



A Waters Company

Thekkekalathil Chandrasekhar
State of Florida DEP Chemistry Laboratory
2600 Blair Stone Road
Room A416D, MS6512
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SOIL-74



Final Report

Soil/Hazardous Waste Proficiency Testing

Soil Study

Open Date: 04/18/11

Close Date: 06/02/11

Report Issued Date: 06/23/11



A Waters Company

June 23, 2011

Thekkekalathil Chandrasekhar
State of Florida DEP Chemistry Laboratory
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Enclosed is your final report for ERA's SOIL-74 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-74 Proficiency Testing (PT) study have been evaluated using the following tiered approach. If the analyte is listed in the most current National Environmental Laboratory Accreditation Conference (NELAC) PT Field of Testing tables, the evaluation was completed by comparing the reported result to the acceptance limits generated using the criteria contained in the NELAC FoPT tables. If the analyte is not included in the NELAC 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 helpful in helping you work through your technical issues.

Thank you for your participation in ERA's SOIL-74 Proficiency Testing study. If you have any questions, please contact the proficiency testing department, or myself, at 1-800-372-0122.

Sincerely,

Jay R. McBurney
Quality Program Manager

attachments
jrm



A Waters Company

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



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SOIL-74 Definitions & Study Discussion

Study Dates: 04/18/11 - 06/02/11

Report Issued: 06/23/11

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 NELAC parameters not added to a standard are given an assigned Value of "0", per the guidance issued by the NELAC Board of Directors, on December 14, 2000. Non-NELAC parameters not added to a standard may be given an assigned value of less than a minimum verified concentration as determined in the background soil for applicable EPA methodologies.

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.

SOIL Study Discussion

ERA's SOIL-74 Proficiency Testing (PT) study has been reviewed by ERA senior management and certified compliant with the requirements of the National Environmental Laboratory Accreditation Conference (NELAC), Proficiency Testing Program Standards, Chapter 2, July 2003.

Per the requirements of the NELAC Proficiency Testing Program, a full review of all homogeneity, stability and accuracy verification data was completed. All analytical verification data for all analytes in the Soil study standards met the acceptance criteria contained in the NELAC Proficiency Testing Program Standards, Chapter 2, July 2003. If the analyte is included in the NELAC Fields of Testing list, the acceptance limits were calculated based on the NELAC Proficiency Testing Program Standards, Chapter 2, July 2003. If the analyte is not included in the NELAC Fields of Testing list, 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 SOIL-74 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 Jay McBurney, Quality Program Manager, or the proficiency testing department at 1-800-372-0122.





A Waters Company

Study: **SOIL-74**

ERA Customer Number: **S744803**

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

Inorganic Results





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SOIL-74 Final Complete Report

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QA Officer
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EPA ID: FLO1181
ERA Customer Number: S744803
Report Issued: 06/23/11
Study Dates: 04/18/11 - 06/02/11

Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
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SOIL Cyanide in Soil (cat# 621)

1635	Cyanide, total	mg/kg	46.1	47.5	14.5 - 59.8	Acceptable	EPA 9012B
1923	Reactive Cyanide	mg/kg		< 25.0		Not Reported	

SOIL Ignitability/Flashpoint (cat# 874)

1780	Ignitability/Flashpoint	°F	130	135	118 - 152	Acceptable	EPA 1010
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Chemistry Laboratory**

Organic Results





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SOIL-74 Final Complete Report

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Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
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SOIL Nitroaromatics & Nitramines in Soil (cat# 871)

9306	4-Amino-2,6-dinitrotoluene	µg/kg		2280	674 - 3020	Not Reported	
9303	2-Amino-4,6-dinitrotoluene	µg/kg		2860	1010 - 3720	Not Reported	
6160	1,3-Dinitrobenzene	µg/kg	2020	2320	768 - 3430	Acceptable	EPA 8270D
6185	2,4-Dinitrotoluene	µg/kg		3580	594 - 5690	Not Reported	
6190	2,6-Dinitrotoluene	µg/kg		3600	1120 - 5120	Not Reported	
9522	HMX	µg/kg		0.00		Not Reported	
5015	Nitrobenzene	µg/kg		8400	2020 - 12800	Not Reported	
9507	2-Nitrotoluene	µg/kg		7650	2690 - 10900	Not Reported	
9510	3-Nitrotoluene	µg/kg		9420	3150 - 13200	Not Reported	
9513	4-Nitrotoluene	µg/kg		4330	3200 - 5070	Not Reported	
9432	RDX	µg/kg		5920	1400 - 8010	Not Reported	
6415	Tetryl	µg/kg		0.00		Not Reported	
6885	1,3,5-Trinitrobenzene	µg/kg	9830	8720	872 - 12800	Acceptable	EPA 8270D
9651	2,4,6-Trinitrotoluene	µg/kg		8800	5570 - 9680	Not Reported	

