

PERFORMANCE EVALUATION

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Off-study

LPTP09-1-255

26-Mar-2009 through 2-Apr-2009

RT1137A

RTC Labcode

FL01182

US EPA Labcode

Florida DEP, Innovation Park Satellite Lab
Andrew Tintle
2600 Blainstone Rd MS 6511
Tallahassee FL 32399-2400

Thank you for participating in study LPTP09-1-255. Additional information about this study may be found online at www.rt-corp.com. If you have any questions or comments about this study please contact me.

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This report may contain data that are not covered by the A2LA accreditation.

Sincerely,

A handwritten signature in black ink, appearing to read "Chris Rucinski", is located below the "Sincerely," text.

Christopher Rucinski
Quality Director

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Dataset

VOAs in Soil - Low Level

Accreditors

Evaluations of this dataset will be sent to the accreditor(s) listed below using your laboratory's labcode listed above each accrediting agency. If any of the information listed below is incorrect, please contact RTC immediately.

Accrediting Labcode E31640

Florida Dept. of Health

229 Stephen Arms
PO Box 210
1217 Pearl Street
Jacksonville FL 32231
UNITED STATES

Volatiles - Low Level (Solids)

Analysis

EPA 8260C (2006)

Method Number 10307003

	Result Units	Assigned Value	Accept.	Z	Evaluation
Acetone 1, 4 4315 / 002-L - Lot 014499 /Analysis Date: 3/30/09	179 µg/Kg	293.00	0.00 to 739	-0.77	Acceptable
Benzene 1, 4 4375 / 002-L - Lot 014499 /Analysis Date: 3/30/09	145 µg/Kg	145.00	88.8 to 201	0.00	Acceptable
Bromodichloromethane 1, 4 4395 / 002-L - Lot 014499 /Analysis Date: 3/30/09	< 2.00 µg/Kg	0.00	0.0 to 0.0		Acceptable
Bromoform 1, 4 4400 / 002-L - Lot 014499 /Analysis Date: 3/30/09	159 µg/Kg	167.00	85.4 to 249	-0.29	Acceptable
2-Butanone (Methyl ethyl ketone, MEK) 1, 4 4410 / 002-L - Lot 014499 /Analysis Date: 3/30/09	229 µg/Kg	291.00	0.00 to 653	-0.51	Acceptable
Carbon tetrachloride 1, 4 4455 / 002-L - Lot 014499 /Analysis Date: 3/30/09	150 µg/Kg	164.00	81.4 to 246	-0.51	Acceptable
Chlorobenzene 1, 4 4475 / 002-L - Lot 014499 /Analysis Date: 3/30/09	175 µg/Kg	168.00	97.6 to 238	0.30	Acceptable
Chloroethane 4, 5 4485 / 002-L - Lot 014499 /Analysis Date: 3/30/09	< 2.00 µg/Kg	0.00	0.0 to 0.0		Acceptable
Chloroform 1, 4 4505 / 002-L - Lot 014499 /Analysis Date: 3/30/09	69.2 µg/Kg	67.70	40.5 to 95.0	0.17	Acceptable
Dibromochloromethane 1, 4 4575 / 002-L - Lot 014499 /Analysis Date: 3/30/09	129 µg/Kg	143.00	88.1 to 198	-0.77	Acceptable
1,2-Dichlorobenzene 1, 4 4610 / 002-L - Lot 014499 /Analysis Date: 3/30/09	186 µg/Kg	169.00	86.3 to 251	0.62	Acceptable
1,3-Dichlorobenzene 1, 4 4615 / 002-L - Lot 014499 /Analysis Date: 3/30/09	68.5 µg/Kg	55.40	21.7 to 89.2	1.17	Acceptable

Volatiles - Low Level (Solids) (continued)

Analysis
EPA 8260C (2006)

