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Supplemental Report 1

The original report has been revised to include the Level III deliverables package.

WORK ORDER NUMBER: 17-03-0336

The difference is service

AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: Andersen Environmental

Client Project Name: Burbank Airport / 9836002041

Attention: Brian Martasin
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Approved for release on 04/12/2017 by:
Stephen Nowak
Project Manager

ResultLink

Email your PM

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

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Work Order Number: 17-03-0336

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Work Order Narrative

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Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 03/03/17. They were assigned to Work Order 17-03-0336.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.

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Sample Summary

Client:	Andersen Environmental	Work Order:	17-03-0336
	5261 West Imperial Highway	Project Name:	Burbank Airport / 9836002041
	Los Angeles, CA 90045-6231	PO Number:	
		Date/Time Received:	03/03/17 18:45
		Number of Containers:	4
Attn:	Brian Martasin		

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
D-DU2-S-SG-05-03S	17-03-0336-1	03/03/17 15:00	1	Solid
D-DU2-S-SG-05-8S	17-03-0336-2	03/03/17 15:08	1	Solid
D-DU2-S-SG-05-13S	17-03-0336-3	03/03/17 15:20	1	Solid
D-DU2-S-SG-05-25S	17-03-0336-4	03/03/17 15:48	1	Solid

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Detections Summary

Client:	Andersen Environmental	Work Order:	17-03-0336
	5261 West Imperial Highway	Project Name:	Burbank Airport / 9836002041
	Los Angeles, CA 90045-6231	Received:	03/03/17
Attn:	Brian Martasin		Page 1 of 1

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
D-DU2-S-SG-05-13S (17-03-0336-3)						
Moisture	4.2		0.10	%	ASTM D-2216 (M)	N/A
Barium	178		0.509	mg/kg	EPA 6010B	EPA 3050B
Chromium	6.80		0.255	mg/kg	EPA 6010B	EPA 3050B
Cobalt	9.27		0.255	mg/kg	EPA 6010B	EPA 3050B
Copper	6.32		0.509	mg/kg	EPA 6010B	EPA 3050B
Lead	1.04		0.509	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.718		0.255	mg/kg	EPA 6010B	EPA 3050B
Nickel	4.15		0.255	mg/kg	EPA 6010B	EPA 3050B
Vanadium	31.1		0.255	mg/kg	EPA 6010B	EPA 3050B
Zinc	47.7		1.02	mg/kg	EPA 6010B	EPA 3050B
D-DU2-S-SG-05-25S (17-03-0336-4)						
Moisture	3.4		0.10	%	ASTM D-2216 (M)	N/A
Barium	44.8		0.495	mg/kg	EPA 6010B	EPA 3050B
Chromium	3.37		0.248	mg/kg	EPA 6010B	EPA 3050B
Cobalt	3.27		0.248	mg/kg	EPA 6010B	EPA 3050B
Copper	5.36		0.495	mg/kg	EPA 6010B	EPA 3050B
Lead	1.03		0.495	mg/kg	EPA 6010B	EPA 3050B
Molybdenum	0.335		0.248	mg/kg	EPA 6010B	EPA 3050B
Nickel	2.37		0.248	mg/kg	EPA 6010B	EPA 3050B
Vanadium	9.05		0.248	mg/kg	EPA 6010B	EPA 3050B
Zinc	19.1		0.991	mg/kg	EPA 6010B	EPA 3050B

Subcontracted analyses, if any, are not included in this summary.

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* MDL is shown

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Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/03/17
Work Order: 17-03-0336
Preparation: N/A
Method: ASTM D-2216 (M)
Units: %

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-13S	**17-03-0336-3-A**	**03/03/17 15:20**	**Solid**	**N/A**	**03/07/17**	**03/07/17 21:00**	**H0307MOIB4**

Parameter	Result	RL	DF	Qualifiers
Moisture	4.2	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-25S	**17-03-0336-4-A**	**03/03/17 15:48**	**Solid**	**N/A**	**03/07/17**	**03/07/17 21:00**	**H0307MOIB4**

Parameter	Result	RL	DF	Qualifiers
Moisture	3.4	0.10	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-05-014-6729**	**N/A**	**Solid**	**N/A**	**03/07/17**	**03/07/17 21:00**	**H0307MOIB4**

Parameter	Result	RL	DF	Qualifiers
Moisture	ND	0.10	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 1 of 1

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-13S	**17-03-0336-3-A**	**03/03/17 15:20**	**Solid**	**GC 49**	**03/07/17**	**03/08/17 04:35**	**170307B06**

Comment(s): - Results are reported on a dry weight basis.
- Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.1	1.00	
TPH as Motor Oil	ND	5.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	131	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-25S	**17-03-0336-4-A**	**03/03/17 15:48**	**Solid**	**GC 49**	**03/07/17**	**03/08/17 04:55**	**170307B06**

Comment(s): - Results are reported on a dry weight basis.
- Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.1	1.00	
TPH as Motor Oil	ND	5.1	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	130	61-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-353-4**	**N/A**	**Solid**	**GC 49**	**03/07/17**	**03/07/17 22:19**	**170307B06**

Comment(s): - Motor Oil Range Organics (C17-C44) uses a Diesel Range Organics (C10-C28) standard for quantitation and quality control.

Parameter	Result	RL	DF	Qualifiers
TPH as Diesel	ND	5.0	1.00	
TPH as Motor Oil	ND	5.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
n-Octacosane	117	61-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-13S	**17-03-0336-3-A**	**03/03/17 15:20**	**Solid**	**ICP 7300**	**03/08/17**	**03/08/17 14:30**	**170308L01**

Comment(s): - Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.764	0.976	
Arsenic	ND	0.764	0.976	
Barium	178	0.509	0.976	
Beryllium	ND	0.255	0.976	
Cadmium	ND	0.509	0.976	
Chromium	6.80	0.255	0.976	
Cobalt	9.27	0.255	0.976	
Copper	6.32	0.509	0.976	
Lead	1.04	0.509	0.976	
Molybdenum	0.718	0.255	0.976	
Nickel	4.15	0.255	0.976	
Selenium	ND	0.764	0.976	
Silver	ND	0.255	0.976	
Thallium	ND	0.764	0.976	
Vanadium	31.1	0.255	0.976	
Zinc	47.7	1.02	0.976	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 2 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-25S	**17-03-0336-4-A**	**03/03/17 15:48**	**Solid**	**ICP 7300**	**03/08/17**	**03/08/17 14:30**	**170308L01**

Comment(s): - Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.743	0.957	
Arsenic	ND	0.743	0.957	
Barium	44.8	0.495	0.957	
Beryllium	ND	0.248	0.957	
Cadmium	ND	0.495	0.957	
Chromium	3.37	0.248	0.957	
Cobalt	3.27	0.248	0.957	
Copper	5.36	0.495	0.957	
Lead	1.03	0.495	0.957	
Molybdenum	0.335	0.248	0.957	
Nickel	2.37	0.248	0.957	
Selenium	ND	0.743	0.957	
Silver	ND	0.248	0.957	
Thallium	ND	0.743	0.957	
Vanadium	9.05	0.248	0.957	
Zinc	19.1	0.991	0.957	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 3 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**097-01-002-24425**	**N/A**	**Solid**	**ICP 7300**	**03/08/17**	**03/08/17 14:17**	**170308L01**

Parameter	Result	RL	DF	Qualifiers
Antimony	ND	0.725	0.966	
Arsenic	ND	0.725	0.966	
Barium	ND	0.483	0.966	
Beryllium	ND	0.242	0.966	
Cadmium	ND	0.483	0.966	
Chromium	ND	0.242	0.966	
Cobalt	ND	0.242	0.966	
Copper	ND	0.483	0.966	
Lead	ND	0.483	0.966	
Molybdenum	ND	0.242	0.966	
Nickel	ND	0.242	0.966	
Selenium	ND	0.725	0.966	
Silver	ND	0.242	0.966	
Thallium	ND	0.725	0.966	
Vanadium	ND	0.242	0.966	
Zinc	ND	0.966	0.966	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Project: Burbank Airport / 9836002041

Date Received: 03/03/17
Work Order: 17-03-0336
Preparation: EPA 7471A Total
Method: EPA 7471A
Units: mg/kg

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-13S	**17-03-0336-3-A**	**03/03/17 15:20**	**Solid**	**Mercury 08**	**03/08/17**	**03/08/17 16:10**	**170308L03**

Comment(s): - Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0856	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-25S	**17-03-0336-4-A**	**03/03/17 15:48**	**Solid**	**Mercury 08**	**03/08/17**	**03/08/17 16:12**	**170308L03**

Comment(s): - Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0835	1.00	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-16-272-2864**	**N/A**	**Solid**	**Mercury 08**	**03/08/17**	**03/08/17 15:33**	**170308L03**

Parameter	Result	RL	DF	Qualifiers
Mercury	ND	0.0833	1.00	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/03/17
Work Order: 17-03-0336
Preparation: EPA 3545
Method: EPA 8082
Units: ug/kg

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-13S	**17-03-0336-3-A**	**03/03/17 15:20**	**Solid**	**GC 31**	**03/06/17**	**03/07/17 17:27**	**170306L05**

Comment(s): - Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	52	1.00	
Aroclor-1221	ND	52	1.00	
Aroclor-1232	ND	52	1.00	
Aroclor-1242	ND	52	1.00	
Aroclor-1248	ND	52	1.00	
Aroclor-1254	ND	52	1.00	
Aroclor-1260	ND	52	1.00	
Aroclor-1262	ND	52	1.00	
Aroclor-1268	ND	52	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	76	24-168	
2,4,5,6-Tetrachloro-m-Xylene	63	25-145	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-25S	**17-03-0336-4-A**	**03/03/17 15:48**	**Solid**	**GC 31**	**03/06/17**	**03/07/17 17:44**	**170306L05**

Comment(s): - Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	52	1.00	
Aroclor-1221	ND	52	1.00	
Aroclor-1232	ND	52	1.00	
Aroclor-1242	ND	52	1.00	
Aroclor-1248	ND	52	1.00	
Aroclor-1254	ND	52	1.00	
Aroclor-1260	ND	52	1.00	
Aroclor-1262	ND	52	1.00	
Aroclor-1268	ND	52	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	76	24-168	
2,4,5,6-Tetrachloro-m-Xylene	65	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
		Units:	ug/kg
Project: Burbank Airport / 9836002041			Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-12-535-4077**	**N/A**	**Solid**	**GC 31**	**03/06/17**	**03/07/17 09:57**	**170306L05**

Parameter	Result	RL	DF	Qualifiers
Aroclor-1016	ND	50	1.00	
Aroclor-1221	ND	50	1.00	
Aroclor-1232	ND	50	1.00	
Aroclor-1242	ND	50	1.00	
Aroclor-1248	ND	50	1.00	
Aroclor-1254	ND	50	1.00	
Aroclor-1260	ND	50	1.00	
Aroclor-1262	ND	50	1.00	
Aroclor-1268	ND	50	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decachlorobiphenyl	76	24-168	
2,4,5,6-Tetrachloro-m-Xylene	67	25-145	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
		Units:	mg/kg
Project: Burbank Airport / 9836002041			Page 1 of 3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-13S	**17-03-0336-3-A**	**03/03/17 15:20**	**Solid**	**GC/MS EEE**	**03/06/17**	**03/07/17 17:19**	**170306L10**

Comment(s): - Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qualifiers
Naphthalene	ND	0.010	1.00	
2-Methylnaphthalene	ND	0.010	1.00	
1-Methylnaphthalene	ND	0.010	1.00	
Acenaphthylene	ND	0.010	1.00	
Acenaphthene	ND	0.010	1.00	
Fluorene	ND	0.010	1.00	
Phenanthrene	ND	0.010	1.00	
Anthracene	ND	0.010	1.00	
Fluoranthene	ND	0.010	1.00	
Pyrene	ND	0.010	1.00	
Benzo (a) Anthracene	ND	0.010	1.00	
Chrysene	ND	0.010	1.00	
Benzo (k) Fluoranthene	ND	0.010	1.00	
Benzo (b) Fluoranthene	ND	0.010	1.00	
Benzo (a) Pyrene	ND	0.010	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.010	1.00	
Dibenz (a,h) Anthracene	ND	0.010	1.00	
Benzo (g,h,i) Perylene	ND	0.010	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	87	13-127	
Nitrobenzene-d5	89	17-137	
p-Terphenyl-d14	116	4-160	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/03/17
Work Order: 17-03-0336
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: mg/kg

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
D-DU2-S-SG-05-25S	**17-03-0336-4-A**	**03/03/17 15:48**	**Solid**	**GC/MS EEE**	**03/06/17**	**03/07/17 17:39**	**170306L10**

Comment(s): - Results are reported on a dry weight basis.

Parameter	Result	RL	DF	Qualifiers
Naphthalene	ND	0.010	1.00	
2-Methylnaphthalene	ND	0.010	1.00	
1-Methylnaphthalene	ND	0.010	1.00	
Acenaphthylene	ND	0.010	1.00	
Acenaphthene	ND	0.010	1.00	
Fluorene	ND	0.010	1.00	
Phenanthrene	ND	0.010	1.00	
Anthracene	ND	0.010	1.00	
Fluoranthene	ND	0.010	1.00	
Pyrene	ND	0.010	1.00	
Benzo (a) Anthracene	ND	0.010	1.00	
Chrysene	ND	0.010	1.00	
Benzo (k) Fluoranthene	ND	0.010	1.00	
Benzo (b) Fluoranthene	ND	0.010	1.00	
Benzo (a) Pyrene	ND	0.010	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.010	1.00	
Dibenz (a,h) Anthracene	ND	0.010	1.00	
Benzo (g,h,i) Perylene	ND	0.010	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	82	13-127	
Nitrobenzene-d5	99	17-137	
p-Terphenyl-d14	94	4-160	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Analytical Report

Andersen Environmental
5261 West Imperial Highway
Los Angeles, CA 90045-6231

Date Received: 03/03/17
Work Order: 17-03-0336
Preparation: EPA 3545
Method: EPA 8270C SIM PAHs
Units: mg/kg

Project: Burbank Airport / 9836002041

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-14-035-377**	**N/A**	**Solid**	**GC/MS EEE**	**03/06/17**	**03/07/17 10:49**	**170306L10**

Parameter	Result	RL	DF	Qualifiers
Naphthalene	ND	0.010	1.00	
2-Methylnaphthalene	ND	0.010	1.00	
1-Methylnaphthalene	ND	0.010	1.00	
Acenaphthylene	ND	0.010	1.00	
Acenaphthene	ND	0.010	1.00	
Fluorene	ND	0.010	1.00	
Phenanthrene	ND	0.010	1.00	
Anthracene	ND	0.010	1.00	
Fluoranthene	ND	0.010	1.00	
Pyrene	ND	0.010	1.00	
Benzo (a) Anthracene	ND	0.010	1.00	
Chrysene	ND	0.010	1.00	
Benzo (k) Fluoranthene	ND	0.010	1.00	
Benzo (b) Fluoranthene	ND	0.010	1.00	
Benzo (a) Pyrene	ND	0.010	1.00	
Indeno (1,2,3-c,d) Pyrene	ND	0.010	1.00	
Dibenz (a,h) Anthracene	ND	0.010	1.00	
Benzo (g,h,i) Perylene	ND	0.010	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
2-Fluorobiphenyl	81	13-127	
Nitrobenzene-d5	88	17-137	
p-Terphenyl-d14	96	4-160	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Burbank Airport / 9836002041			Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0335-11	**Sample**	**Solid**	**GC 49**	**03/07/17**	**03/08/17 01:06**	**170307S06**
17-03-0335-11	**Matrix Spike**	**Solid**	**GC 49**	**03/07/17**	**03/07/17 23:01**	**170307S06**
17-03-0335-11	**Matrix Spike Duplicate**	**Solid**	**GC 49**	**03/07/17**	**03/07/17 23:22**	**170307S06**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Diesel	ND	400.0	315.9	79	343.9	86	61-145	8	0-25	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0335-3	**Sample**	**Solid**	**ICP 7300**	**03/08/17**	**03/08/17 14:19**	**170308S01**
17-03-0335-3	**Matrix Spike**	**Solid**	**ICP 7300**	**03/08/17**	**03/08/17 14:20**	**170308S01**
17-03-0335-3	**Matrix Spike Duplicate**	**Solid**	**ICP 7300**	**03/08/17**	**03/08/17 14:21**	**170308S01**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Antimony	ND	25.00	13.82	55	11.26	45	50-115	20	0-20	3
Arsenic	ND	25.00	27.61	110	27.06	108	75-125	2	0-20	
Barium	51.72	25.00	85.01	133	90.08	153	75-125	6	0-20	3
Beryllium	ND	25.00	27.97	112	26.73	107	75-125	5	0-20	
Cadmium	ND	25.00	27.52	110	26.05	104	75-125	5	0-20	
Chromium	3.748	25.00	31.35	110	30.09	105	75-125	4	0-20	
Cobalt	3.869	25.00	31.23	109	30.13	105	75-125	4	0-20	
Copper	6.462	25.00	34.33	111	34.55	112	75-125	1	0-20	
Lead	1.497	25.00	29.61	112	28.13	107	75-125	5	0-20	
Molybdenum	ND	25.00	26.76	107	25.49	102	75-125	5	0-20	
Nickel	3.161	25.00	30.15	108	28.97	103	75-125	4	0-20	
Selenium	ND	25.00	27.48	110	26.23	105	75-125	5	0-20	
Silver	ND	12.50	13.37	107	12.41	99	75-125	7	0-20	
Thallium	ND	25.00	26.54	106	24.78	99	75-125	7	0-20	
Vanadium	12.40	25.00	40.93	114	38.73	105	75-125	6	0-20	
Zinc	23.37	25.00	52.53	117	50.65	109	75-125	4	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Burbank Airport / 9836002041			Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0335-3	**Sample**	**Solid**	**Mercury 08**	**03/08/17**	**03/08/17 15:43**	**170308S03**
17-03-0335-3	**Matrix Spike**	**Solid**	**Mercury 08**	**03/08/17**	**03/08/17 15:45**	**170308S03**
17-03-0335-3	**Matrix Spike Duplicate**	**Solid**	**Mercury 08**	**03/08/17**	**03/08/17 15:48**	**170308S03**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Mercury	ND	0.8350	0.7637	91	0.6569	79	71-137	15	0-14	4

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
Project: Burbank Airport / 9836002041			Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0341-1	**Sample**	**Solid**	**GC 31**	**03/06/17**	**03/07/17 11:09**	**170306S05**
17-03-0341-1	**Matrix Spike**	**Solid**	**GC 31**	**03/06/17**	**03/07/17 10:34**	**170306S05**
17-03-0341-1	**Matrix Spike Duplicate**	**Solid**	**GC 31**	**03/06/17**	**03/07/17 10:53**	**170306S05**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Aroclor-1016	ND	100.0	67.00	67	76.50	76	50-135	13	0-20	
Aroclor-1260	ND	100.0	81.50	82	93.00	93	50-135	13	0-20	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Spike/Spike Duplicate