SOIL Organochlorine Pesticides in Soil (cat# 468)

7025	Aldrin	µg/kg	300	375	105 - 459	Acceptable	EPA 8081B
7110	alpha-BHC	µg/kg	231	292	78.4 - 363	Acceptable	EPA 8081B
7115	beta-BHC	µg/kg	253	309	59.2 - 430	Acceptable	EPA 8081B
7105	delta-BHC	µg/kg	165	180	36.4 - 245	Acceptable	EPA 8081B
7120	gamma-BHC(Lindane)	µg/kg	159	186	41.7 - 247	Acceptable	EPA 8081B
7240	alpha-Chlordane	µg/kg	331	393	130 - 503	Acceptable	EPA 8081B
7245	gamma-Chlordane	µg/kg	348	402	169 - 511	Acceptable	EPA 8081B
7355	4,4'-DDD	µg/kg	368	372	134 - 513	Acceptable	EPA 8081B
7360	4,4'-DDE	µg/kg	411	443	154 - 583	Acceptable	EPA 8081B
7365	4,4'-DDT	µg/kg	232	218	53.8 - 324	Acceptable	EPA 8081B
7470	Dieldrin	µg/kg	353	434	157 - 554	Acceptable	EPA 8081B
7540	Endrin	µg/kg	175	153	58.1 - 221	Acceptable	EPA 8081B
7530	Endrin aldehyde	µg/kg	275	359	37.8 - 405	Acceptable	EPA 8081B
7535	Endrin ketone	µg/kg	460	468	115 - 604	Acceptable	EPA 8081B
7510	Endosulfan I	µg/kg	252	472	87.4 - 519	Acceptable	EPA 8081B
7515	Endosulfan II	µg/kg	241	397	75.1 - 437	Acceptable	EPA 8081B
7520	Endosulfan sulfate	µg/kg	389	412	89.5 - 576	Acceptable	EPA 8081B
7685	Heptachlor	µg/kg	151	160	44.8 - 212	Acceptable	EPA 8081B
7690	Heptachlor epoxide	µg/kg	260	290	98.3 - 375	Acceptable	EPA 8081B
7810	Methoxychlor	µg/kg	362	336	39.6 - 565	Acceptable	EPA 8081B

SOIL Chlordane in Soil (cat# 628)

7250	Chlordane, technical	µg/kg	500	536	104 - 699	Acceptable	EPA 8081B
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Anal. No.	Analyte	Units	Reported Value	Assigned Value	Acceptance Limits	Performance Evaluation	Method Description
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SOIL Toxaphene in Soil (cat# 627)

8250	Toxaphene	µg/kg	1670	1550	394 - 2060	Acceptable	EPA 8081B
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SOIL Organophosphorus Pesticides in Soil (cat# 878)

7075	Azinphos-methyl (Guthion)	µg/kg	776	854	399 - 1000	Acceptable	EPA 8141B
7300	Chlorpyrifos	µg/kg	< 1.70	0.00		Acceptable	EPA 8141B
7395	Demeton-O	µg/kg		0.00		Not Reported	
7385	Demeton-S	µg/kg		0.00		Not Reported	
7410	Diazinon	µg/kg	322	375	0.00 - 521	Acceptable	EPA 8141B
8610	Dichlorvos (DDVP)	µg/kg		0.00		Not Reported	
8625	Disulfoton	µg/kg	103	139	10.7 - 153	Acceptable	EPA 8141B
7955	Ethyl Parathion	µg/kg	363	357	194 - 488	Acceptable	EPA 8141B
7770	Malathion	µg/kg	563	630	258 - 732	Acceptable	EPA 8141B
7825	Methyl Parathion	µg/kg	573	729	310 - 802	Acceptable	EPA 8141B
7985	Phorate	µg/kg	396	465	190 - 512	Acceptable	EPA 8141B
8110	Ronnel	µg/kg		881	356 - 969	Not Reported	
8200	Stirophos (tetrachlorovinphos)	µg/kg		287	0.00 - 316	Not Reported	
8185	Terbufos	µg/kg	< 1.70	0.00		Acceptable	EPA 8141B

SOIL PCBs in Soil (cat# 624)

8880	Aroclor 1016	mg/kg	< 0.010	0.00		Acceptable	EPA 8082
8885	Aroclor 1221	mg/kg	< 0.0067	0.00		Acceptable	EPA 8082
8890	Aroclor 1232	mg/kg	< 0.015	0.00		Acceptable	EPA 8082
8895	Aroclor 1242	mg/kg	< 0.010	0.00		Acceptable	EPA 8082
8900	Aroclor 1248	mg/kg	19.0	19.1	4.84 - 26.8	Acceptable	EPA 8082
8905	Aroclor 1254	mg/kg	< 0.0067	0.00		Acceptable	EPA 8082
8910	Aroclor 1260	mg/kg	< 0.010	0.00		Acceptable	EPA 8082