(continued)
Method Number 10307003

	Result Units	Assigned Value	Accept.	Z	Evaluation
1,4-Dichlorobenzene 1, 4 4620 / 002-L - Lot 014499 /Analysis Date: 3/30/09	97.9 µg/Kg	77.50	30.3 to 125	1.30	Acceptable
Dichlorodifluoromethane 4, 5 4625 / 002-L - Lot 014499 /Analysis Date: 3/30/09	< 2.00 µg/Kg	0.00	0.0 to 0.0		Acceptable
1,1-Dichloroethane 1, 4 4630 / 002-L - Lot 014499 /Analysis Date: 3/30/09	152 µg/Kg	153.00	86.5 to 219	-0.05	Acceptable
1,2-Dichloroethane 1, 4 4635 / 002-L - Lot 014499 /Analysis Date: 3/30/09	128 µg/Kg	125.00	73.6 to 176	0.18	Acceptable
1,1-Dichloroethylene 4, 5 4640 / 002-L - Lot 014499 /Analysis Date: 3/30/09	98.6 µg/Kg	86.00	41.1 to 131	0.84	Acceptable
cis-1,2-Dichloroethylene 4, 5 4645 / 002-L - Lot 014499 /Analysis Date: 3/30/09	150 µg/Kg	125.00	67.7 to 181	1.32	Acceptable
1,2-Dichloropropane 1, 4 4655 / 002-L - Lot 014499 /Analysis Date: 3/30/09	113 µg/Kg	105.00	63.9 to 146	0.58	Acceptable
cis-1,3-Dichloropropene 4, 5 4680 / 002-L - Lot 014499 /Analysis Date: 3/30/09	54.3 µg/Kg	56.40	33.1 to 79.7	-0.27	Acceptable
trans-1,3-Dichloropropene 4, 5 4685 / 002-L - Lot 014499 /Analysis Date: 3/30/09	163 µg/Kg	166.00	74.5 to 257	-0.10	Acceptable
trans-1,2-Dichloroethylene 4, 5 4700 / 002-L - Lot 014499 /Analysis Date: 3/30/09	84.7 µg/Kg	78.00	41.0 to 115	0.54	Acceptable
Ethylbenzene 1, 4 4765 / 002-L - Lot 014499 /Analysis Date: 3/30/09	123 µg/Kg	114.00	64.0 to 165	0.54	Acceptable
2-Hexanone 4, 5 4860 / 002-L - Lot 014499 /Analysis Date: 3/30/09	291 µg/Kg	372.00	0.00 to 770	-0.61	Acceptable
Methyl bromide (Bromomethane) 4, 5 4950 / 002-L - Lot 014499 /Analysis Date: 3/30/09	33.7 µg/Kg	25.30	0.00 to 53.3	0.90	Acceptable
Methyl chloride (Chloromethane) 4, 5 4960 / 002-L - Lot 014499 /Analysis Date: 3/30/09	48.5 µg/Kg	59.40	10.7 to 108	-0.67	Acceptable
Methylene chloride (Dichloromethane) 1, 4 4975 / 002-L - Lot 014499 /Analysis Date: 3/30/09	87.6 µg/Kg	85.00	41.0 to 129	0.18	Acceptable
4-Methyl-2-pentanone (MIBK) 1, 4 4995 / 002-L - Lot 014499 /Analysis Date: 3/30/09	171 µg/Kg	198.00	91.5 to 304	-0.76	Acceptable
Methyl tert-butyl ether (MTBE) 1, 4 5000 / 002-L - Lot 014499 /Analysis Date: 3/30/09	40.0 µg/Kg	38.50	15.0 to 61.9	0.19	Acceptable
Styrene 4, 5 5100 / 002-L - Lot 014499 /Analysis Date: 3/30/09	144 µg/Kg	135.00	82.8 to 187	0.52	Acceptable

Volatiles - Low Level (Solids) (continued)

Analysis
EPA 8260C (2006)

(continued)
Method Number 10307003

	Result Units	Assigned Value	Accept.	Z	Evaluation
1,1,2,2-Tetrachloroethane 1, 4 5110 / 002-L - Lot 014499 /Analysis Date: 3/30/09	122 µg/Kg	130.00	68.5 to 192	-0.39	Acceptable
Tetrachloroethylene (Perchloroethylene) 1, 4 5115 / 002-L - Lot 014499 /Analysis Date: 3/30/09	55.3 µg/Kg	46.60	21.8 to 71.4	1.05	Acceptable
Toluene 1, 4 5140 / 002-L - Lot 014499 /Analysis Date: 3/30/09	92.4 µg/Kg	89.20	51.6 to 127	0.26	Acceptable
1,1,1-Trichloroethane 1, 4 5160 / 002-L - Lot 014499 /Analysis Date: 3/30/09	< 2.00 µg/Kg	0.00	0.0 to 0.0		Acceptable
1,1,2-Trichloroethane 1, 4 5165 / 002-L - Lot 014499 /Analysis Date: 3/30/09	119 µg/Kg	121.00	72.1 to 169	-0.12	Acceptable
Trichloroethene (Trichloroethylene) 1, 4 5170 / 002-L - Lot 014499 /Analysis Date: 3/30/09	23.1 µg/Kg	0.00	0.0 to 0.0		Not Acceptable
Trichlorofluoromethane 4, 5 5175 / 002-L - Lot 014499 /Analysis Date: 3/30/09	167 µg/Kg	162.00	67.4 to 257	0.16	Acceptable
Vinyl chloride 4, 5 5235 / 002-L - Lot 014499 /Analysis Date: 3/30/09	< 2.00 µg/Kg	0.00	0.0 to 0.0		Acceptable
m+p-Xylene 4 5240 / 002-L - Lot 014499 /Analysis Date: 3/30/09	92.6 µg/Kg	85.30	41.0 to 130	0.49	Acceptable
o-Xylene 4 5250 / 002-L - Lot 014499 /Analysis Date: 3/30/09	102 µg/Kg	90.80	43.8 to 138	0.71	Acceptable
Xylene, total 1, 4 5260 / 002-L - Lot 014499 /Analysis Date: 3/30/09	195 µg/Kg	175.00	87.2 to 262	0.68	Acceptable