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: Burbank Airport / 9836002041			Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-03-0335-3	**Sample**	**Solid**	**GC/MS EEE**	**03/06/17**	**03/07/17 14:17**	**170306S10**
17-03-0335-3	**Matrix Spike**	**Solid**	**GC/MS EEE**	**03/06/17**	**03/07/17 13:37**	**170306S10**
17-03-0335-3	**Matrix Spike Duplicate**	**Solid**	**GC/MS EEE**	**03/06/17**	**03/07/17 13:56**	**170306S10**

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Naphthalene	ND	0.1000	0.07824	78	0.07935	79	20-150	1	0-33	
2-Methylnaphthalene	ND	0.1000	0.08935	89	0.09361	94	29-137	5	0-31	
1-Methylnaphthalene	ND	0.1000	0.07897	79	0.08532	85	34-136	8	0-29	
Acenaphthylene	ND	0.1000	0.07172	72	0.07478	75	29-131	4	0-32	
Acenaphthene	ND	0.1000	0.07304	73	0.07507	75	29-137	3	0-28	
Fluorene	ND	0.1000	0.07346	73	0.07788	78	36-132	6	0-27	
Phenanthrene	ND	0.1000	0.08062	81	0.08486	85	20-144	5	0-27	
Anthracene	ND	0.1000	0.08123	81	0.08461	85	26-134	4	0-27	
Fluoranthene	ND	0.1000	0.08556	86	0.08960	90	20-151	5	0-26	
Pyrene	ND	0.1000	0.08020	80	0.08337	83	20-150	4	0-32	
Benzo (a) Anthracene	ND	0.1000	0.08354	84	0.08669	87	24-150	4	0-24	
Chrysene	ND	0.1000	0.08213	82	0.08458	85	25-145	3	0-28	
Benzo (k) Fluoranthene	ND	0.1000	0.08425	84	0.08750	88	28-148	4	0-26	
Benzo (b) Fluoranthene	ND	0.1000	0.08427	84	0.09110	91	21-153	8	0-26	
Benzo (a) Pyrene	ND	0.1000	0.08726	87	0.09022	90	29-149	3	0-22	
Indeno (1,2,3-c,d) Pyrene	ND	0.1000	0.09109	91	0.09352	94	20-154	3	0-25	
Dibenz (a,h) Anthracene	ND	0.1000	0.09278	93	0.09727	97	20-132	5	0-26	
Benzo (g,h,i) Perylene	ND	0.1000	0.09490	95	0.09644	96	20-148	2	0-27	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - Sample Duplicate

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	N/A
		Method:	ASTM D-2216 (M)
Project: Burbank Airport / 9836002041			Page 1 of 1

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	Duplicate Batch Number
17-03-0425-4	**Sample**	**Solid**	**N/A**	**03/07/17 00:00**	**03/07/17 21:00**	**H0307MOID4**
17-03-0425-4	**Sample Duplicate**	**Solid**	**N/A**	**03/07/17 00:00**	**03/07/17 21:00**	**H0307MOID4**

Parameter	Sample Conc.	DUP Conc.	RPD	RPD CL	Qualifiers
Moisture	19.60	20.10	3	0-10	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3550B
		Method:	EPA 8015B (M)
Project: Burbank Airport / 9836002041			Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-353-4	**LCS**	**Solid**	**GC 49**	**03/07/17**	**03/07/17 22:40**	**170307B06**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
TPH as Diesel	400.0	360.5	90	61-145	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3050B
		Method:	EPA 6010B
Project: Burbank Airport / 9836002041			Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
097-01-002-24425	**LCS**	**Solid**	**ICP 7300**	**03/08/17**	**03/08/17 14:18**	**170308L01**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Antimony	25.00	22.68	91	80-120	73-127	
Arsenic	25.00	23.32	93	80-120	73-127	
Barium	25.00	24.77	99	80-120	73-127	
Beryllium	25.00	22.82	91	80-120	73-127	
Cadmium	25.00	23.76	95	80-120	73-127	
Chromium	25.00	24.07	96	80-120	73-127	
Cobalt	25.00	24.74	99	80-120	73-127	
Copper	25.00	24.04	96	80-120	73-127	
Lead	25.00	24.64	99	80-120	73-127	
Molybdenum	25.00	23.60	94	80-120	73-127	
Nickel	25.00	23.88	96	80-120	73-127	
Selenium	25.00	23.10	92	80-120	73-127	
Silver	12.50	11.16	89	80-120	73-127	
Thallium	25.00	24.03	96	80-120	73-127	
Vanadium	25.00	22.79	91	80-120	73-127	
Zinc	25.00	23.94	96	80-120	73-127	

Total number of LCS compounds: 16
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 7471A Total
		Method:	EPA 7471A
Project: Burbank Airport / 9836002041			Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-16-272-2864	**LCS**	**Solid**	**Mercury 08**	**03/08/17**	**03/08/17 15:41**	**170308L03**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Mercury	0.8350	0.7976	96	85-121	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8082
Project: Burbank Airport / 9836002041			Page 4 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-12-535-4077	**LCS**	**Solid**	**GC 31**	**03/06/17**	**03/07/17 10:16**	**170306L05**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	Qualifiers
Aroclor-1016	100.0	88.50	88	50-135	
Aroclor-1260	100.0	89.00	89	50-135	

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RPD: Relative Percent Difference. CL: Control Limits

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Quality Control - LCS

Andersen Environmental		Date Received:	03/03/17
5261 West Imperial Highway		Work Order:	17-03-0336
Los Angeles, CA 90045-6231		Preparation:	EPA 3545
		Method:	EPA 8270C SIM PAHs
Project: Burbank Airport / 9836002041			Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-035-377	**LCS**	**Solid**	**GC/MS EEE**	**03/06/17**	**03/07/17 11:09**	**170306L10**

Parameter	Spike Added	Conc. Recovered	LCS %Rec.	%Rec. CL	ME CL	Qualifiers
Naphthalene	0.1000	0.09332	93	51-129	38-142	
2-Methylnaphthalene	0.1000	0.1080	108	50-127	37-140	
1-Methylnaphthalene	0.1000	0.1019	102	54-132	41-145	
Acenaphthylene	0.1000	0.08533	85	50-123	38-135	
Acenaphthene	0.1000	0.08642	86	53-125	41-137	
Fluorene	0.1000	0.08738	87	55-127	43-139	
Phenanthrene	0.1000	0.09564	96	50-122	38-134	
Anthracene	0.1000	0.09771	98	50-132	36-146	
Fluoranthene	0.1000	0.09986	100	55-127	43-139	
Pyrene	0.1000	0.09302	93	50-134	36-148	
Benzo (a) Anthracene	0.1000	0.09672	97	50-133	36-147	
Chrysene	0.1000	0.09393	94	51-129	38-142	
Benzo (k) Fluoranthene	0.1000	0.1008	101	49-150	32-167	
Benzo (b) Fluoranthene	0.1000	0.1044	104	50-142	35-157	
Benzo (a) Pyrene	0.1000	0.1030	103	50-134	36-148	
Indeno (1,2,3-c,d) Pyrene	0.1000	0.1078	108	50-148	34-164	
Dibenz (a,h) Anthracene	0.1000	0.1095	110	50-133	36-147	
Benzo (g,h,i) Perylene	0.1000	0.1129	113	50-130	37-143	

Total number of LCS compounds: 18
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

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RPD: Relative Percent Difference. CL: Control Limits

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Sample Analysis Summary Report

Work Order: 17-03-0336 Page 1 of 1

Method	Extraction	Chemist ID	Instrument	Analytical Location
ASTM D-2216 (M)	N/A	1009	N/A	1
EPA 6010B	EPA 3050B	935	ICP 7300	1
EPA 7471A	EPA 7471A Total	868	Mercury 08	1
EPA 8015B (M)	EPA 3550B	972	GC 49	1
EPA 8082	EPA 3545	944	GC 31	1
EPA 8270C SIM PAHs	EPA 3545	907	GC/MS EEE	1

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Glossary of Terms and Qualifiers

Work Order: 17-03-0336 Page 1 of 1

Qualifiers	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

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EFI Global

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Chain-of-Custody Record

Analytical Laboratory:	Calscience	Job # 9836002041
Project Name:	Burbank Airport	NA
Project Address:	2627 N. Hollywood Way, Burbank	
Project Manager:	B. Martasin	
Sampled by:	G. Baader	
Phone/Email:	310-854-6300, brian_martasin@efiglobal.com	
Phone/Email:	Robert Cheung, 510-529-5948, RCheung@Geosyntec.com	

Number	Sample ID	Lab ID	Type: Grab	Type: Discrete	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time	Method: VOCs, EPA Method 8260B	Method: PAHs, EPA Method 8270C SIM	Method: Metals, EPA Method 6010B/7471A	Method: Lead, EPA Method 6010B	Method: Arsenic, EPA Method 6010B	Method: STLC Lead EPA Method	Method: TCLP Lead EPA Method	Method: PCBs, EPA Method 8082	Method: TPH full chain, EPA Method 8015M	Method: TPHd, TPHmo, EPA Method 8015M	Method: Composite	Method: Hold	Container: 4- or 8-ounce Glass	Container: 250-ml Poly Bottle	Container: EZ Draw (EPA 5035)	Container: Acetate Liner	Container: 1-l Amber Bottle	Turnaround Time: 24 hours	Turnaround Time: 48 hours	Turnaround Time: Normal
1	D-DU2-S-SG-05.035			X		X			X				3/3/17	15:00		X	X	SB				X	SB	X					X				X
2	D-DU2-S-SG-0585			X		X			X				"	15:08										X					X				X
3	D-DU2-S-SG-0135			X		X			X				"	15:20		X	X					X		X		X				X				X
4	D-DU2-S-SG-0525			X		X			X				"	15:48		X	X	3/3/17				X		X		X				X				X
5																																		
6																																		
7																																		
8																																		
9																																		
10																																		
11																																		
12																																		
13																																		
14																																		
15																																		
16																																		
17																																		
18																																		
19																																		
20																																		

Relinquished by	Date	Time	Received by	Date	Time
	3/3/17			3/3/17	

Remarks: 3' and 8' samples 3/3/17

Sample condition (circle): Chilled Intact

Hold until all D-DU2 samples recovered for ISM composites. Then take sample from center of each liner unless otherwise indicated on liner.

Hold remaining portions of 15-foot samples (after extraction) pending results of the shallower ISM samples

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EFI Global

EFI Global
5261 West Imperial Highway, Los Angeles CA 90045
Tel: (310) 854-6300 Fax: (310) 854-0199 www.AndersenEnviro.com

Chain-of-Custody Record

17-03-0336

Analytical Laboratory:	Calscience
Job #	9836002041
Project Name:	Burbank Airport
	NA
Project Address:	2627 N. Hollywood Way, Burbank
Project Manager:	B. Martasin
Sampled by:	G. Baader
Phone/Email:	310-854-6300, brian_martasin@efiglobal.com
Phone/Email:	Robert Cheung, 510-529-5948, RCheung@Geosyntec.com

Number	Sample ID	Lab ID	Type: Grab	Type: Discrete	Matrix: Water	Matrix: Soil	Matrix: Vapor	Matrix: Other	Preservative: Cold (4° C)	Preservative: HNO3	Preservative: NaHSO4	Preservative: HCl	Sampling Information: Date	Sampling Information: Time
1	D-DU2-S-SG-0535	1		X		X			X				3/3/17	15:00
2	D-DU2-S-SG-0538	2		X		X			X				"	15:08
3	D-DU2-S-SG-0535	3		X		X			X				"	15:20
4	D-DU2-S-SG-0525	4		X		X			X				"	15:48
5														
6														
7														
8														
9														
10														
11														
12														
13														
14														
15														
16														
17														
18														
19														
20														

Method													Container					Turnaround Time		
VOCs, EPA Method 8260B	PAHs, EPA Method 8270C SIM	Metals, EPA Method 6010B/7471A	Lead, EPA Method 6010B	Arsenic, EPA Method 6010B	STLC Lead EPA Method	TCLP Lead EPA Method	PCBs, EPA Method 8082	TPH full chain, EPA Method 8015M	TPHd, TPHmo, EPA Method 8015M	Composite	Hold	4- or 8-ounce Glass	250-ml Poly Bottle	EZ Draw (EPA 5035)	Acetate Liner	1-l Amber Bottle	24 hours	48 hours	Normal
	X	X	X				X	X	X		X				X				X
											X				X				
											X				X				
											X				X				

Relinquished by	Date	Time	Received by	Date	Time
	3/3/17	16.00		3/3/17	16.00
	3/03/17	18.45		3/3/17	1845

Remarks

Sample condition (circle): Chilled Intact

Hold until COC D-DU2 samples received for 15% composites. Then take sample from center of each liner unless otherwise indicated on liner.

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WORK ORDER NUMBER: 17-03-0336

SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: EFI/ANDERSEN

DATE: 03 / 03 / 2017

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC3B (CF: 0.0°C); Temperature (w/o CF): 3.3 °C (w/ CF): 3.3 °C; ☑ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____)

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

☐ Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: ☐ Air ☐ Filter Checked by: 804

CUSTODY SEAL:

Cooler ☑ Present and Intact ☐ Present but Not Intact ☐ Not Present ☐ N/A Checked by: 804

Sample(s) ☐ Present and Intact ☐ Present but Not Intact ☑ Not Present ☐ N/A Checked by: 1052

SAMPLE CONDITION:	Yes	No	N/A
Chain-of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☑	☐	☐
☐ Sampling date ☐ Sampling time ☐ Matrix ☐ Number of containers			
☐ No analysis requested ☐ Not relinquished ☐ No relinquished date ☐ No relinquished time			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and in good condition	☑	☐	☐
Proper containers for analyses requested	☑	☐	☐
Sufficient volume/mass for analyses requested	☑	☐	☐
Samples received within holding time	☑	☐	☐
Aqueous samples for certain analyses received within 15-minute holding time			
☐ pH ☐ Residual Chlorine ☐ Dissolved Sulfide ☐ Dissolved Oxygen	☐	☐	☑
Proper preservation chemical(s) noted on COC and/or sample container	☐	☐	☑
Unpreserved aqueous sample(s) received for certain analyses			
☐ Volatile Organics ☐ Total Metals ☐ Dissolved Metals			
Container(s) for certain analysis free of headspace	☐	☐	☑
☐ Volatile Organics ☐ Dissolved Gases (RSK-175) ☐ Dissolved Oxygen (SM 4500)			
☐ Carbon Dioxide (SM 4500) ☐ Ferrous Iron (SM 3500) ☐ Hydrogen Sulfide (Hach)			
Tedlar™ bag(s) free of condensation	☐	☐	☑

CONTAINER TYPE: (Trip Blank Lot Number: _____)

Aqueous: ☐ VOA ☐ VOA**h** ☐ VOA**na$_2$** ☐ 100PJ ☐ 100PJ**na$_2$** ☐ 125AGB ☐ 125AGB**h** ☐ 125AGB**p** ☐ 125PB

☐ 125PB**znna** ☐ 250AGB ☐ 250CGB ☐ 250CGB**s** ☐ 250PB ☐ 250PB**n** ☐ 500AGB ☐ 500AGJ ☐ 500AGJ**s**

☐ 500PB ☐ 1AGB ☐ 1AGB**na$_2$** ☐ 1AGB**s** ☐ 1PB ☐ 1PB**na** ☐ _____ ☐ _____ ☐ _____ ☐ _____

Solid: ☐ 4ozCGJ ☐ 8ozCGJ ☐ 16ozCGJ ☑ Sleeve (P) ☐ EnCores® (_____) ☐ TerraCores® (_____) ☐ _____

Air: ☐ Tedlar™ ☐ Canister ☐ Sorbent Tube ☐ PUF ☐ _____ **Other Matrix** (_____): ☐ _____ ☐ _____

Container: **A** = Amber, **B** = Bottle, **C** = Clear, **E** = Envelope, **G** = Glass, **J** = Jar, **P** = Plastic, and **Z** = Ziploc/Resealable Bag

Preservative: **b** = buffered, **f** = filtered, **h** = HCl, **n** = HNO_3, **na** = NaOH, **na$_2$** = $Na_2S_2O_3$, **p** = H_3PO_4, **s** = H_2SO_4, **u** = ultra-pure, **x** = Na_2SO_3+$NaHSO_4.H_2O$, **znna** = Zn $(CH_3CO_2)_2$ + NaOH

Labeled/Checked by: 1053

Reviewed by: 1017

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0336

CONDITION UPON RECEIPT:

Eurofins Calscience, Inc. received (4) solid samples on March 3rd, 2017. A total of (4) containers were received in good condition and at a temperature of 3.3°C , which was within the recommended temperature of 0°C – 6°C.

Client Sample ID	Lab Sample ID	Date & Time Sampled	Date & Time Received
D-DU2-S-SG-05-03S	17-03-0336-1	03/03/17 15:00	03/03/17 18:45
D-DU2-S-SG-05-8S	17-03-0336-2	03/03/17 15:08	03/03/17 18:45
D-DU2-S-SG-05-13S	17-03-0336-3	03/03/17 15:20	03/03/17 18:45
D-DU2-S-SG-05-25S	17-03-0336-4	03/03/17 15:48	03/03/17 18:45

DATA SUMMARY:

As per the chain of custody (COC), the samples were analyzed using one or more of the following methodologies:

- ASTM D-2216 (M) Moisture Content (Solid)
- EPA 6010B Title 22 Metals (Solid)
- EPA 7471A Mercury (Solid)
- EPA 8015B (M) Diesel and Motor Oil Ranges (Solid)
- EPA 8082 PCB Aroclors (Solid)
- EPA 8270C SIM PAHs (Solid)

The samples were analyzed within the suggested EPA holding time for the requested methods unless otherwise noted.

Sample results were reported in the RL format.

The sample data is reported in dry weight. The instrument printouts do not reflect the correction for dry weight.

Any dilutions made to the sample(s) and/or QC will be noted in the following narrative. Reporting limits have been adjusted accordingly.

Manual integrations made to the data will be noted in the following narrative. The before and amended chromatograms have been included in the data package.

All sample and analytical QC are within acceptance criteria unless otherwise noted.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0336

ASTM D-2216 (M) Moisture Content (Solid):

Samples -3 and -4 were analyzed for % Moisture by ASTM D-2216 (M). The samples were prepared and analyzed on 03/07/17 in batch #s H0307MOIB4 / H0307MOID4.

Balance Calibration/Verification:

All values were within acceptance criteria.

Sample and QC:

The method blank was non-detect.

A non-client sample was used as the sample duplicate for quality control; refer to the sample duplicate summary form for further information.

EPA 6010B Title 22 Metals (Solid):

Samples -3 and -4 were analyzed for Metals by EPA 6010B. The samples were prepared and analyzed on 03/08/17 in batch #s 170308L01 / 170308S01 on ICP 7300.

Initial Calibration, Initial Calibration Verification, and Initial Calibration Blank:

All values were within acceptance criteria.

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

ICS A/AB:

All values were within acceptance criteria.

Sample and QC:

The method blank was non-detect and the LCS was within acceptance criteria.

A sample from a different work order was used for the MS/MSD. All values were within acceptance criteria for project-specific analytes except for the MS and/or MSD % recoveries for Antimony and Barium, which were out of range.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0336

EPA 7471A Mercury (Solid):

Samples -3 and -4 were analyzed for Mercury by EPA 7471A. The samples were prepared and analyzed on 03/08/17 in batch #s 170308L03 / 170308S03 on Mercury 08.

