrobenzene	µg/kg	2140	2690	1280 - 3310	Acceptable	EPA 8270D 3	11/7/2012	-0.461	2300	337	GHAFFARI_M
9651	2,4,6-Trinitrotoluene	µg/kg		2670	1230 - 2940	Not Reported				2070	281	



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SOIL Organochlorine Pesticides in Soil (cat# 468)

7025	Aldrin	µg/kg	279	402	113 - 490	Acceptable	EPA 8081B 2	11/2/2012	-0.449	302	50.1	NAGAR_V
7110	alpha-BHC	µg/kg	257	403	106 - 473	Acceptable	EPA 8081B 2	11/2/2012	-0.587	289	55.0	NAGAR_V
7115	beta-BHC	µg/kg	190	284	47.2 - 360	Acceptable	EPA 8081B 2	11/2/2012	-0.319	204	43.0	NAGAR_V
7105	delta-BHC	µg/kg	236	344	77.4 - 430	Acceptable	EPA 8081B 2	11/2/2012	-0.397	254	44.8	NAGAR_V
7120	gamma-BHC(Lindane)	µg/kg	90.6	152	27.6 - 193	Acceptable	EPA 8081B 2	11/3/2012	-0.887	110	22.1	NAGAR_V
7240	alpha-Chlordane	µg/kg	238	308	94.8 - 372	Acceptable	EPA 8081B 2	11/2/2012	0.130	233	36.8	NAGAR_V
7245	gamma-Chlordane	µg/kg	142	185	66.2 - 225	Acceptable	EPA 8081B 2	11/2/2012	-0.142	146	24.9	NAGAR_V
7355	4,4'-DDD	µg/kg	289	334	104 - 419	Acceptable	EPA 8081B 2	11/2/2012	0.575	261	48.0	NAGAR_V
7360	4,4'-DDE	µg/kg	265	333	103 - 410	Acceptable	EPA 8081B 2	11/2/2012	0.188	257	44.1	NAGAR_V
7365	4,4'-DDT	µg/kg	138	169	35.3 - 229	Acceptable	EPA 8081B 2	11/3/2012	0.219	132	26.7	NAGAR_V
7470	Dieldrin	µg/kg	260	333	107 - 402	Acceptable	EPA 8081B 2	11/2/2012	0.128	254	42.7	NAGAR_V
7540	Endrin	µg/kg	191	238	86.0 - 291	Acceptable	EPA 8081B 2	11/3/2012	0.0659	189	34.7	NAGAR_V
7530	Endrin aldehyde	µg/kg	125	202	20.2 - 238	Acceptable	EPA 8081B 2	11/3/2012	0.0723	123	27.8	NAGAR_V
7535	Endrin ketone	µg/kg	252	277	62.8 - 351	Acceptable	EPA 8081B 2	11/2/2012	1.03	207	43.6	NAGAR_V
7510	Endosulfan I	µg/kg	217	403	79.5 - 443	Acceptable	EPA 8081B 2	11/2/2012	0.198	209	39.4	NAGAR_V
7515	Endosulfan II	µg/kg	236	391	73.4 - 430	Acceptable	EPA 8081B 2	11/2/2012	0.591	212	40.7	NAGAR_V
7520	Endosulfan sulfate	µg/kg	381	461	93.4 - 599	Acceptable	EPA 8081B 2	11/2/2012	0.485	346	71.6	NAGAR_V
7685	Heptachlor	µg/kg	186	257	70.6 - 323	Acceptable	EPA 8081B 2	11/2/2012	-0.318	197	34.6	NAGAR_V
7690	Heptachlor epoxide	µg/kg	156	209	63.6 - 249	Acceptable	EPA 8081B 2	11/2/2012	-0.0173	156	27.2	NAGAR_V
7810	Methoxychlor	µg/kg	220	235	23.5 - 384	Acceptable	EPA 8081B 2	11/3/2012	0.415	202	43.1	NAGAR_V



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SOIL Chlordane in Soil (cat# 628)

7250	Chlordane, technical	µg/kg	513	702	137 - 904	Acceptable	EPA 8081B 2	11/3/2012	-0.0613	521	125	NAGAR_V
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SOIL Toxaphene in Soil (cat# 627)

8250	Toxaphene	µg/kg	383	536	158 - 716	Acceptable	EPA 8081B 2	11/3/2012	-0.582	437	93.1	NAGAR_V
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SOIL Organophosphorus Pesticides in Soil (cat# 878)

7075	Azinphos-methyl (Guthion)	µg/kg	334	356	5.35 - 514	Acceptable	EPA 8141B	11/7/2012	0.873	260	84.8	CARBONE_I
7300	Chlorpyrifos	µg/kg	< 1.70	< 100	0.00 - 100	Acceptable	EPA 8141B	11/7/2012				CARBONE_I
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	11/7/2012				CARBONE_I
8610	Dichlorvos (DDVP)	µg/kg		< 100	0.00 - 100	Not Reported						
8625	Disulfoton	µg/kg	575	662	0.00 - 826	Acceptable	EPA 8141B	11/7/2012	1.32	378	149	CARBONE_I
7955	Ethyl Parathion	µg/kg	599	571	216 - 738	Acceptable	EPA 8141B	11/7/2012	1.40	477	87.0	CARBONE_I
7770	Malathion	µg/kg	204	249	67.4 - 274	Acceptable	EPA 8141B	11/7/2012	1.24	164	32.2	CARBONE_I
7825	Methyl Parathion	µg/kg	309	428	86.9 - 471	Acceptable	EPA 8141B	11/7/2012	1.00	253	55.5	CARBONE_I
7985	Phorate	µg/kg	612	613	115 - 719	Acceptable	EPA 8141B	11/7/2012	1.94	417	101	CARBONE_I
8110	Ronnel	µg/kg		881	78.9 - 969	Not Reported				470	130	
8200	Stirophos (tetrachlorovinphos)	µg/kg		< 100	0.00 - 100	Not Reported						
8185	Terbufos	µg/kg	290	300	46.5 - 405	Acceptable	EPA 8141B	11/7/2012	1.08	226	59.7	CARBONE_I



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SOIL PCBs in Soil (cat# 624)

8880	Aroclor 1016	mg/kg	< 0.0033	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	11/3/2012				NAGAR_V
8885	Aroclor 1221	mg/kg	< 0.0067	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	11/3/2012				NAGAR_V
8890	Aroclor 1232	mg/kg	< 0.0033	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	11/3/2012				NAGAR_V
8895	Aroclor 1242	mg/kg	< 0.0033	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	11/3/2012				NAGAR_V
8900	Aroclor 1248	mg/kg	< 0.0033	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	11/3/2012				NAGAR_V
8905	Aroclor 1254	mg/kg	4.11	6.10	1.22 - 8.39	Acceptable	EPA 8082A	11/3/2012	-0.498	4.80	1.39	NAGAR_V
8910	Aroclor 1260	mg/kg	< 0.0033	< 0.100	0.00 - 0.100	Acceptable	EPA 8082A	11/3/2012				NAGAR_V



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