Group Analysis Summary

Acceptable 40 / 41
Score 97.6% - **(Acceptable)**

End of VOAs in Soil - Low Level

Sample Information

VOAs in Soil - Low Level

SPE-002-L / Lot {EncryptedLotCode}

	Units	Assigned Value	Study Mean	Study Std. Dev.	Gravimetric Value
Acetone 4315 Volatiles - Low Level (Solids)	µg/Kg	293.00	293.00	148.00	185 ± 1.8
Benzene 4375 Volatiles - Low Level (Solids)	µg/Kg	145.00	144.00	13.60	147 ± 1.42
Bromodichloromethane 4395 Volatiles - Low Level (Solids)	µg/Kg	0.00			0.00
Bromoform 4400 Volatiles - Low Level (Solids)	µg/Kg	167.00	171.00	18.30	168 ± 1.63
2-Butanone (Methyl ethyl ketone, MEK) 4410 Volatiles - Low Level (Solids)	µg/Kg	291.00	291.00	121.00	234 ± 2.27
Carbon tetrachloride 4455 Volatiles - Low Level (Solids)	µg/Kg	164.00	161.00	24.30	167 ± 1.62
Chlorobenzene 4475 Volatiles - Low Level (Solids)	µg/Kg	168.00	175.00	14.20	172 ± 1.67
Chloroethane 4485 Volatiles - Low Level (Solids)	µg/Kg	0.00			0.00
Chloroform 4505 Volatiles - Low Level (Solids)	µg/Kg	67.70	65.80	7.99	67.6 ± 0.66
Dibromochloromethane 4575 Volatiles - Low Level (Solids)	µg/Kg	143.00	142.00	17.30	144 ± 1.4
1,2-Dichlorobenzene 4610 Volatiles - Low Level (Solids)	µg/Kg	169.00	180.00	22.70	178 ± 1.73
1,3-Dichlorobenzene 4615 Volatiles - Low Level (Solids)	µg/Kg	55.40	61.50	9.97	60.3 ± 0.58
1,4-Dichlorobenzene 4620 Volatiles - Low Level (Solids)	µg/Kg	77.50	90.40	8.91	87.8 ± 0.85
Dichlorodifluoromethane 4625 Volatiles - Low Level (Solids)	µg/Kg	0.00			0.00
1,1-Dichloroethane 4630 Volatiles - Low Level (Solids)	µg/Kg	153.00	150.00	14.20	152 ± 1.47
1,2-Dichloroethane 4635 Volatiles - Low Level (Solids)	µg/Kg	125.00	124.00	16.30	127 ± 1.23
1,1-Dichloroethylene 4640 Volatiles - Low Level (Solids)	µg/Kg	86.00	86.00	15.00	89.6 ± 0.87
cis-1,2-Dichloroethylene 4645 Volatiles - Low Level (Solids)	µg/Kg	125.00	125.00	19.00	128 ± 1.24
1,2-Dichloropropane 4655 Volatiles - Low Level (Solids)	µg/Kg	105.00	112.00	7.25	109 ± 1.05
cis-1,3-Dichloropropene 4680 Volatiles - Low Level (Solids)	µg/Kg	56.40	56.40	7.76	55.5 ± 0.54
trans-1,3-Dichloropropene 4685 Volatiles - Low Level (Solids)	µg/Kg	166.00	166.00	30.40	164 ± 1.59
trans-1,2-Dichloroethylene 4700 Volatiles - Low Level (Solids)	µg/Kg	78.00	78.00	12.30	77.8 ± 0.75
Ethylbenzene 4765 Volatiles - Low Level (Solids)	µg/Kg	114.00	117.00	13.30	115 ± 1.11
2-Hexanone 4860 Volatiles - Low Level (Solids)	µg/Kg	372.00	372.00	133.00	301 ± 2.92
Methyl bromide (Bromomethane) 4950 Volatiles - Low Level (Solids)	µg/Kg	25.30	25.30	9.31	157 ± 1.52
Methyl chloride (Chloromethane) 4960 Volatiles - Low Level (Solids)	µg/Kg	59.40	59.40	16.20	173 ± 1.68
Methylene chloride (Dichloromethane) 4975 Volatiles - Low Level (Solids)	µg/Kg	85.00	79.50	11.90	88.1 ± 0.85
4-Methyl-2-pentanone (MIBK) 4995 Volatiles - Low Level (Solids)	µg/Kg	198.00	218.00	70.70	209 ± 2.03
Methyl tert-butyl ether (MTBE) 5000 Volatiles - Low Level (Solids)	µg/Kg	38.50	35.70	5.26	37.0 ± 0.36
Styrene 5100 Volatiles - Low Level (Solids)	µg/Kg	135.00	135.00	17.40	131 ± 1.27
1,1,2,2-Tetrachloroethane 5110 Volatiles - Low Level (Solids)	µg/Kg	130.00	132.00	15.70	132 ± 1.28
Tetrachloroethylene (Perchloroethylene) 5115 Volatiles - Low Level (Solids)	µg/Kg	46.60	47.90	7.67	49.6 ± 0.48
Toluene 5140 Volatiles - Low Level (Solids)	µg/Kg	89.20	86.30	12.20	90.1 ± 0.87