Initial Calibration, Initial Calibration Verification, and Initial Calibration Blank:

All values were within acceptance criteria.

Continuing Calibration Verification and Continuing Calibration Blank:

All values were within acceptance criteria.

Sample and QC:

The method blank was non-detect and the LCS was within acceptance criteria.

A sample from a different work order was used for the MS/MSD. The MS/MSD RPD for Mercury was out of range.

EPA 8015B (M) Diesel and Motor Oil Ranges (Solid):

Samples -3 and -4 were analyzed for Diesel and Motor Oil Ranges by EPA 8015B (M). The samples were prepared on 03/07/17 and analyzed on 03/08/17 in batch #s 170307B06 / 170307S06 on GC 49.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/06/17 on GC 49. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 30% D acceptance criteria.

For the Diesel and Motor Oil Ranges, Diesel is used for the initial calibration and spiking standards. The surrogate recoveries for the samples and QC were calculated from the 5-point surrogate curve analyzed with the Diesel ICAL.

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

Sample and QC:

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0336

A sample from a different work order was used for the MS/MSD. The method blank was non-detect; the LCS, MS/MSD, and all surrogate recoveries were within acceptance criteria.

Manual integration was performed on (1) or more of the sample to correct the peak ID and/or baseline integration.

EPA 8082 PCB Aroclors (Solid):

Samples -3 and -4 were analyzed for Polychlorinated Biphenyls Aroclors by EPA 8082. The samples were prepared on 03/06/17 and analyzed on 03/07/17 in batch #s 170306L05 / 170306S05 on GC 31.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 03/04/17 on GC 31. The ICAL was within the 20% RSD acceptance criteria and the ICV was within the 15% D acceptance criteria for Aroclors 1016 and 1260 on primary column. Single point response factors were generated for all other Aroclors.

Continuing Calibration Verification:

All values were within the 15% D acceptance criteria.

Sample and QC:

The method blank was non-detect; the LCS and all surrogate recoveries were within acceptance criteria.

A non-client sample was used for the MS/MSD; refer to the MS/MSD summary form for further information.

EPA 8270C SIM PAHs (Solid):

Samples -3 and -4 were analyzed for Polynuclear Aromatic Hydrocarbons by EPA 8270C SIM. The samples were prepared on 03/06/17 and analyzed on 03/07/17 in batch #s 170306L10 / 170306S10 on GC/MS EEE.

Initial Calibration and Initial Calibration Verification:

The initial calibration was performed on 02/27/17 on GC/MS EEE. The ICAL was within the 15% RSD acceptance criteria and the ICV was within the 20% D acceptance criteria.

Continuing Calibration Verification:

All values were within the 20% D acceptance criteria.

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Case Narrative

Client Project Name: Burbank Airport / 9836002041
Work Order Number: 17-03-0336

Tuning Standards:

All instrument tuning standards (DFTPP) were within acceptance criteria.

Sample and QC:

A sample from a different work order was used for the MS/MSD. The method blank was non-detect; the LCS, MS/MSD, all surrogate and internal standard recoveries were within acceptance criteria.

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ASTM D-2216 (M)

Moisture Content

(Solid)

RAW DATA

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RAW DATA SHEET
FOR METHOD: ASTM D-2216 (M)

WORK ORDER:	**17-03-0336**	ANALYZED BY:	1,009
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-07 21:00
EXTRACTION :	N/A	REVIEWED BY:	1,009
D/T EXTRACTED:	2017-03-07 00:00	D/T REVIEWED:	2017-03-09 16:20

DATA FILE: NONE

 # 3 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-13S**

LCS/MB BATCH:	H0307MOIB4	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 g
MS/MSD BATCH:	H0307MOID4	FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml
UNITS:	%	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Moisture	4.20	1.00	4.20	0.10	

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RAW DATA SHEET
FOR METHOD: ASTM D-2216 (M)

WORK ORDER:	**17-03-0336**	ANALYZED BY:	1,009
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-07 21:00
EXTRACTION :	N/A	REVIEWED BY:	1,009
D/T EXTRACTED:	2017-03-07 00:00	D/T REVIEWED:	2017-03-09 16:20

DATA FILE: NONE

 # 4 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-25S**

LCS/MB BATCH:	H0307MOIB4	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 g
MS/MSD BATCH:	H0307MOID4	FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml
UNITS:	%	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Moisture	3.40	1.00	3.40	0.10	

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: ASTM D-2216 (M)

MB SAMPLE ID:	**099-05-014-6729**	ANALYZED BY:	1,009
MB BATCH ID:	H0307MOIB4	D/T ANALYZED:	2017-03-07 21:00
INSTRUMENT:	N/A	REVIEWED BY:	1,009
EXTRACTION:	N/A	D/T REVIEWED:	2017-03-09 16:20
D/T EXTRACTED:	2017-03-07 00:00	MATRIX:	Soil

DATA FILE: NONE

CLIENT WORK ORDER: 17-03-0336

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
3		D-DU2-S-SG-05-13S	2017-03-07 21:00	NONE
4		D-DU2-S-SG-05-25S	2017-03-07 21:00	NONE

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RAW DATA SHEET
FOR METHOD: ASTM D-2216 (M)

WORK ORDER:	**099-05-014**	ANALYZED BY:	1,009
INSTRUMENT:	N/A	D/T ANALYZED:	2017-03-07 21:00
EXTRACTION :	N/A	REVIEWED BY:	1,009
D/T EXTRACTED:	2017-03-07 00:00	D/T REVIEWED:	2017-03-09 16:20

DATA FILE: NONE

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH:	H0307MOIB4	SAMPLE VOLUME / WEIGHT:	DEFAULT: 1.00 g
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 1.00 ml
UNITS:	%	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Moisture	0.000	1.00	ND	0.10	

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DUPLICATE REPORT
FOR METHOD: ASTM D-2216 (M)

DUP SAMPLE ID: 17-03-0425-4
DUP BATCH : H0307MOID4
INSTRUMENTS:
SAMPLE: N/A
DUP SAMPLE: N/A

EXTRACTION : N/A
D/T EXTRACTED :
SAMPLE: 2017-03-07 00:00
DUP SAMPLE: 2017-03-07 00:00

ANALYZED BY: 1,009
D/T ANALYZED
SAMPLE: 2017-03-07 21:00
DUP SAMPLE: 2017-03-07 21:00
REVIEWED BY: 1,009
D/T REVIEWED 2017-03-09 16:20

COMPOUND	SAMPLE CONC	DUP CONC	% RPD	CONTROL LIMIT	STATUS	QUALIFIERS
Moisture	19.60	20.10	3	0-10	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
SDP	NONE	

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Moisture Content Raw Data Logbook

METHOD	MATRIX	DATE	ANALYST(S)	BATCH NUMBER
ASTM D2216(M)	☑ Solid ☐ Sediment ☐ Other_____	Preparation: 3/7/17	1050 / 1009	MB: H0307 MOI BK 4 1009
		Analysis: ↓	↓	Sample Duplicate: ↓ DK 4 3/9/17

CEL ID #	MASS (g) DISH	MASS (g) DRY DISH	MASS (g) MOISTURE	% MOISTURE	RL (%)	COMMENTS	ALUMINUM DISH SUPPLY ID
MB	1.87	1.87	0.00	0.00	0.10		G007-66-15

CEL ID #	% MOISTURE	RPD	CONTROL LIMIT	OVEN ID	THERMOMETER ID / CF (°C)	OVEN TEMP (°C)	BATCH PREP TIME (hh:mm)
Sample 17-03-0425-4A	19.6	3	0 – 10	☑ IO 07	☑ TSS IO7A CF: -2	Start: 103	Start: 1300
Duplicate ↓	20.1			☐ IO 08	☐ TSS IO8A CF:_____	End: 103	End: 2100
Instructions: CEL ID consists of Work Order Number and Container ID				☐ _____	☐ _____ CF:_____		

CEL ID #	MASS (g) DISH	DISH + SAMPLE (as-received)	SAMPLE (as-received)	DISH + SAMPLE (oven-dried)	MOISTURE	% MOISTURE WET-BASED	% MOISTURE DRY-BASED	BALANCE ID #	RL (%)	QUAL	COMMENTS
Duplicate 17-03-0425-4A	1.88	12.27	10.39	10.18	2.09	20.1		63	0.10		
17-03-0425-1A	1.87	12.22	10.35	10.01	2.21	21.4		↓	↓		
-2A	1.87	12.41	10.54	11.73	0.68	6.5					
-3A	1.86	12.29	10.43	11.33	0.96	9.2					
-4A	1.89	12.12	10.23	10.11	2.01	19.6					
-5A	1.86	12.96	11.10	11.67	1.29	11.6					
-6A	1.87	12.76	10.89	11.94	0.82	7.5					
-7A	1.86	12.24	10.38	11.65	0.59	5.7					
17-03-0444-3A	1.88	12.46	10.58	11.89	0.57	5.4					
-4A	1.89	12.99	11.10	12.53	0.46	4.1					
-7A	1.88	12.29	10.41	11.41	0.88	8.5					
-8A	1.86	12.83	10.97	12.26	0.57	5.2					
-15A	1.85	12.20	10.35	11.29	0.91	8.8					
17-03-0445-3A	1.85	12.48	10.63	11.91	0.57	5.4					
-4A	1.88	12.35	10.47	11.77	0.58	5.5					
-7A	1.89	12.90	11.01	12.18	0.72	6.5					
-8A	1.90	12.11	10.21	11.54	0.57	5.6					
-9A	1.88	12.85	10.97	12.35	0.50	4.6					
17-03-0336-3A	1.88	12.55	10.67	12.10	0.45	4.2					
-4A	1.86	12.06	10.20	11.71	0.35	3.4		✓	✓		

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BATCH TIME
Time (24 Hr): 2100
Initials: 1050 / 1009

Drying / Weighing Cycle Raw Data Logbook

Analyte: ☐ Moisture Content, ☐ Solids Content, ☐ Total Dissolved Solids (TDS), ☐ Total Suspended Solids (TSS), ☐ Volatile Solids (VS), ☐ Volatile Suspended Solids (VSS), ☐ Lipid Content, ☐ Mobility Extraction (TCLP/SPLP/STLC), ☐ Other (Specified) _____

METHOD				MASS CHANGE CONTROL LIMIT	COMMENTS
☑ ASTM D2216(M)	☐ EPA 160.4	☐ SM 2540 C	☐ WET (STLC)	Moisture/Solids Content: < 0.1% of previous mass	BATCH TIME Time (24 Hr): 2100 Initials: 1050/1009
☐ EPA 160.1	☐ EPA 1311	☐ SM 2540 D	☐ Other	TDS/TSS/VS/VSS: < 4% of previous mass or 0.5 mg, whichever is less	
☐ EPA 160.2	☐ EPA 1312	☐ SM 2540 E		TCLP/SPLP/STLC: within ± 1% of previous mass	
☐ EPA 160.3	☐ SM 2540 B	☐ SOP-M489			

MATRIX	DATE	ANALYST(S)	BATCH NUMBER	COMMENTS
Solid	Preparation: 03/07/17	1050/1009	MB: H0307 MOI Bx4 1009 3/9/17 LCS/LCSD: NA	
	Analysis: ↓	↓	Sample Duplicate: ↓ Dx4 Sample Duplicate or MS/MSD: NA	

ECI ID #	OVEN ID #	CONTAINER + RESIDUE (OVEN-DRIED) CYCLE 1 MASS (g)	CYCLE 1 TIME IN	CYCLE 1 TIME OUT	CYCLE 2 MASS (g)	CYCLE 2 TIME IN	CYCLE 2 TIME OUT	CYCLE 3 MASS (g)	CYCLE 3 TIME IN	CYCLE 3 TIME OUT	FINAL MASS CHANGE WITHIN LIMITS	BALANCE ID #	COMMENTS
MB	10-07	1.87	1400	1800	1.87	1900	2000				Y N	63	
LCS											Y N		
LCSD											Y N		
MS											Y N		
MSD/Duplicate											Y N		
Duplicate 17-03-0425-4A	10-07	10.18	1400	1800	10.18	1900	2000				Y N	63	
17-03-0425-1A	↓	10.01	↓	↓	10.01	↓	↓				Y N	↓	
2A		11.73			11.73						Y N		
3A		11.33			11.33						Y N		
4A		10.11			10.11						Y N		
5A		11.67			11.67						Y N		
6A		11.94			11.94						Y N		
7A		11.65			11.65						Y N		
17-03-0444-3A		11.89			11.89						Y N		
4A		12.53			12.53						Y N		
7A		11.41			11.41						Y N		
8A		12.26			12.26						Y N		
15A		11.29			11.29						Y N		
17-03-0445-3A		11.91			11.91						Y N		
4A		11.77			11.77						Y N		
7A		12.18			12.18						Y N		
8A		11.54			11.54						Y N		
9A		12.35			12.35						Y N		
17-03-0336-3A		12.10			12.10						Y N		
4A	↓	11.71	↓	↓	11.71	↓	↓				Y N	↓	

BALANCE CALIBRATION CHECK LOG

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Date performed: 3/7/17 Initials: \|\|\|

ID	Class 2 Weight (g)	Reading (g)	Acceptance Range	Pass? (circle one)	Comment (If not passed, note removal or corrective action)
25	1	1.00	0.98 - 1.02	Y N	IO Lab
	100	100.00	98.00 - 102.00	Y N	
	500	498.98	498.00 - 502.00	Y N	
62	0.002	.0020	0.00180 - 0.00220	Y N	IO Lab
	1	.9996	0.99900 - 1.00100	Y N	
	100	99.9962	99.90000 - 100.10000	Y N	
26	1	1.00	0.98 - 1.02	Y N	IO Lab
	100	99.99	98.00 - 102.00	Y N	
55	1	.98	0.98 - 1.02	Y N	IO Lab
	100	99.96	98.00 - 102.00	Y N	
	500	499.83	498.00 - 502.00	Y N	
11	1	.99	0.98 - 1.02	Y N	IO Lab
	100	100.00	98.00 - 102.00	Y N	
66	0.002	.0020	0.00180 - 0.00220	Y N	Metals
	1	.9996	0.99900 - 1.00100	Y N	
	100	100.0004	99.90000 - 100.10000	Y N	
53	0.1	.10	0.09 - 0.11	Y N	Extractions
	1	1.00	0.98 - 1.02	Y N	
	100	99.98	98.00 - 102.00	Y N	
	500	499.93	498 - 502	Y N	
~~80~~ 70	1	1.00	0.98 - 1.02	Y N	Extractions
	100	99.83	98.00 - 102.00	Y N	
	500	499.18	498.00 - 502.00	Y N	
57	100	100.0	98.0-102.0	Y N	Extractions
	1000	1000.0	998.0-1002.0	Y N	
	2000	1999.9	1998.0-2002.0	Y N	
52	0.002	.0020	0.0018 - 0.0022	Y N	Extractions
	1	.9996	0.9990 - 1.0010	Y N	
	100	99.9967	99.9000 - 100.1000	Y N	
71	0.002	.0019	0.0018 - 0.0022	Y N	BOD Room
	1	.9993	0.9990 - 1.0010	Y N	
	100	99.9962	99.9000 - 100.1000	Y N	
63	~~0.1~~	.10	0.09 - 0.11	Y N	BOD Room
	100	99.99	98.00 - 102.00	Y N	
64	1	.99	0.98 - 1.02	Y N	Metals Clean Room
	10	10.01	9.8 - 10.2	Y N	
	100	100.00	98.00 - 102.00	Y N	
72	0.002	.0020	0.0018 - 0.0022	Y N	Oil & Grease Room
	1	.9995	0.9990 - 1.0010	Y N	
	100	100.0011	99.9000 - 100.1000	Y N	
30	1	1.00	0.98 - 1.02	Y N	Oil & Grease Room
	100	100.00	98.00 - 102.00	Y N	

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EPA 8015B (M)

Diesel + Motor Oil

RAW DATA

Return to Contents

EPA 8015B (M)

Diesel + Motor Oil

INITIAL CALIBRATION

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8015B (M)

ICAL WORK ORDER: 099-14-354-23-5901
ICAL BATCH ID: 170306I006
INSTRUMENT: GC 49

ANALYZED BY: 972
ICAL D/T ANALYZED: 2017-03-06 16:25
REVIEWED BY:
D/T REVIEWED:

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD CL	R or R^2	R or R^2 CL	STATUS
TPH as Diesel	C	Avg RF	1,245.677	912.737	918.784	901.660	906.221					977.016	0.00	15	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-03-06 16:25	T:\GC_49\GC_49_data\2017\170306\17030614.d\Report.txt17030614
2	2017-03-06 16:46	T:\GC_49\GC_49_data\2017\170306\17030615.d\Report.txt17030615
3	2017-03-06 17:06	T:\GC_49\GC_49_data\2017\170306\17030616.d\Report.txt17030616
4	2017-03-06 17:27	T:\GC_49\GC_49_data\2017\170306\17030617.d\Report.txt17030617
5	2017-03-06 17:48	T:\GC_49\GC_49_data\2017\170306\17030618.d\Report.txt17030618

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor
LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8015B (M)

ICV WORK ORDER: **099-14-354-23-5901**
INITIAL BATCH: 170306I006
INSTRUMENT: GC 49

ANALYZED BY: 972
D/T ANALYZED:
INITIAL: 2017-03-06 16:25
ICV: 2017-03-06 18:09
REVIEWED BY:
D/T REVIEWED:

DATA FILE: T:\GC_49\GC_49_data\2017\170306\17030619.d\Report.txt17030619

COMPOUND NAME	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	977.016	886.920			9	0-30	PASS

MIN RF: Method Specified Minimum Response Factor

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Report Date : 06-Mar-2017 19:11 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
End Cal Date : 06-MAR-2017 17:48
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_49.i/170306.b/8015d.m
Cal Date : 06-Mar-2017 19:09 d2ef
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_49.i/170124.b/17012441.d
Level 2: /chem1/SVOA/GC_49.i/170124.b/17012442.d
Level 3: /chem1/SVOA/GC_49.i/170124.b/17012443.d
Level 4: /chem1/SVOA/GC_49.i/170124.b/17012444.d
Level 5: /chem1/SVOA/GC_49.i/170124.b/17012445.d

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	___ RRF	% RSD
S 1 TPH as Jet A rf	886434	816845	849166	1193052	863474	921794	17
S 4 TPH as JP5 rf	822008	830452	736341	726438	850947	793237	7
S 14 TPH as Diesel rf	1245677	912737	918784	901660	906221	977016	15

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Report Date : 06-Mar-2017 19:11 Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
End Cal Date : 06-MAR-2017 17:48
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_49.i/170306.b/8015d.m
Cal Date : 06-Mar-2017 19:09 d2ef
Curve Type : Average

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	RRF	% RSD
S 26 Diesel Range Organics rf	1109325	837831	843320	828547	840256	891856	14
S 31 Oil Range Organics rf	325793	329796	315888	323023	313064	321513	2
S 35 TPH as Motor Oil rf	386723	335050	318855	325562	315112	336260	9

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 09-NOV-2016 21:15
End Cal Date : 06-MAR-2017 17:48
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_49.i/170306.b/8015d.m
Cal Date : 06-Mar-2017 19:09 d2ef
Curve Type : Average

Compound	5.000 Level 1	200.000 Level 2	400.000 Level 3	800.000 Level 4	1600.000 Level 5	RRF	% RSD
S 274 Micro-TPH as Motor Oil rf	531070	608933	689551	700484	707426	647493	12
S 200 NWTPH_Diesel rf	838068	650960	682751	690067	691436	710656	10
S 268 NWTPH_Disel Range rf	838068	650960	682751	690067	691436	710656	10
S 201 NWTPH_Motor Oil rf	386163	394983	425714	434936	389269	406213	6
$ 92 n-Octacosane	244278	235628	228262	230419	222709	232259	4
$ 93 C28 n-Octacosane	340990	511509	511646	496028	456324	463300	16

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Data File: /chem1/SVOA/GC_49.i/170306.b/17030619.d
Report Date: 03/07/2017 10:23

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_49.i
Sample Name: ICV D400 C28 50 L102516G
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_49.i/170306.b/8015d.m

Injection Date and Time: 06-MAR-2017 18:09
Initial Calibration Date(s): 09-NOV-2016 06-MAR-2017
Initial Calibration Time(s): 21:15 19:52

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Diesel Range Organics	891855.748	841967.223	0.00	6	15	Averaged
TPH as Diesel	977015.903	886919.945	0.00	9	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
n-Octacosane	232259.309	243037.580	0.00	-5	20	Averaged

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Data File: /chem1/SVOA/GC_49.i/170306.b/17030614.d
Report Date: 07-Mar-2017 10:16

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170306.b/17030614.d
Lab Smp Id:
Inj Date : 06-MAR-2017 16:25
Operator : 682 Inst ID: GC_49.i
Smp Info : ICAL D5 C28 0.625 L102516B
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170306.b/8015d.m
Meth Date : 07-Mar-2017 10:13 uj3k Quant Type: ESTD
Cal Date : 25-JAN-2017 00:58 Cal File: 17012441.d
Als bottle: 14 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
==========	==	======	======	========	=======	=======
S 14 TPH as Diesel	0.697-7.962			6228384	5.00000	6.374
S 26 Diesel Range Organics	2.315-7.962			5546623	5.00000	6.219
$ 92 n-Octacosane	7.758	7.756	0.002	152674	0.62500	0.657

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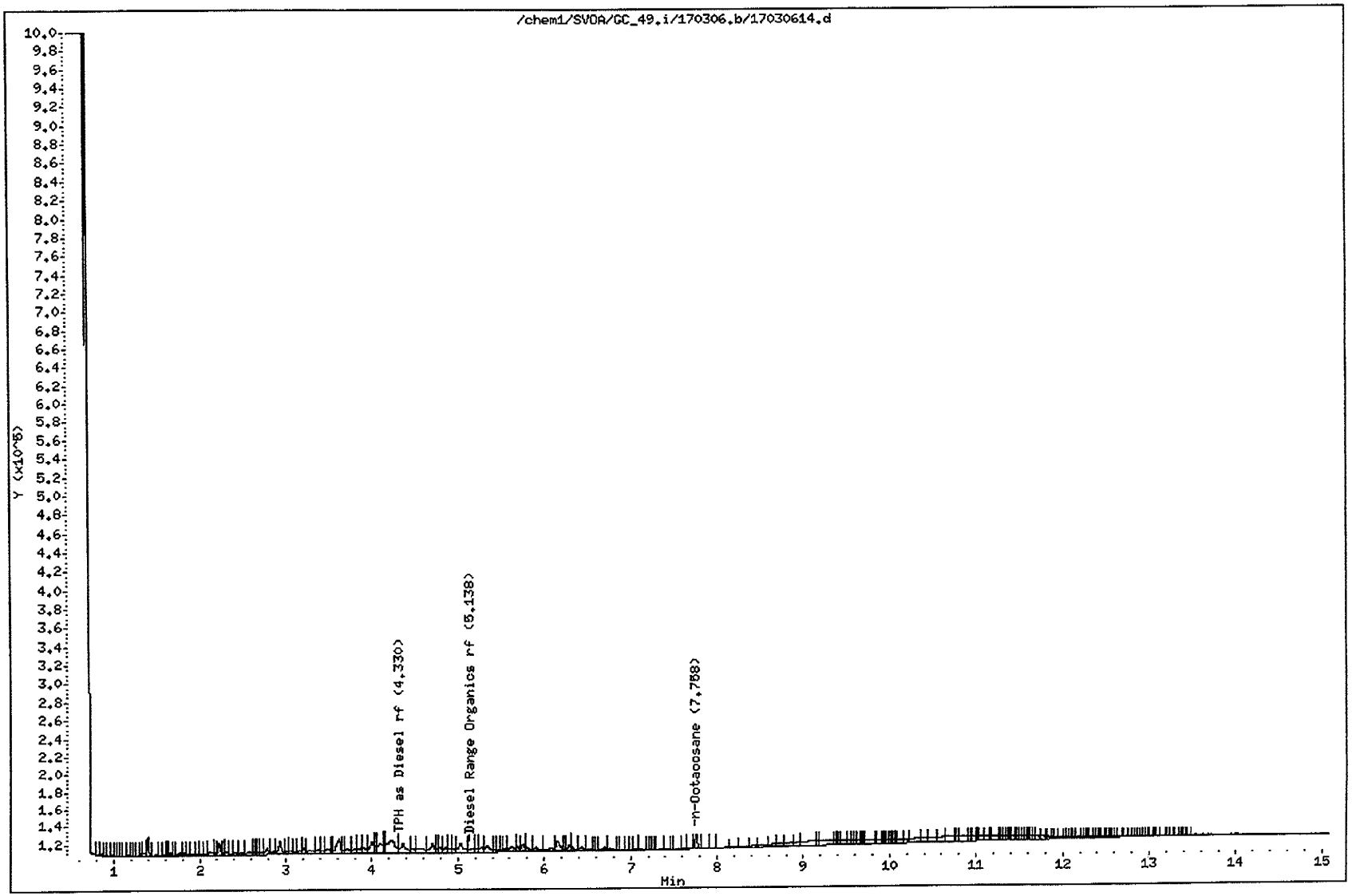
Data File: /chem1/SVOA/GC_49.i/170306.b/17030614.d
Date : 06-MAR-2017 16:25
Client ID:
Sample Info: ICAL D5 C28 0.625 L102516B

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_49.i/170306.b/17030615.d
Report Date: 07-Mar-2017 10:17

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170306.b/17030615.d
Lab Smp Id:
Inj Date : 06-MAR-2017 16:46
Operator : 682 Inst ID: GC_49.i
Smp Info : ICAL D200 C28 25 L102516C
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170306.b/8015d.m
Meth Date : 07-Mar-2017 10:16 uj3k Quant Type: ESTD
Cal Date : 25-JAN-2017 01:19 Cal File: 17012442.d
Als bottle: 15 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 14 TPH as Diesel	0.697-7.962			182547475	200.000	186.841
S 26 Diesel Range Organics	2.315-7.962			167566270	200.000	187.884
$ 92 n-Octacosane	7.757	7.758	-0.001	5890705	25.0000	25.362

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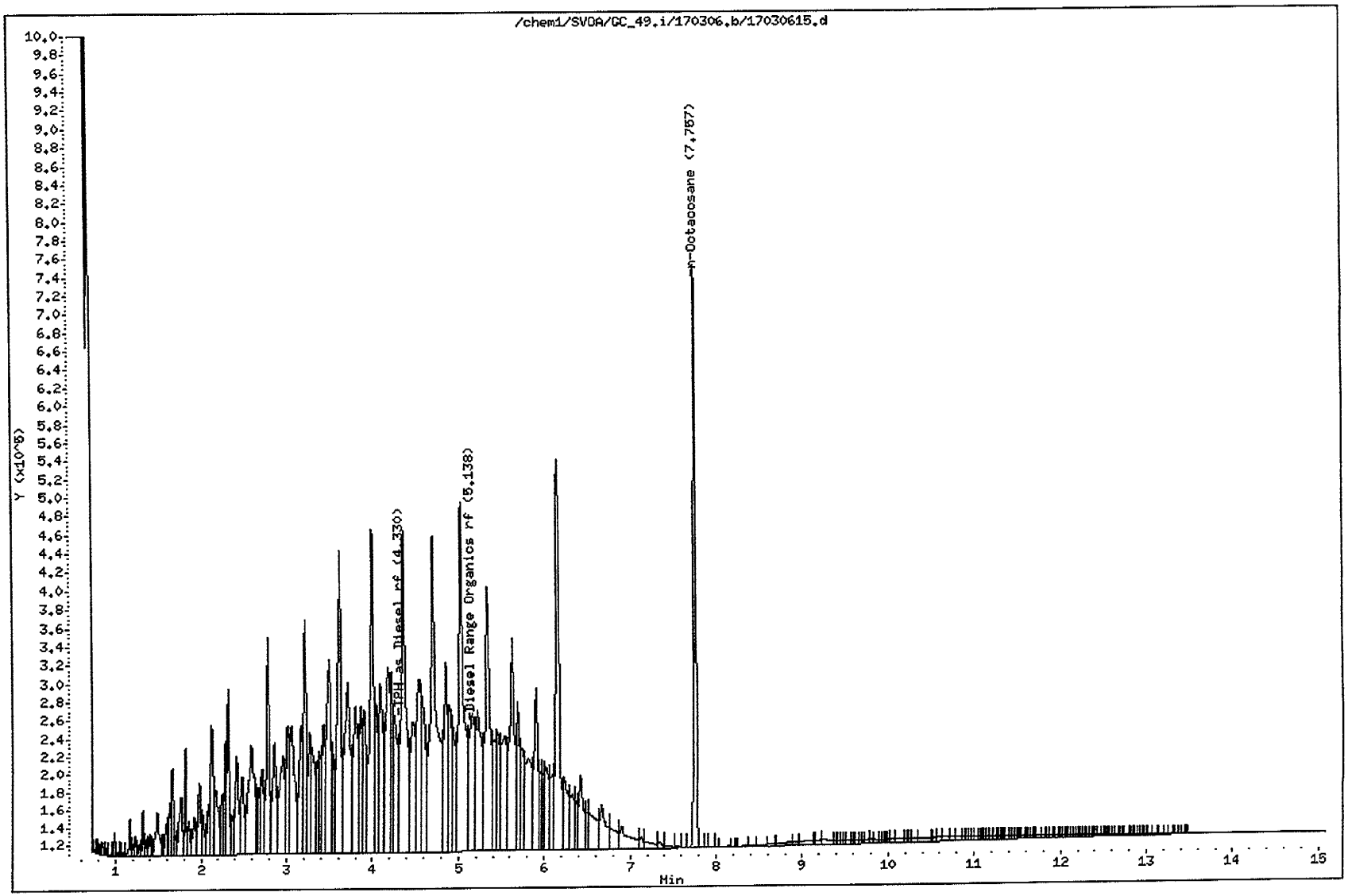
Data File: /chem1/SVOA/GC_49.i/170306.b/17030615.d
Date : 06-MAR-2017 16:46
Client ID:
Sample Info: ICAL D200 C28 25 L102516C

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_49.i/170306.b/17030616.d
Report Date: 07-Mar-2017 10:17

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170306.b/17030616.d
Lab Smp Id:
Inj Date : 06-MAR-2017 17:06
Operator : 682 Inst ID: GC_49.i
Smp Info : ICAL D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170306.b/8015d.m
Meth Date : 07-Mar-2017 10:16 uj3k Quant Type: ESTD
Cal Date : 25-JAN-2017 01:41 Cal File: 17012443.d
Als bottle: 16 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 14 TPH as Diesel	0.697-7.962			367513694	400.000	376.159
S 26 Diesel Range Organics	2.315-7.962			337327915	400.000	378.231
$ 92 n-Octacosane	7.757	7.757	0.000	11413099	50.0000	49.139

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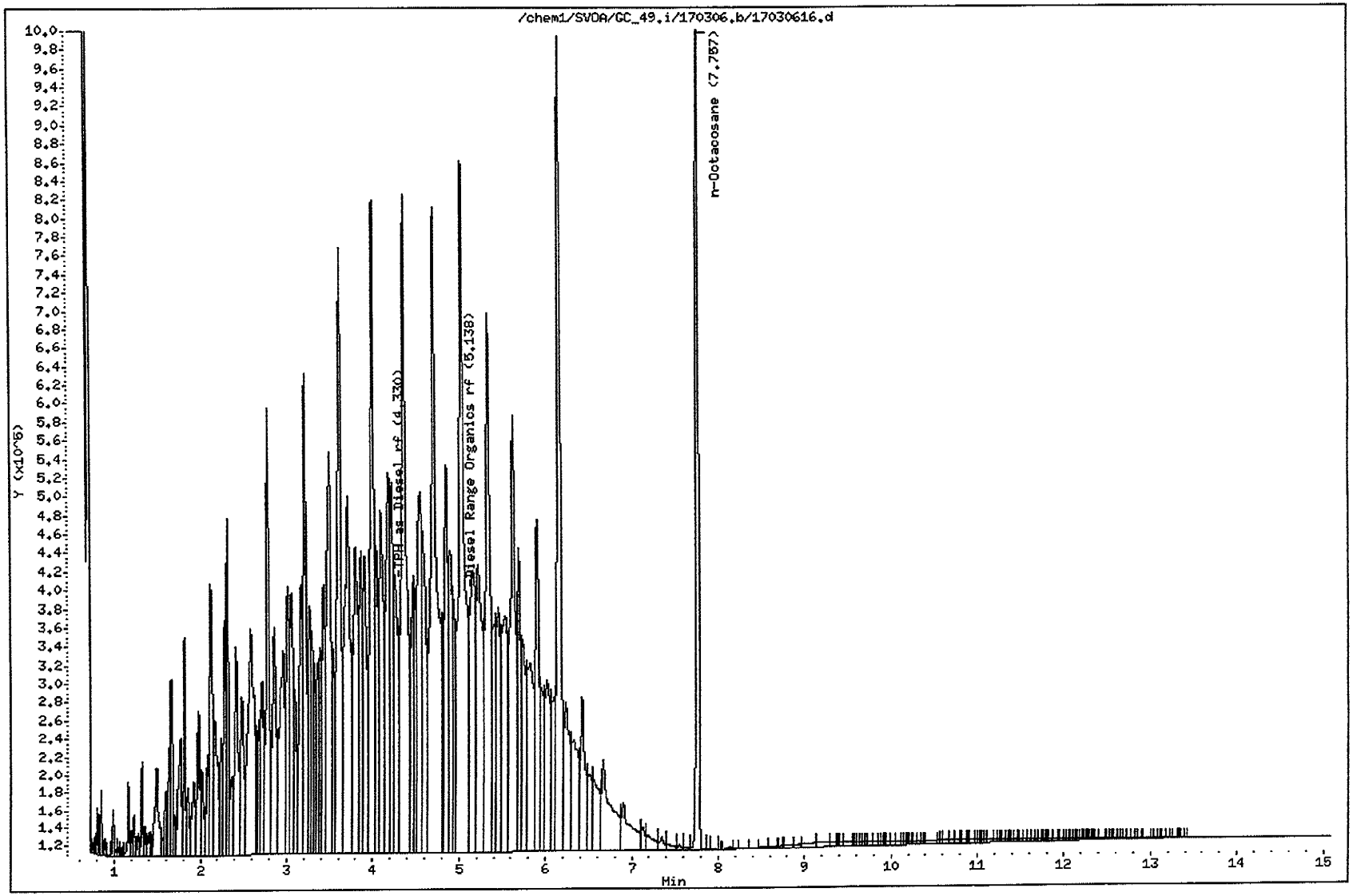
Data File: /chem1/SVOA/GC_49.i/170306.b/17030616.d
Date : 06-MAR-2017 17:06
Client ID:
Sample Info: ICAL D400 C28 50 L102516D

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_49.i/170306.b/17030617.d
Report Date: 07-Mar-2017 10:17

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170306.b/17030617.d
Lab Smp Id:
Inj Date : 06-MAR-2017 17:27
Operator : 682 Inst ID: GC_49.i
Smp Info : ICAL D800 C28 100 L102516E
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170306.b/8015d.m
Meth Date : 07-Mar-2017 10:17 uj3k Quant Type: ESTD
Cal Date : 25-JAN-2017 02:02 Cal File: 17012444.d
Als bottle: 17 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 14 TPH as Diesel	0.697-7.962			721328088	800.000	738.297
S 26 Diesel Range Organics	2.315-7.962			662837940	800.000	743.212
$ 92 n-Octacosane	7.759	7.757	0.002	23041891	100.000	99.207

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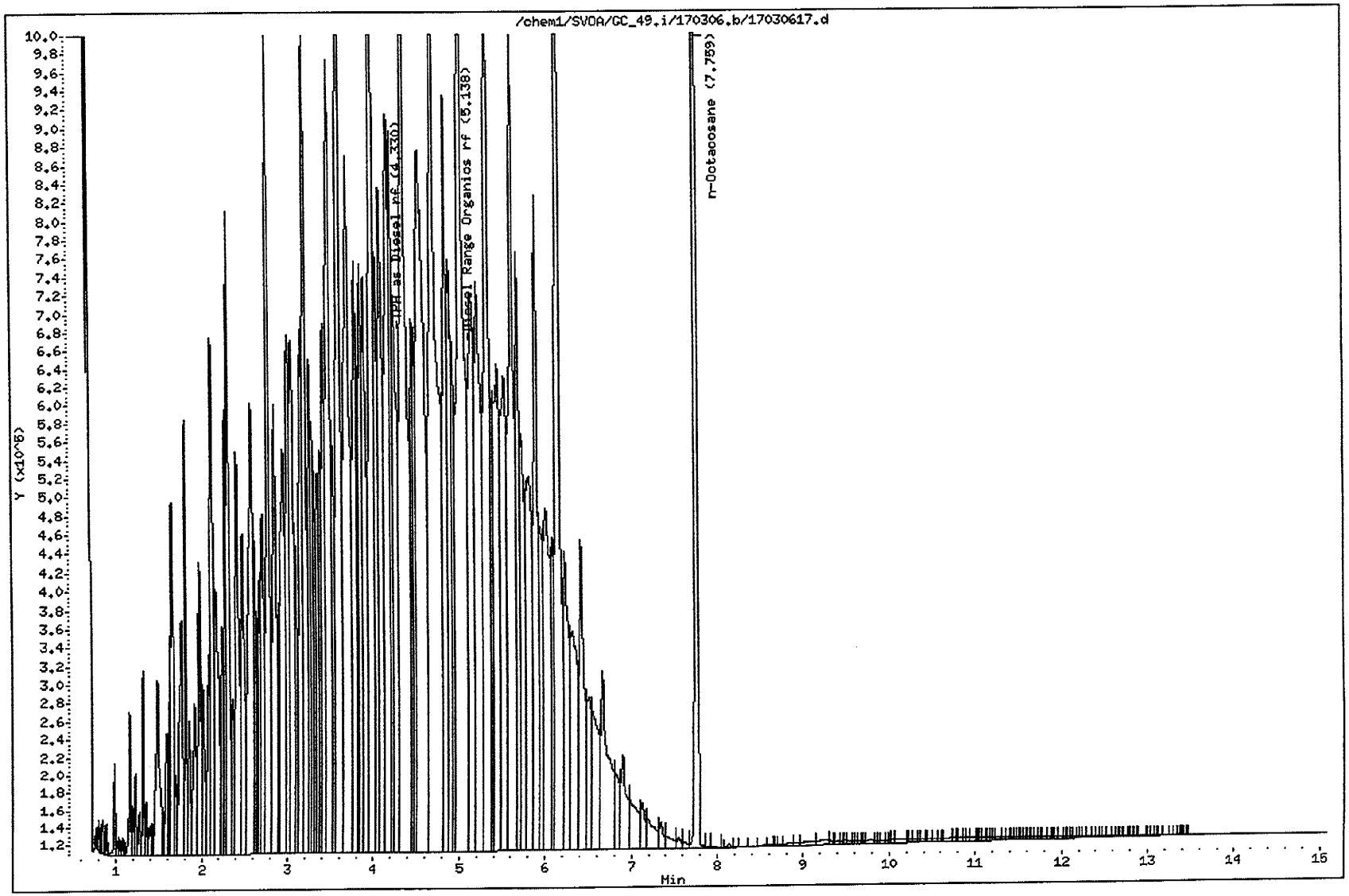
Data File: /chem1/SVOA/GC_49.i/170306.b/17030617.d
Date : 06-MAR-2017 17:27
Client ID:
Sample Info: ICAL D800 C28 100 L102516E