VOAs in Soil - Low Level

SPE-002-L / Lot {EncryptedLotCode}

(continued)

	Units	Assigned Value	Study Mean	Study Std. Dev.	Gravimetric Value
1,1,1-Trichloroethane 5160 Volatiles - Low Level (Solids)	µg/Kg	0.00			0.00
1,1,2-Trichloroethane 5165 Volatiles - Low Level (Solids)	µg/Kg	121.00	126.00	12.90	123 ± 1.19
Trichloroethene (Trichloroethylene) 5170 Volatiles - Low Level (Solids)	µg/Kg	0.00			0.00
Trichlorofluoromethane 5175 Volatiles - Low Level (Solids)	µg/Kg	162.00	162.00	31.60	169 ± 1.64
Vinyl chloride 5235 Volatiles - Low Level (Solids)	µg/Kg	0.00			0.00
m+p-Xylene 5240 Volatiles - Low Level (Solids)	µg/Kg	85.30	83.70	14.10	86.3 ± 0.837
o-Xylene 5250 Volatiles - Low Level (Solids)	µg/Kg	90.80	89.70	12.50	91.9 ± 0.89
Xylene, total 5260 Volatiles - Low Level (Solids)	µg/Kg	175.00	184.00	21.00	178 ± 1.73

Definitions:

Assigned Value: Value attributed to a particular quantity and accepted, sometimes by convention, as having an uncertainty appropriate for a give purpose. See ISO Guide 43 for additional information.

Accept. Window: The range of values that constitute acceptable performance for a laboratory participation in this PT study.

Z: A Z-Score tells how a single data point compares to normal data. A Z-Score says not only whether a point was above or below average, but how unusual the measurement is. Generally, a method result with a Z-Score less than |2| is considered to be in control, a Z-Score between |2| and |3| is considered 'Questionable', but still within control and a Z greater than |3| is considered not acceptable and the method is out of control.

Study Mean: Statistical study mean calculated using a robust statisitcal model (RTC employs the 'Biweight Program'). Robust statistical techniques to minimize the influence that extreme results can have on estimates of the mean and standard deviation NOTE - These techniques assign less weight to extreme results, rather than eliminate them from a data set.

Study Std. Dev.: Standard deviation calculated from study data using robust statisicals (Biweight).

Gravimetric Value: The prepared to value, determined by gravimetric means. The uncertainty associated to this value is standard uncertainty and based on RTC's gravimetric tolerances.

Program analyte accrediting footnotes

¹ NELAC

³ Other

⁵ NELAC Experimental

² EPA

⁴ A2LA