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_49.i/170306.b/17030618.d
Report Date: 07-Mar-2017 10:17

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170306.b/17030618.d
Lab Smp Id:
Inj Date : 06-MAR-2017 17:48
Operator : 682 Inst ID: GC_49.i
Smp Info : ICAL D1600 C28 200 L102516F
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170306.b/8015d.m
Meth Date : 07-Mar-2017 10:17 uj3k Quant Type: ESTD
Cal Date : 25-JAN-2017 02:23 Cal File: 17012445.d
Als bottle: 18 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: ICAL_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 14 TPH as Diesel	0.697-7.962			1449953593	1600.00	1484.063
S 26 Diesel Range Organics	2.315-7.962			1344408923	1600.00	1507.428
$ 92 n-Octacosane	7.762	7.759	0.003	44541811	200.000	191.776

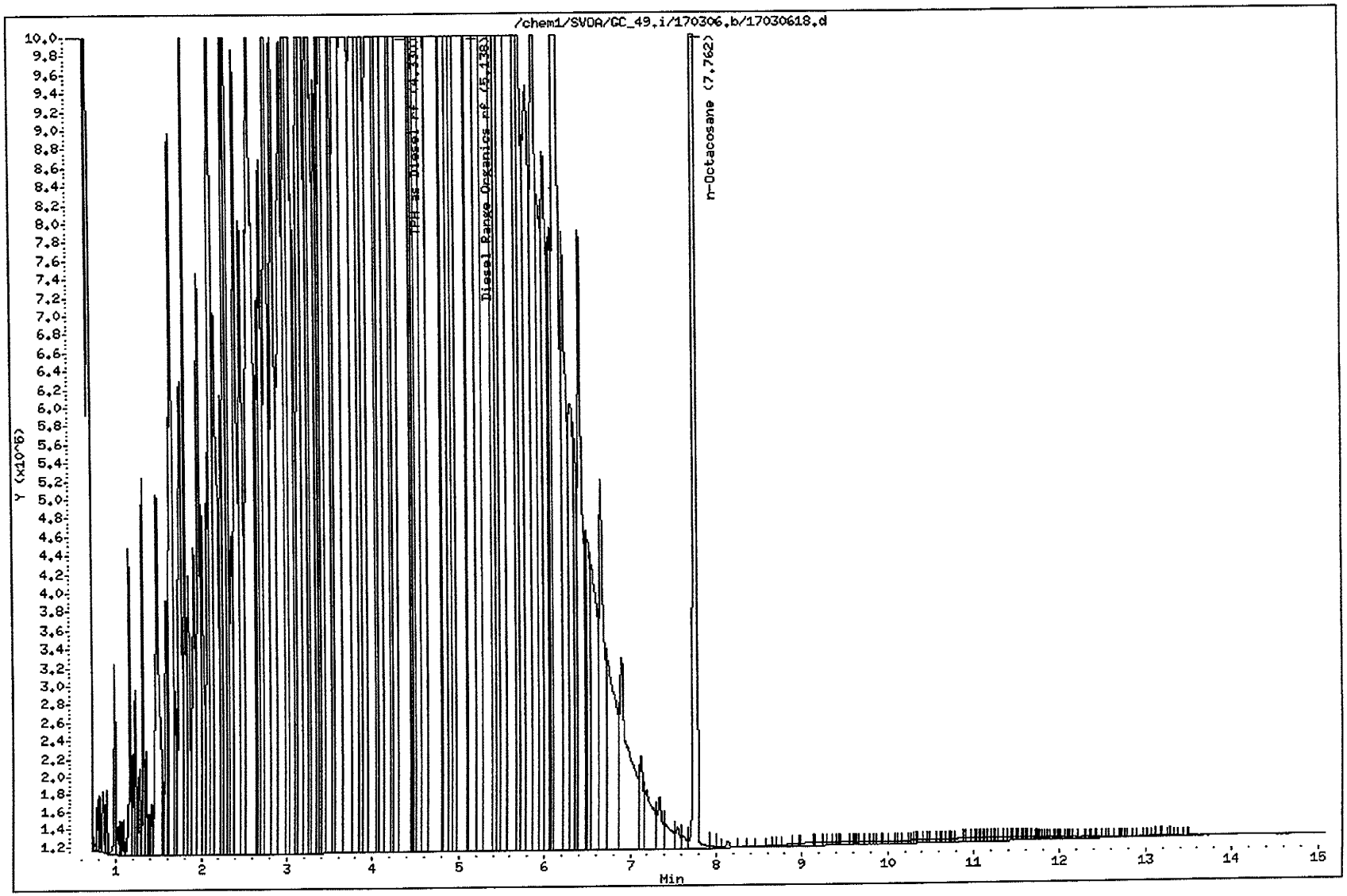
Return to Contents

Data File: /chem1/SVOA/GC_49.i/170306.b/17030618.d
Date : 06-MAR-2017 17:48
Client ID:
Sample Info: ICAL D1600 C28 200 L102516F

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_49.i/170306.b/17030619.d
Report Date: 07-Mar-2017 10:17

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170306.b/17030619.d
Lab Smp Id:
Inj Date : 06-MAR-2017 18:09
Operator : 682 Inst ID: GC_49.i
Smp Info : ICV D400 C28 50 L102516G
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170306.b/8015d.m
Meth Date : 07-Mar-2017 10:17 uj3k Quant Type: ESTD
Cal Date : 25-JAN-2017 02:23 Cal File: 17012445.d
Als bottle: 19 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 14 TPH as Diesel	0.697-7.962			354767978	400.000	363.113
S 26 Diesel Range Organics	2.315-7.962			336786889	400.000	377.624
$ 92 n-Octacosane	7.756	7.762	-0.006	12151879	50.0000	52.320

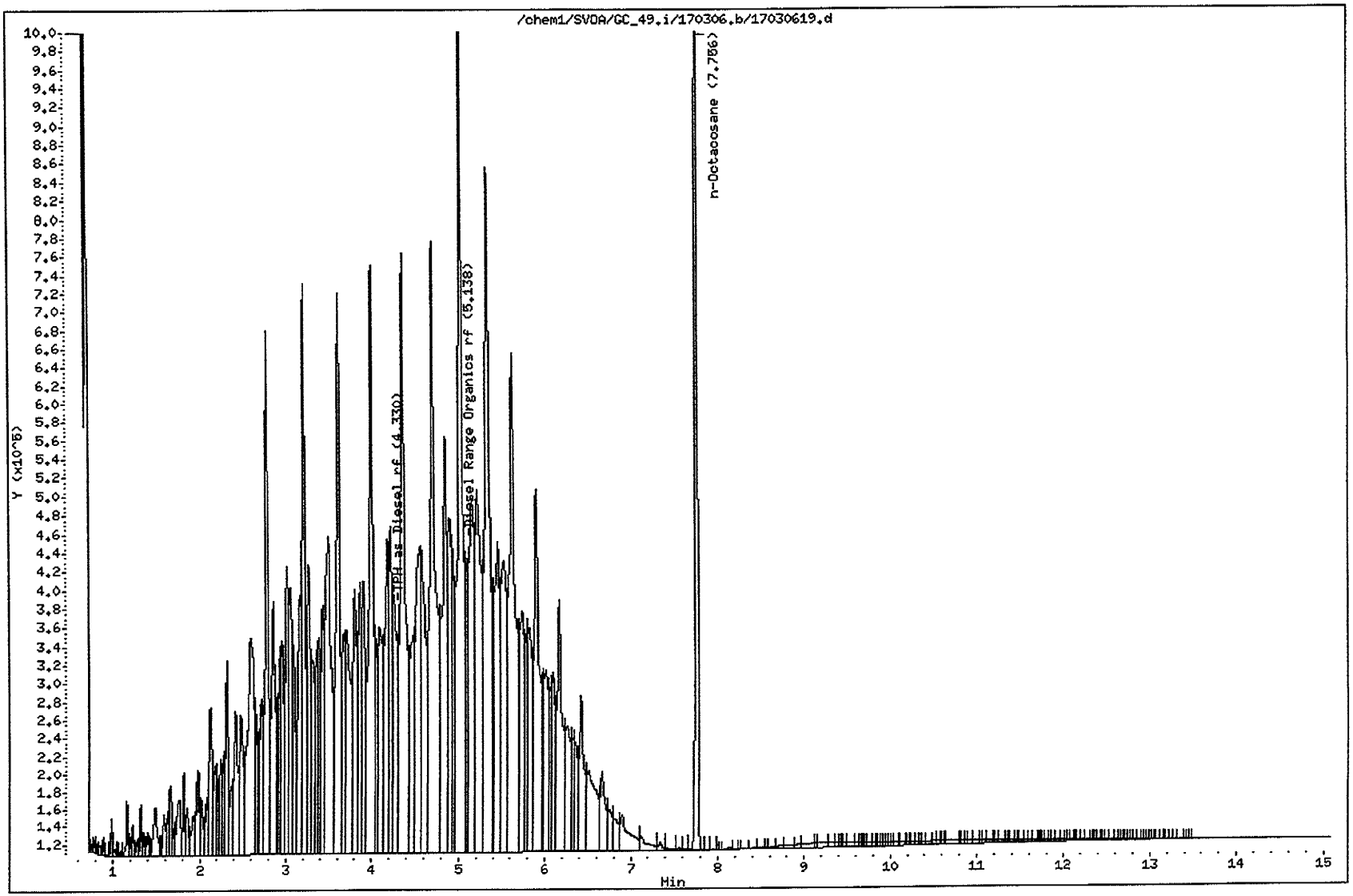
Return to Contents

Data File: /chem1/SVOA/GC_49.i/170306.b/17030619.d
Date : 06-MAR-2017 18:09
Client ID:
Sample Info: ICV D400 C28 50 L102516C

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



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External Standard Report

Data File Name : /chem1/SVOA/GC_49/170306/17030602.d
Page Number :
Operator : 682
Instrument : GC 49
Sample Name : C6-C44 L110816A

Vial Number : Vial 2
Injection Number : 2
Sequence Line : 0
Instrument Method: 8015d.m

Acquired on : 06 MAR 17 12:07
Report Created on: 07-MAR-17 10:23
Software Revision: Target 3.50

Compound Sublist : all

Sig. 1 in /chem1/SVOA/GC_49.i/170306.b/17030602.d

RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.697	7.850	7.153	2200075.00	0.00	C6-Hexane
0.882	7.850	6.968	3983348.00	0.00	C7-Heptane
1.317	7.850	6.533	5426841.00	0.00	C8-Octane
1.814	7.850	6.036	5539750.00	0.00	C9-Nonane
2.315	7.850	5.535	5698858.00	0.00	C10-Decane
2.783	7.850	5.067	5780938.00	0.00	C11-Undecane
3.217	7.850	4.633	5762413.00	0.00	C12-Dodecane
3.623	7.850	4.227	5863572.00	0.00	C13-Tridecane
4.004	7.850	3.846	5844937.00	0.00	C14-Tetradecane
4.364	7.850	3.486	5816534.00	0.00	C15-pentadecane
4.704	7.850	3.146	5811167.00	0.00	C16-Hexadecane
5.027	7.850	2.823	5915621.00	0.00	C17-Heptadecane
5.333	7.850	2.517	5944391.00	0.00	C18-Octadecane
5.626	7.850	2.224	6035801.00	0.00	C19-Nonadecane
5.905	7.850	1.945	6159045.00	0.00	C20-Eicosane
6.172	7.850	1.678	6187213.00	0.00	C21-Heneicosane
6.428	7.850	1.422	6163868.00	0.00	C22-Docosane
6.674	7.850	1.176	5942329.00	0.00	C23-Tricosane
6.909	7.850	0.941	5510708.00	0.00	C24-Tetracosane
7.135	7.850	0.715	4799734.00	0.00	C25-Pentacosane
7.353	7.850	0.497	3885114.00	0.00	C26-Hexacosane
7.563	7.850	0.287	2673879.00	0.00	C27-Heptacosane
7.766	7.850	0.084	1744614.00	7.51	n-Octacosane
7.962	7.850	-0.112	979046.00	0.00	C29-Nonacosane
8.152	7.850	-0.302	541331.00	0.00	C30-Triacontane
8.335	7.850	-0.485	292943.00	0.00	C31-Hentriacontane
8.513	7.850	-0.663	187410.00	0.00	C32-Dotricacontane
8.685	7.850	-0.835	153599.00	0.00	C33-Tritriacontane
8.853	7.850	-1.003	120180.00	0.00	C34-Tetratriacontane
9.016	7.850	-1.166	101264.00	0.00	C35-Pentatriacontane
9.176	7.850	-1.326	130921.00	0.00	C36-Hexatriacontane
9.351	7.850	-1.501	69385.00	0.00	C37-Heptatriacontane
9.555	7.850	-1.705	45993.00	0.00	C38-Octatriacontane
9.794	7.850	-1.944	81150.00	0.00	C39-Nonatriacontane
10.062	7.850	-2.212	37339.00	0.00	C40-Tetracontane
11.777	7.850	-3.927	401386.00	0.00	C44-Tetratetracontane

End of File

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EPA 8015B (M)

Diesel + Motor Oil

SAMPLE DATA

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RAW DATA SHEET
FOR METHOD: EPA 8015B (M)

WORK ORDER:	**17-03-0336**	ANALYZED BY:	972
INSTRUMENT:	GC 49	D/T ANALYZED:	2017-03-08 04:35
EXTRACTION :	EPA 3550B	REVIEWED BY:	
D/T EXTRACTED:	2017-03-07 00:00	D/T REVIEWED:	

DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030754.d\Report.txt17030754

 # 3 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-13S**

LCS/MB BATCH:	170307B06	SAMPLE VOLUME / WEIGHT:	DEFAULT: 10.00 g / ACTUAL: 10.20 g
MS/MSD BATCH:	170307S06	FINAL VOLUME / WEIGHT:	DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	0.98

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	1.32	1.00	ND	4.9	
TPH as Motor Oil	0.310	1.00	ND	4.9	

Return to Contents

```
================================================================================
                          External Standard Report
================================================================================

Data File Name    : /chem1/SVOA/GC_49/170307/17030754.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 1
Instrument        : GC 49                        Injection Number : 1
Sample Name       : 17-03-0336-3                 Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 08 MAR 17  04:35
Report Created on: 08-MAR-17  14:09              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170307.b/17030754.d
RT Range       Exp RT    DLT RT    Response           ppm              Compound
|-------------|---------|---------|------------------|---------------|--------------------|
        7.754     7.850     0.096        15201741.00          65.45  n-Octacosane
 2.313- 7.945                           1286599.68           1.32  TPH as Diesel
 5.022-11.750                            299415.05           0.31  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_49.i/170307.b/17030754.d

Page 1

Date : 08-MAR-2017 04:35

Client ID:

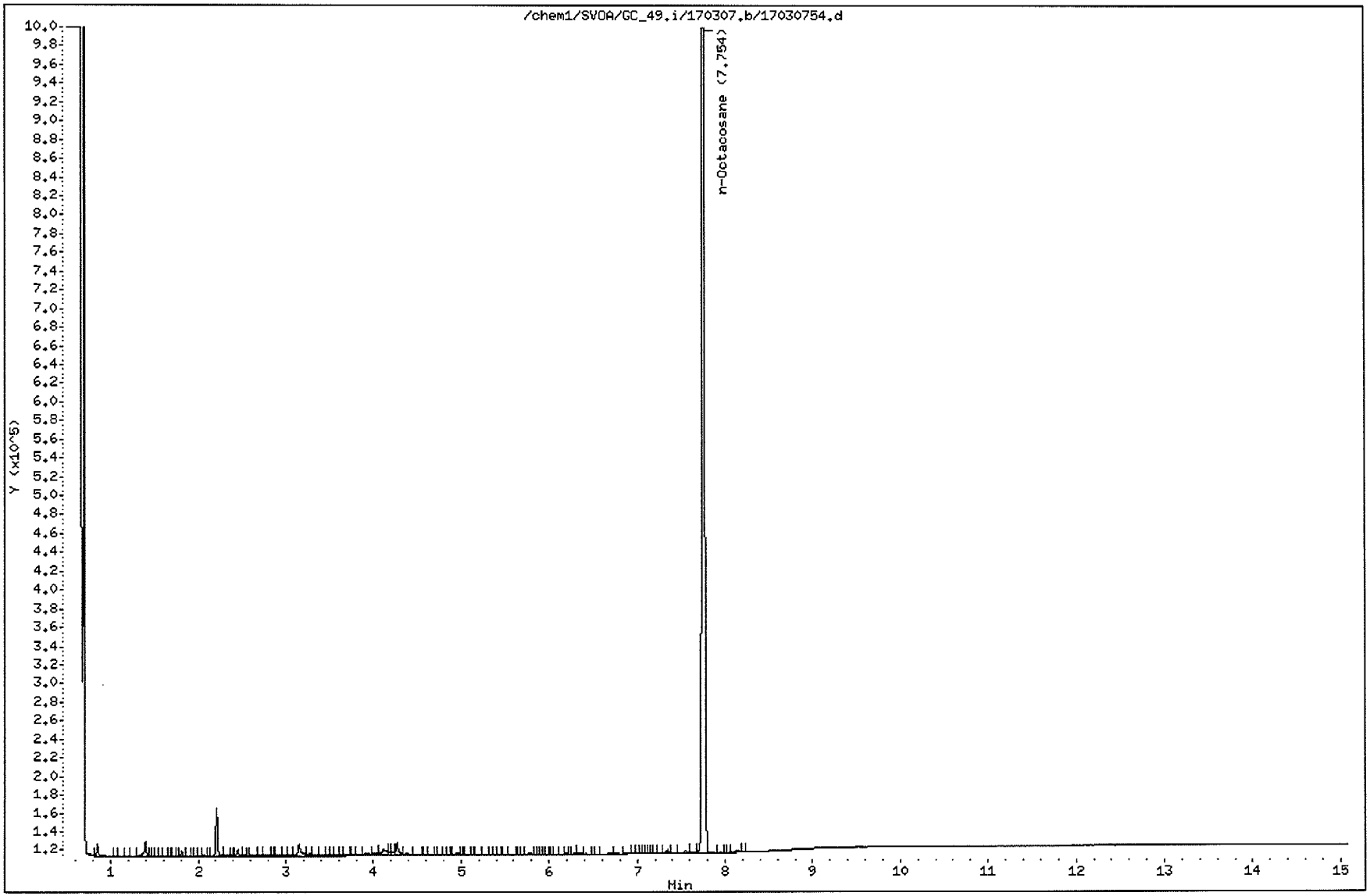
Instrument: GC_49.i

Sample Info: 17-03-0336-3

Operator: 682

Column phase:

Column diameter: 2.00



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RAW DATA SHEET
FOR METHOD: EPA 8015B (M)

WORK ORDER:	**17-03-0336**	ANALYZED BY:	972
INSTRUMENT:	GC 49	D/T ANALYZED:	2017-03-08 04:55
EXTRACTION :	EPA 3550B	REVIEWED BY:	
D/T EXTRACTED:	2017-03-07 00:00	D/T REVIEWED:	

DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030755.d\Report.txt17030755

 # 4 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-25S**

LCS/MB BATCH:	170307B06	SAMPLE VOLUME / WEIGHT:	DEFAULT: 10.00 g / ACTUAL: 10.10 g
MS/MSD BATCH:	170307S06	FINAL VOLUME / WEIGHT:	DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	0.99

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	1.60	1.00	ND	5.0	
TPH as Motor Oil	0.340	1.00	ND	5.0	

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```
================================================================================
                          External Standard Report
================================================================================

Data File Name    : /chem1/SVOA/GC_49/170307/17030755.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 1
Instrument        : GC 49                        Injection Number : 1
Sample Name       : 17-03-0336-4                 Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 08 MAR 17  04:55
Report Created on: 08-MAR-17  14:09              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170307.b/17030755.d
RT Range       Exp RT    DLT RT    Response           ppm               Compound
|-------------|---------|---------|------------------|---------------|---------------------|
        7.754     7.850     0.096        15075680.00           64.91  n-Octacosane
 2.313- 7.945                             1567033.49            1.60  TPH as Diesel
 5.022-11.750                              335920.38            0.34  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_49.i/170307.b/17030755.d

Date : 08-MAR-2017 04:55

Client ID:

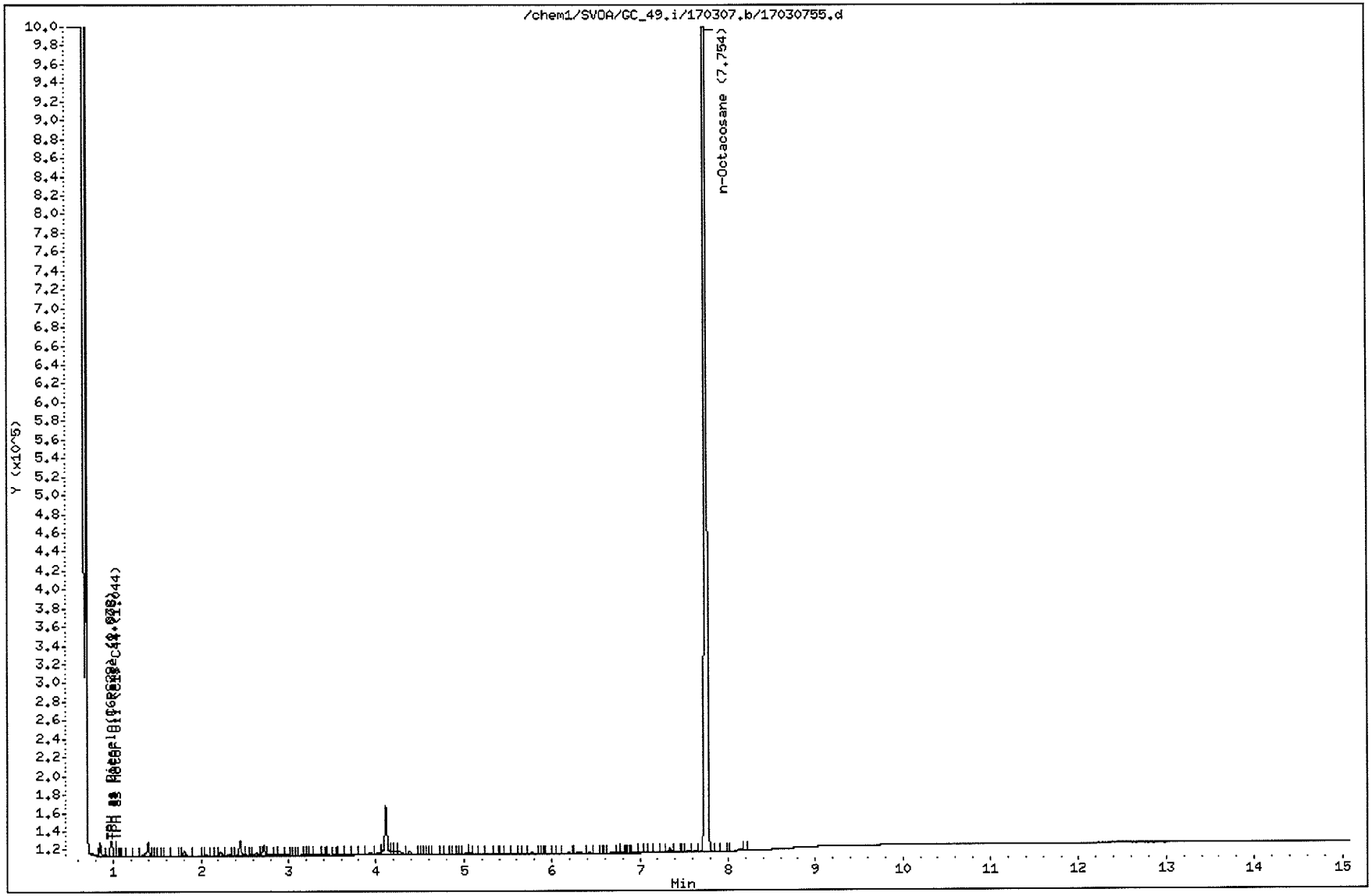
Instrument: GC_49.i

Sample Info: 17-03-0336-4

Operator: 682

Column phase:

Column diameter: 2.00



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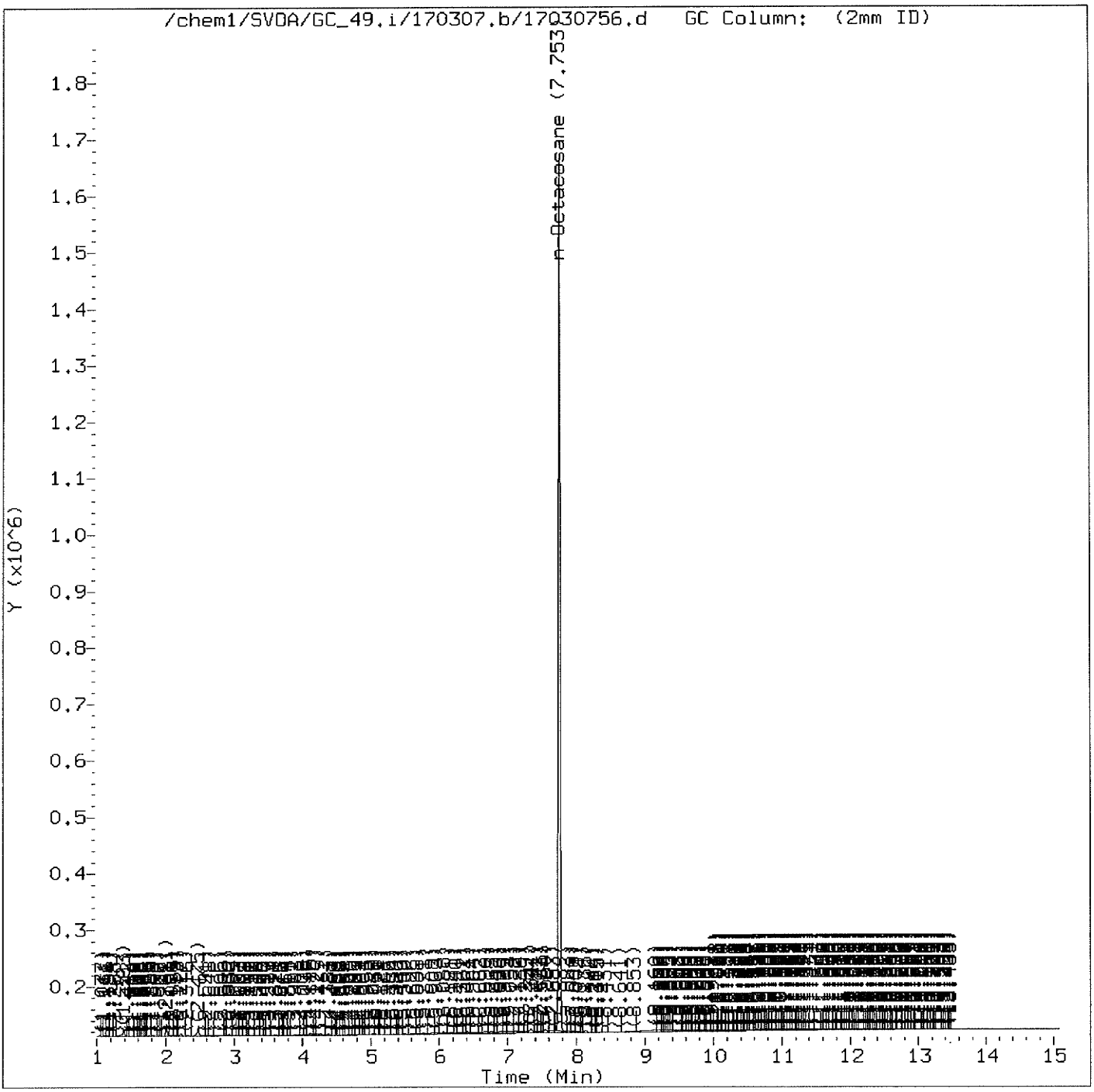
Manually Integrated Data File



Reason for manual integration: Signal not integrated by automation

Analyst responsible for change: Digitally signed by Minhchi Doan
on 03/08/2017 at 14:09.
Target 3.5 esignature user ID: umd6

Audit/management approval: 10E7

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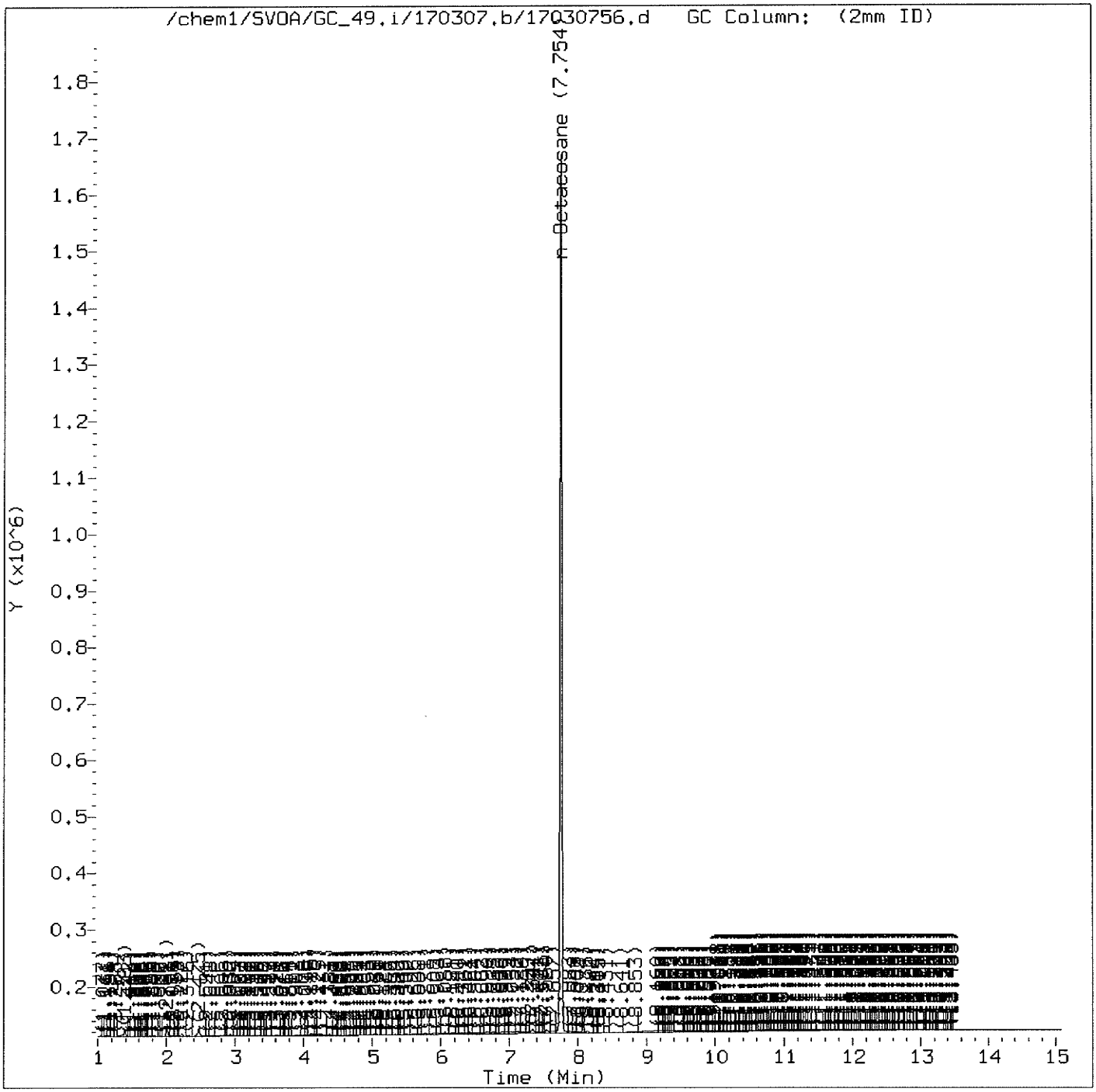
Original Data File



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EPA 8015B (M)

Diesel + Motor Oil

QUALITY CONTROL

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8015B (M)

MB SAMPLE ID:	**099-14-353-4**	ANALYZED BY:	972
MB BATCH ID:	170307B06	D/T ANALYZED:	2017-03-07 22:19
INSTRUMENT:	GC 49	REVIEWED BY:	
EXTRACTION:	EPA 3550B	D/T REVIEWED:	
D/T EXTRACTED:	2017-03-07 00:00	MATRIX:	Soil

DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030736.d\Report.txt17030736

CLIENT WORK ORDER: 17-03-0336

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
3		D-DU2-S-SG-05-13S	2017-03-08 04:35	T:\GC_49\GC_49_data\2017\170307\17030754.d\Report.txt17030754
4		D-DU2-S-SG-05-25S	2017-03-08 04:55	T:\GC_49\GC_49_data\2017\170307\17030755.d\Report.txt17030755

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RAW DATA SHEET
FOR METHOD: EPA 8015B (M)

WORK ORDER:	**099-14-353**	ANALYZED BY:	972
INSTRUMENT:	GC 49	D/T ANALYZED:	2017-03-07 22:19
EXTRACTION :	EPA 3550B	REVIEWED BY:	
D/T EXTRACTED:	2017-03-07 00:00	D/T REVIEWED:	

DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030736.d\Report.txt17030736

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH:	170307B06	SAMPLE VOLUME / WEIGHT:	DEFAULT: 10.00 g / ACTUAL: 10.00 g
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
TPH as Diesel	0.450	1.00	ND	5.0	
TPH as Motor Oil	0.260	1.00	ND	5.0	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 8015B (M)

LCS SAMPLE ID: **099-14-353- 4**
LCS/MB BATCH ID: 170307B06
INSTRUMENT: GC 49

EXTRACTION : EPA 3550B
D/T EXTRACTED: 2017-03-07 00:00

ANALYZED BY: 972
D/T ANALYZED: 2017-03-07 22:40
REVIEWED BY:
D/T REVIEWED:

DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030737.d\Report.txt17030737

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
TPH as Diesel	400.0	360.5	90	61-145	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 8015B (M)

SPIKED SAMPLE ID: **17-03-0335-11**
MS/MSD BATCH: 170307S06
INSTRUMENTS:
SAMPLE: GC 49
MS: GC 49
MSD: GC 49

EXTRACTION: EPA 3550B
D/T EXTRACTED:
SAMPLE: 2017-03-07 00:00
MS: 2017-03-07 00:00
MSD: 2017-03-07 00:00

ANALYZED BY: 972
D/T ANALYZED:
SAMPLE: 2017-03-08 01:06
MS: 2017-03-07 23:01
MSD: 2017-03-07 23:22
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
TPH as Diesel	ND	400.0	400.0	315.9	79	343.9	86	61-145	8	0-25	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17030738	T:\GC_49\GC_49_data\2017\170307\17030738.d\Report.txt
MSD	17030739	T:\GC_49\GC_49_data\2017\170307\17030739.d\Report.txt

SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-0336
BATCH ID:
LCS/MB: 170307B06
MS: 170307S06
EXTRACTION : EPA 3550B

REVIEWED BY:
D/T REVIEWED:

 # 3 CLIENT SAMPLE NUMBER : D-DU2-S-SG-05-13S

INSTRUMENT: GC 49
D/T EXTRACTED: 2017-03-07 00:00
DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030754.d\Report.txt17030754

ANALYZED BY: 972
D/T ANALYZED 2017-03-08 04:35

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	131	61-145	PASS	

 # 4 CLIENT SAMPLE NUMBER : D-DU2-S-SG-05-25S

INSTRUMENT: GC 49
D/T EXTRACTED: 2017-03-07 00:00
DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030755.d\Report.txt17030755

ANALYZED BY: 972
D/T ANALYZED 2017-03-08 04:55

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	130	61-145	PASS	

 # MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 49
D/T EXTRACTED: 2017-03-07 00:00
DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030736.d\Report.txt17030736

ANALYZED BY: 972
D/T ANALYZED 2017-03-07 22:19

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	117	61-145	PASS	

 # LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 49
D/T EXTRACTED: 2017-03-07 00:00
DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030737.d\Report.txt17030737

ANALYZED BY: 972
D/T ANALYZED 2017-03-07 22:40

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	124	61-145	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8015B (M)

WORK ORDER: 17-03-0336
BATCH ID:
LCS/MB:
MS: **170307S06**
EXTRACTION : EPA 3550B

REVIEWED BY:
D/T REVIEWED:

 # MS **CLIENT SAMPLE NUMBER : Matrix Spike**

INSTRUMENT: GC 49
D/T EXTRACTED: 2017-03-07 00:00
DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030738.d\Report.txt17030738

ANALYZED BY: 972
D/T ANALYZED 2017-03-07 23:01

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	119	61-145	PASS	

 # MSD **CLIENT SAMPLE NUMBER : Matrix Spike Duplicate**

INSTRUMENT: GC 49
D/T EXTRACTED: 2017-03-07 00:00
DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030739.d\Report.txt17030739

ANALYZED BY: 972
D/T ANALYZED 2017-03-07 23:22

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
n-Octacosane	110	61-145	PASS	

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```
================================================================================
                          External Standard Report
================================================================================

Data File Name    : /chem1/SVOA/GC_49/170307/17030736.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 36
Instrument        : GC 49                        Injection Number : 36
Sample Name       : MB 17030706                  Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 07 MAR 17  22:19
Report Created on: 08-MAR-17  13:54              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170307.b/17030736.d
RT Range       Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|------------------|---------------|--------------------|
        7.752     7.850     0.098        13587785.00           58.50  n-Octacosane
 2.313- 7.945                             439837.37            0.45  TPH as Diesel
 5.022-11.750                             253529.63            0.26  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_49.i/170307.b/17030736.d

Page 1

Date : 07-MAR-2017 22:19

Client ID:

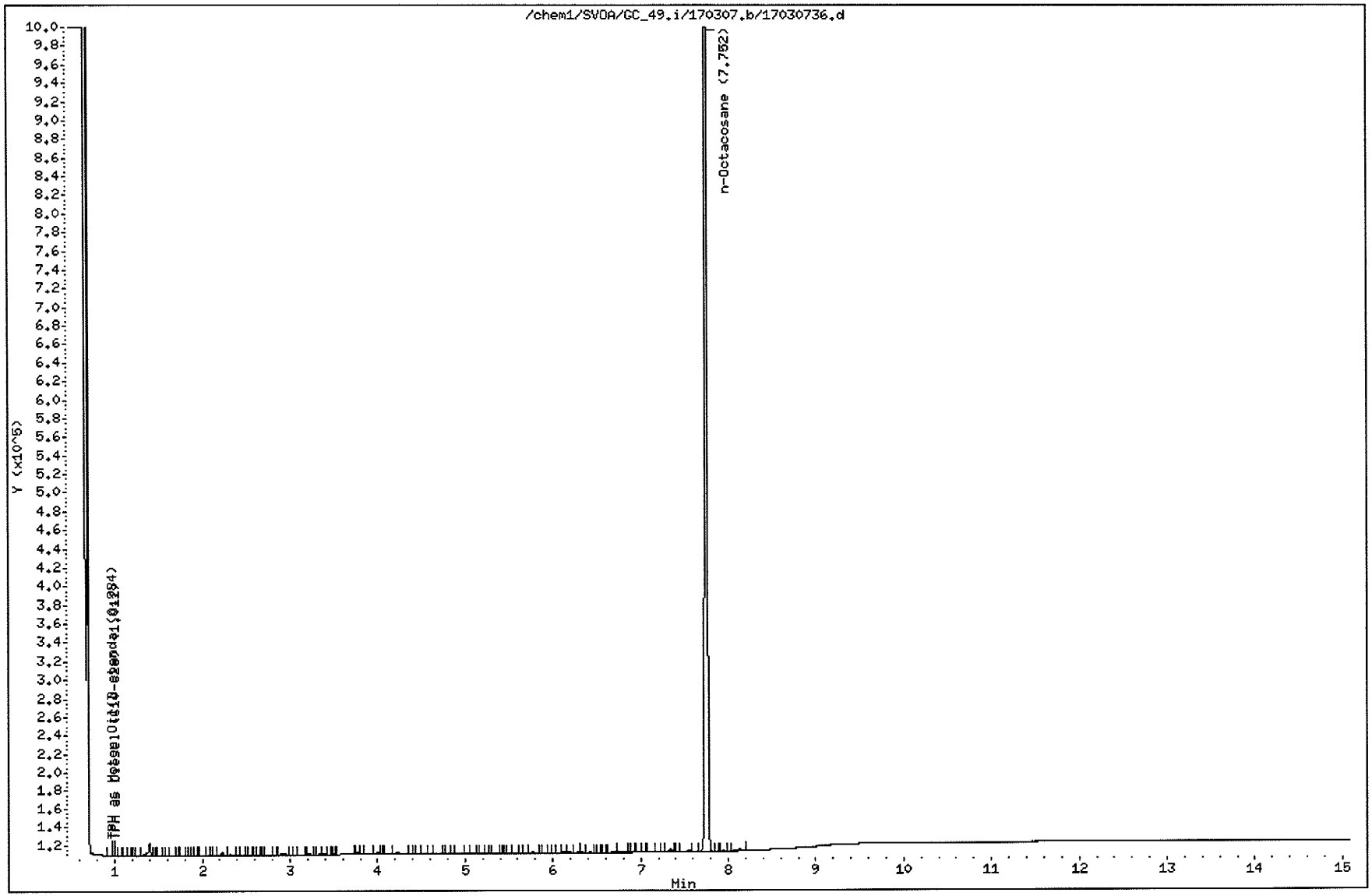
Instrument: GC_49.i

Sample Info: MB 17030706

Operator: 682

Column phase:

Column diameter: 2.00



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================================================================================
                          External Standard Report
================================================================================

Data File Name    : /chem1/SVOA/GC_49/170307/17030737.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 37
Instrument        : GC 49                        Injection Number : 37
Sample Name       : LCS 17030706                 Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 07 MAR 17  22:40
Report Created on: 08-MAR-17  13:54              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170307.b/17030737.d
RT Range      Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|-------------------|----------------|--------------------|
        7.752     7.850     0.098        14358575.00           61.82  n-Octacosane
 0.698- 7.945                          352250625.47          360.54  TPH as Diesel
 2.313- 7.945                          334504844.23          375.07  Diesel Range Organics
End of File
```

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Data File: /chem1/SVOA/GC_49.i/170307.b/17030737.d

Page 1

Date : 07-MAR-2017 22:40

Client ID:

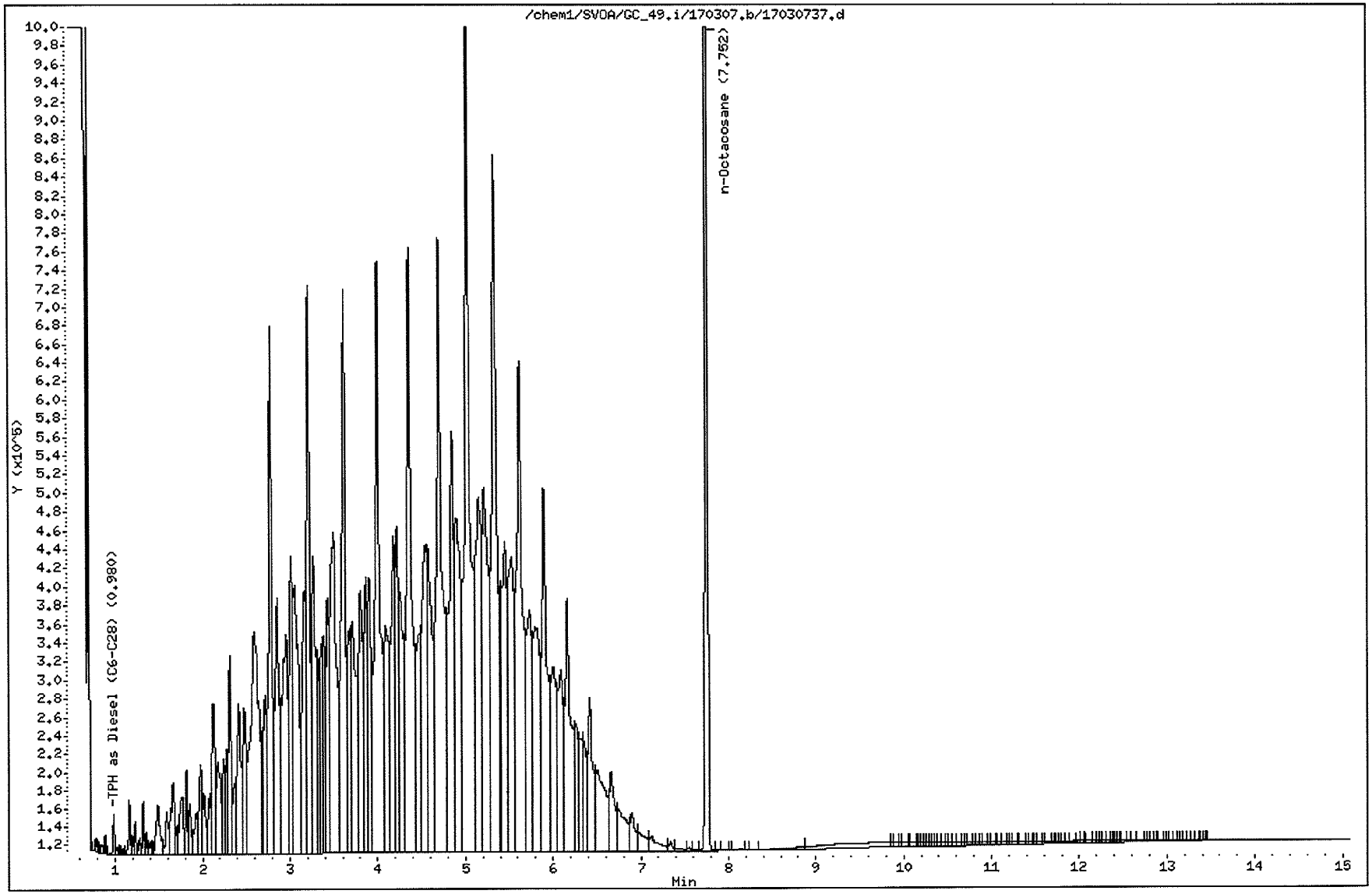
Instrument: GC_49.i

Sample Info: LCS 17030706

Operator: 682

Column phase:

Column diameter: 2.00



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================================================================================
                          External Standard Report
================================================================================

Data File Name    : /chem1/SVOA/GC_49/170307/17030738.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 38
Instrument        : GC 49                        Injection Number : 38
Sample Name       : MS 17-03-0335-11             Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 07 MAR 17  23:01
Report Created on: 08-MAR-17  13:55              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170307.b/17030738.d
RT Range      Exp RT    DLT RT    Response           ppm              Compound
|-------------|---------|---------|------------------|---------------|--------------------|
        7.750     7.850     0.100        13778536.00          59.32  n-Octacosane
 2.313- 7.945                          308677974.69         315.94  TPH as Diesel
 5.022-11.750                          125252160.79         128.20  TPH as Motor Oil
End of File
```

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Data File: /chem1/SVOA/GC_49.i/170307.b/17030738.d

Page 1

Date : 07-MAR-2017 23:01

Client ID:

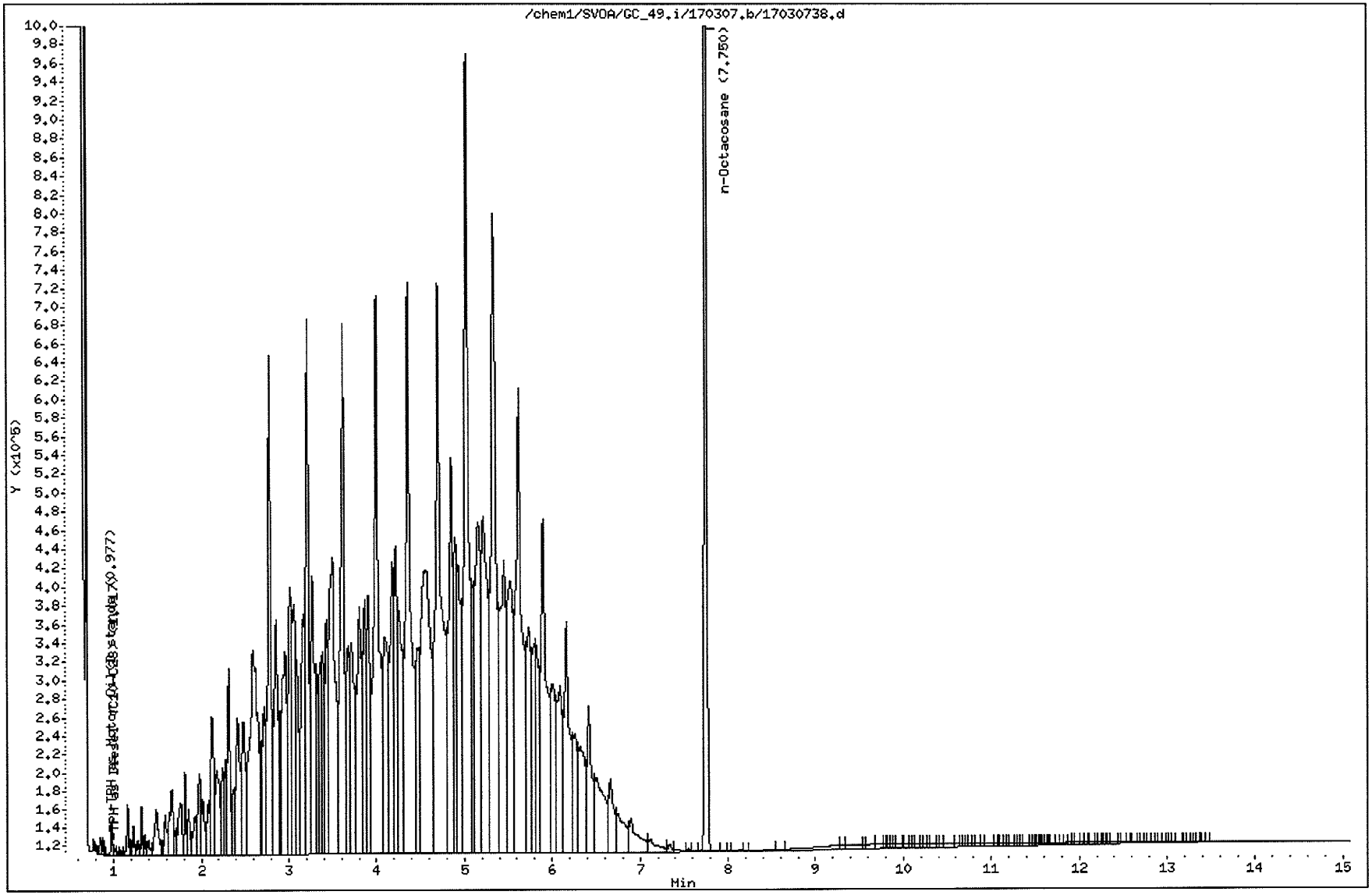
Instrument: GC_49.i

Sample Info: MS 17-03-0335-11

Operator: 682

Column phase:

Column diameter: 2.00



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================================================================================
                          External Standard Report
================================================================================

Data File Name    : /chem1/SVOA/GC_49/170307/17030739.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 39
Instrument        : GC 49                        Injection Number : 39
Sample Name       : MSD 17-03-0335-11            Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 07 MAR 17  23:22
Report Created on: 08-MAR-17  13:55              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170307.b/17030739.d
RT Range      Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|-------------------|----------------|---------------------|
        7.750     7.850     0.100        12817666.00           55.19  n-Octacosane
 2.313- 7.945                          336015929.94          343.92  TPH as Diesel
 5.022-11.750                          136318122.19          139.52  TPH as Motor Oil
End of File
```

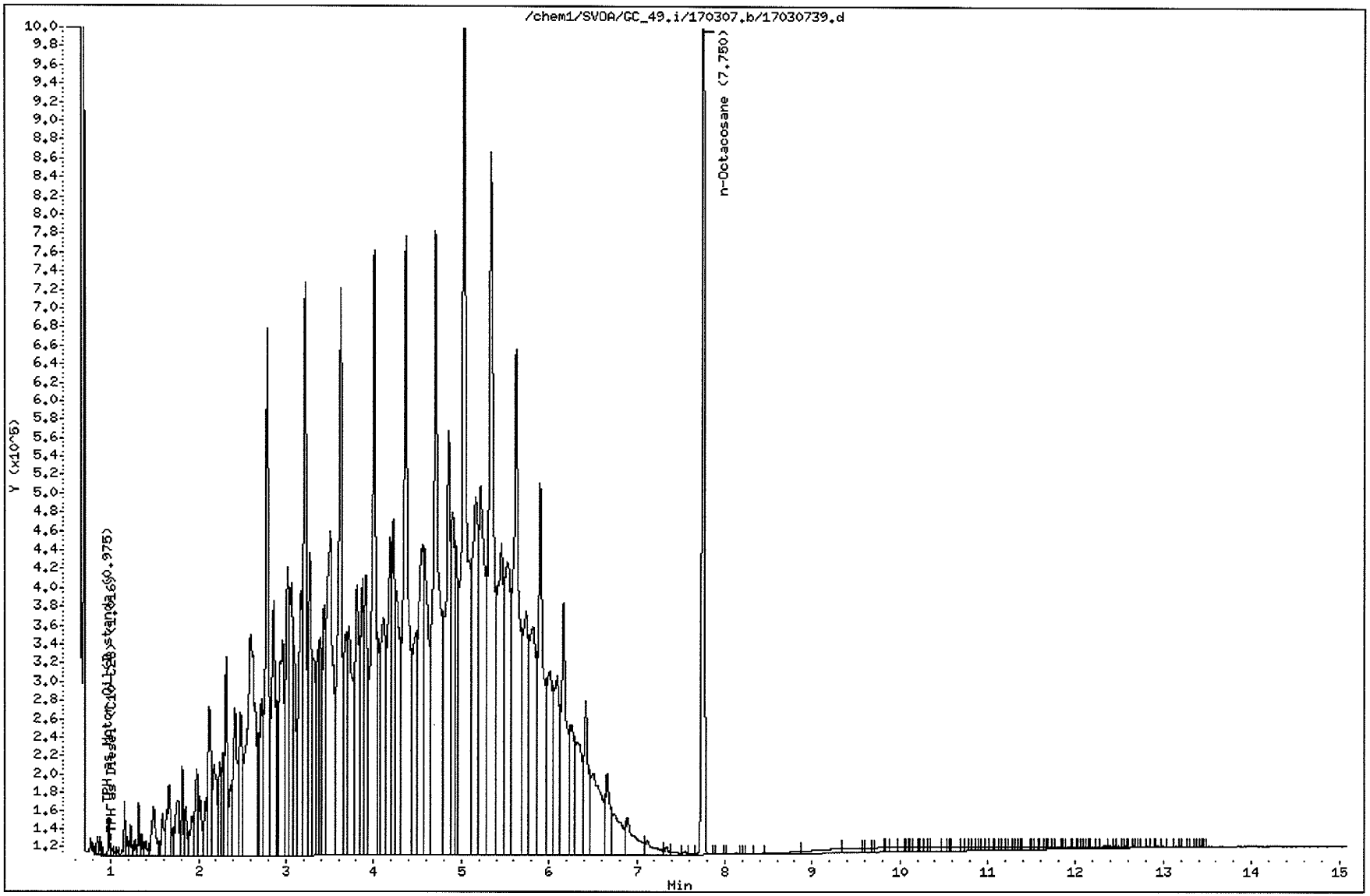
Return to Contents

Data File: /chem1/SVOA/GC_49.i/170307.b/17030739.d
Date : 07-MAR-2017 23:22
Client ID:
Sample Info: MSD 17-03-0335-11

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



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================================================================================
                          External Standard Report
================================================================================

Data File Name    : /chem1/SVOA/GC_49/170307/17030744.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 44
Instrument        : GC 49                        Injection Number : 44
Sample Name       : 17-03-0335-11                Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 08 MAR 17  01:06
Report Created on: 08-MAR-17  13:57              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170307.b/17030744.d
RT Range      Exp RT    DLT RT    Response            ppm                Compound
|-------------|---------|---------|-------------------|----------------|---------------------|
        7.752     7.850     0.098        13983688.00           60.21  n-Octacosane
 2.313- 7.945                              895953.89            0.92  TPH as Diesel
 5.022-11.750                              241569.04            0.25  TPH as Motor Oil
End of File
```

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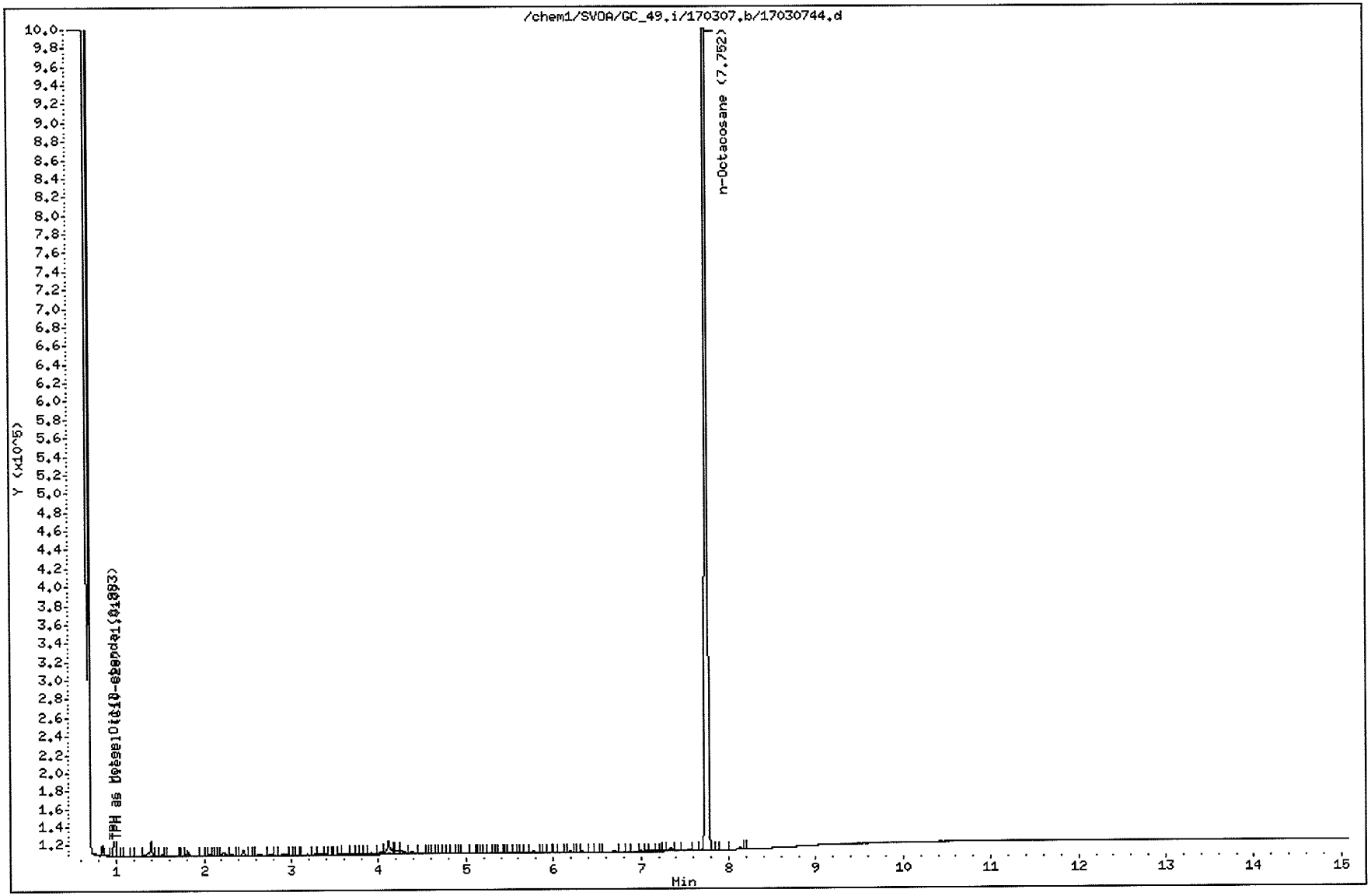
Data File: /chem1/SVOA/GC_49.i/170307.b/17030744.d
Date : 08-MAR-2017 01:06
Client ID:
Sample Info: 17-03-0335-11

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



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EPA 8015B (M)

Diesel + Motor Oil

CONTINUING CALIBRATION

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8015B (M)

CCV WORK ORDER: **099-14-354-24-5901**
BATCH ID:
INITIAL: 170306I006
CCV: 170307A070
INSTRUMENT: GC 49

DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030734.d\Report.txt17030734

ANALYZED BY: 972
D/T ANALYZED:
INITIAL: 2017-03-06 16:25
CCV: 2017-03-07 21:39
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	977.016	919.283			6	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_49.i/170307.b/17030734.d
Report Date: 03/08/2017 13:52

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_49.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_49.i/170307.b/8015d.m

Injection Date and Time: 07-MAR-2017 21:39
Initial Calibration Date(s): 09-NOV-2016 06-MAR-2017
Initial Calibration Time(s): 21:15 19:52

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Diesel Range Organics	891855.748	844213.558	0.00	5	15	Averaged
TPH as Diesel	977015.903	919283.173	0.00	6	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	232259.309	250374.400	0.00	-8	20	Averaged

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Data File: /chem1/SVOA/GC_49.i/170307.b/17030734.d Page 1
Report Date: 08-Mar-2017 13:52

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170307.b/17030734.d
Lab Smp Id:
Inj Date : 07-MAR-2017 21:39
Operator : 682 Inst ID: GC_49.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170307.b/8015d.m
Meth Date : 08-Mar-2017 13:52 umd6 Quant Type: ESTD
Cal Date : 25-JAN-2017 02:23 Cal File: 17012445.d
Als bottle: 34 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppm)	AMOUNTS ON-COL (ppm)
S 14 TPH as Diesel	0.698-7.945			367713269	400.000	376.363
S 26 Diesel Range Organics	2.313-7.945			337685423	400.000	378.632
$ 92 n-Octacosane	7.752	7.752	0.000	12518720	50.0000	53.899

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Data File: /chem1/SVOA/GC_49.i/170307.b/17030734.d

Page 1

Date : 07-MAR-2017 21:39

Client ID:

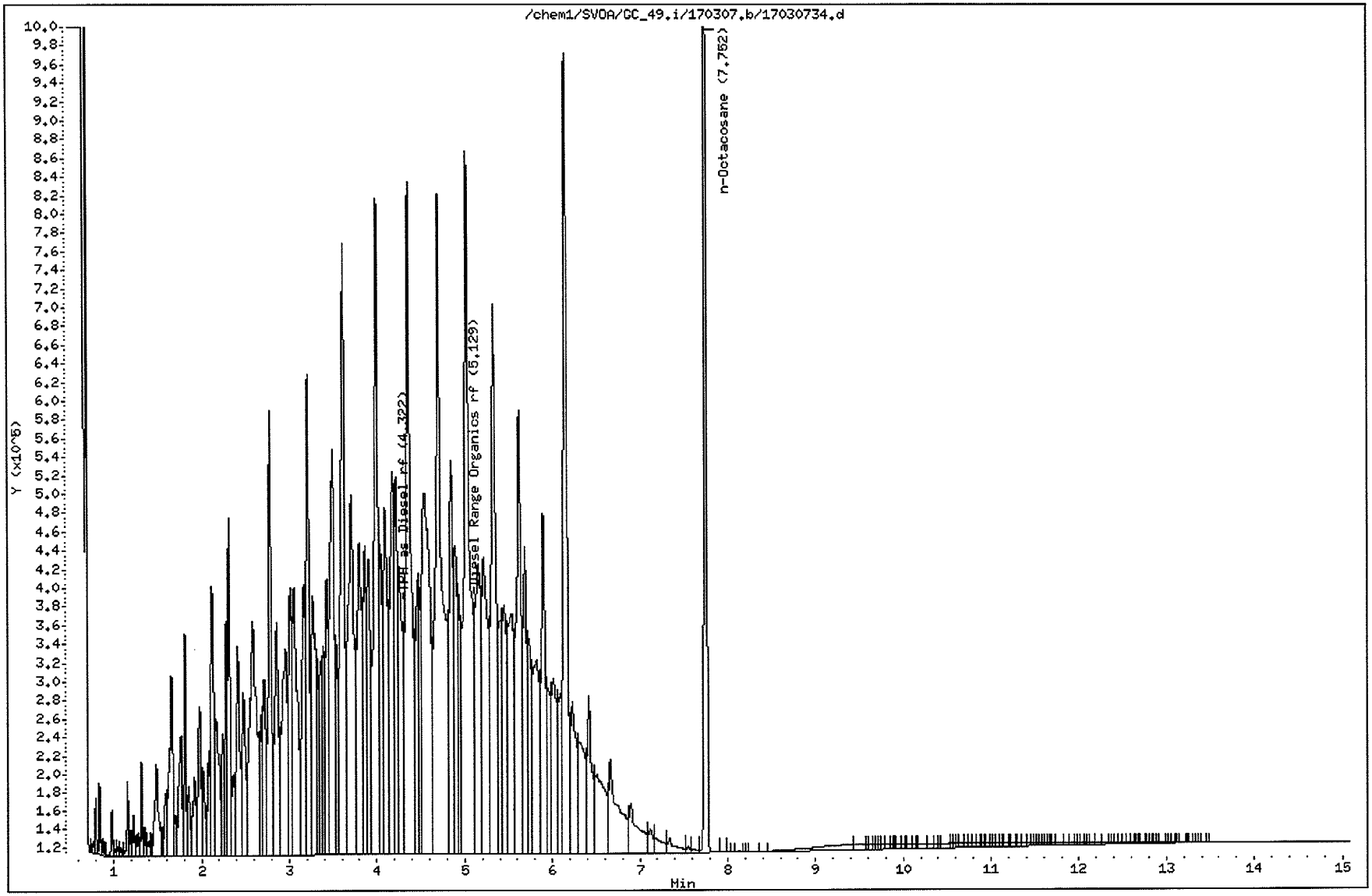
Instrument: GC_49.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8015B (M)

BATCH ID: **170307A071** ANALYZED BY: 972
INSTRUMENT: GC 49

WORK ORDER: **099-14-354** REVIEWED BY: 1,027
MATRIX: Water D/T REVIEWED: 2017-03-09 14:39

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
25	Daily Calibration	2017-03-08 03:11	T:\GC_49\GC_49_data\2017\170307\17030750.d\Report.txt17030750

WORK ORDER: **17-03-0336** REVIEWED BY: 1,027
MATRIX: Soil D/T REVIEWED: 2017-03-09 17:20

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
3	D-DU2-S-SG-05-13S	2017-03-08 04:35	T:\GC_49\GC_49_data\2017\170307\17030754.d\Report.txt17030754
4	D-DU2-S-SG-05-25S	2017-03-08 04:55	T:\GC_49\GC_49_data\2017\170307\17030755.d\Report.txt17030755

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8015B (M)

CCV WORK ORDER: **099-14-354-25-5901**
BATCH ID:
INITIAL: 170306I006
CCV: 170307A071
INSTRUMENT: GC 49

DATA FILE: T:\GC_49\GC_49_data\2017\170307\17030750.d\Report.txt17030750

ANALYZED BY: 972
D/T ANALYZED:
INITIAL: 2017-03-06 16:25
CCV: 2017-03-08 03:11
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
TPH as Diesel	C	Avg Resp	0.00	977.016	924.700			5	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

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Data File: /chem1/SVOA/GC_49.i/170307.b/17030750.d
Report Date: 03/08/2017 13:59

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_49.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_49.i/170307.b/8015d.m

Injection Date and Time: 08-MAR-2017 03:11
Initial Calibration Date(s): 09-NOV-2016 06-MAR-2017
Initial Calibration Time(s): 21:15 19:52

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Diesel Range Organics	891855.748	848534.623	0.00	5	15	Averaged
TPH as Diesel	977015.903	924700.295	0.00	5	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	232259.309	277904.420	0.00	-20	20	Averaged

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Data File: /chem1/SVOA/GC_49.i/170307.b/17030750.d Page 1
Report Date: 08-Mar-2017 13:57

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170307.b/17030750.d
Lab Smp Id:
Inj Date : 08-MAR-2017 03:11
Operator : 682 Inst ID: GC_49.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170307.b/8015d.m
Meth Date : 08-Mar-2017 13:57 umd6 Quant Type: ESTD
Cal Date : 25-JAN-2017 02:23 Cal File: 17012445.d
Als bottle: 50 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
==========	==	======	======	========	=======	=======
S 14 TPH as Diesel	0.698-7.945			369880118	400.000	378.581
S 26 Diesel Range Organics	2.313-7.945			339413849	400.000	380.570
$ 92 n-Octacosane	7.753	7.753	0.000	13895221	50.0000	59.826

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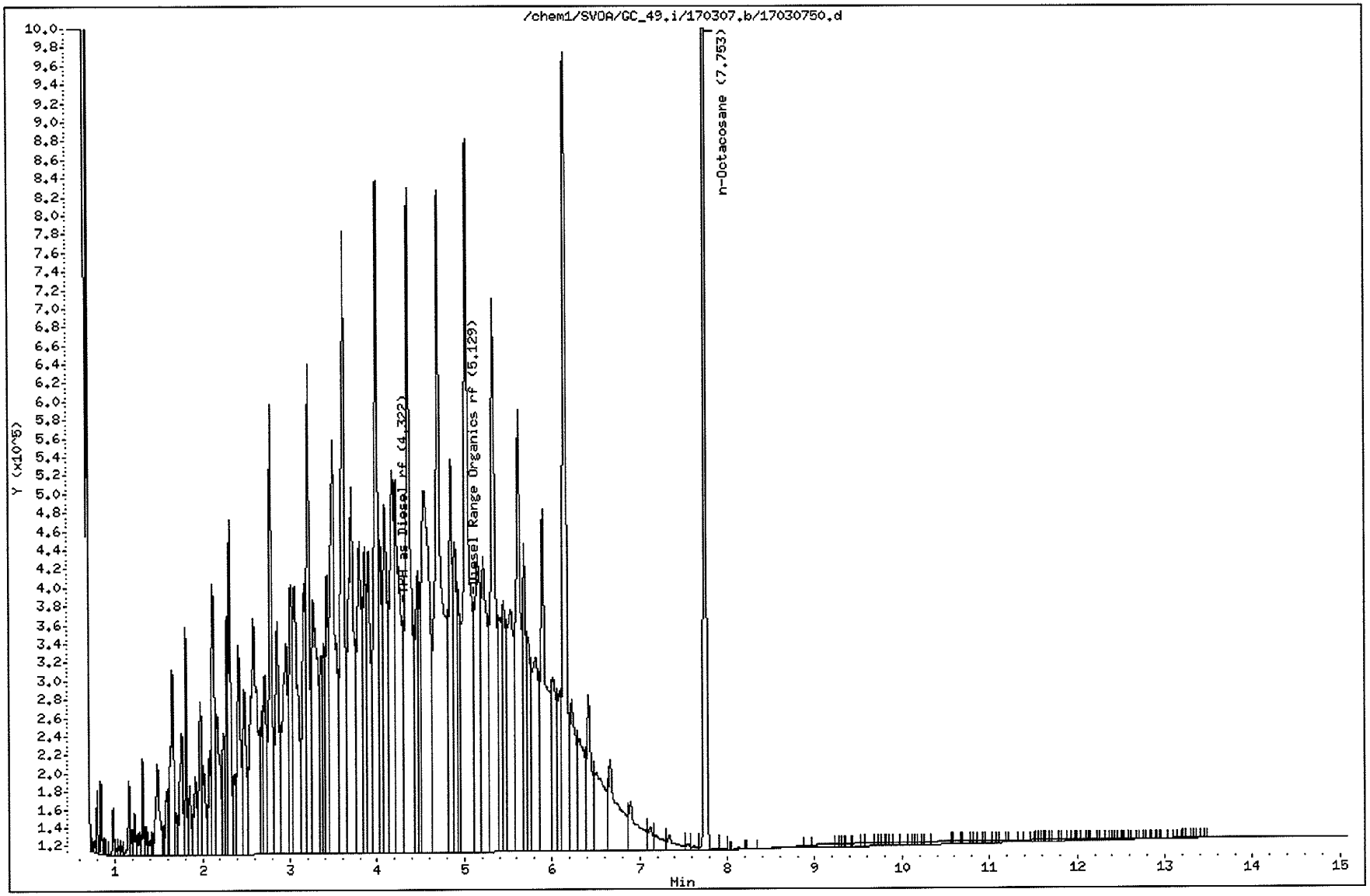
Data File: /chem1/SVOA/GC_49.i/170307.b/17030750.d
Date : 08-MAR-2017 03:11
Client ID:
Sample Info: CCV D400 C28 50 L102516D

Instrument: GC_49.i

Operator: 682
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_49.i/170307.b/17030761.d
Report Date: 03/08/2017 14:11

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_49.i
Sample Name: CCV D400 C28 50 L102516D
Sublist used: CCV_D-DRO.sub
Method used: /chem1/SVOA/GC_49.i/170307.b/8015d.m

Injection Date and Time: 08-MAR-2017 07:01
Initial Calibration Date(s): 09-NOV-2016 06-MAR-2017
Initial Calibration Time(s): 21:15 19:52

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Diesel Range Organics	891855.748	828483.083	0.00	7	15	Averaged
TPH as Diesel	977015.903	901858.895	0.00	8	15	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
n-Octacosane	232259.309	245028.580	0.00	-5	20	Averaged

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Data File: /chem1/SVOA/GC_49.i/170307.b/17030761.d Page 1
Report Date: 08-Mar-2017 14:05

Eurofins Calscience

EPA 8015B(M)

Data file : /chem1/SVOA/GC_49.i/170307.b/17030761.d
Lab Smp Id:
Inj Date : 08-MAR-2017 07:01
Operator : 682 Inst ID: GC_49.i
Smp Info : CCV D400 C28 50 L102516D
Misc Info :
Comment :
Method : /chem1/SVOA/GC_49.i/170307.b/8015d.m
Meth Date : 08-Mar-2017 14:05 umd6 Quant Type: ESTD
Cal Date : 25-JAN-2017 02:23 Cal File: 17012445.d
Als bottle: 61 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: CCV_D-DRO.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

					AMOUNTS	
					CAL-AMT	ON-COL
Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppm)	(ppm)
S 14 TPH as Diesel	0.698-7.945			360743558	400.000	369.229
S 26 Diesel Range Organics	2.313-7.945			331393233	400.000	371.577
$ 92 n-Octacosane	7.754	7.754	0.000	12251429	50.0000	52.748

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Data File: /chem1/SVOA/GC_49.i/170307.b/17030761.d

Page 1

Date : 08-MAR-2017 07:01

Client ID:

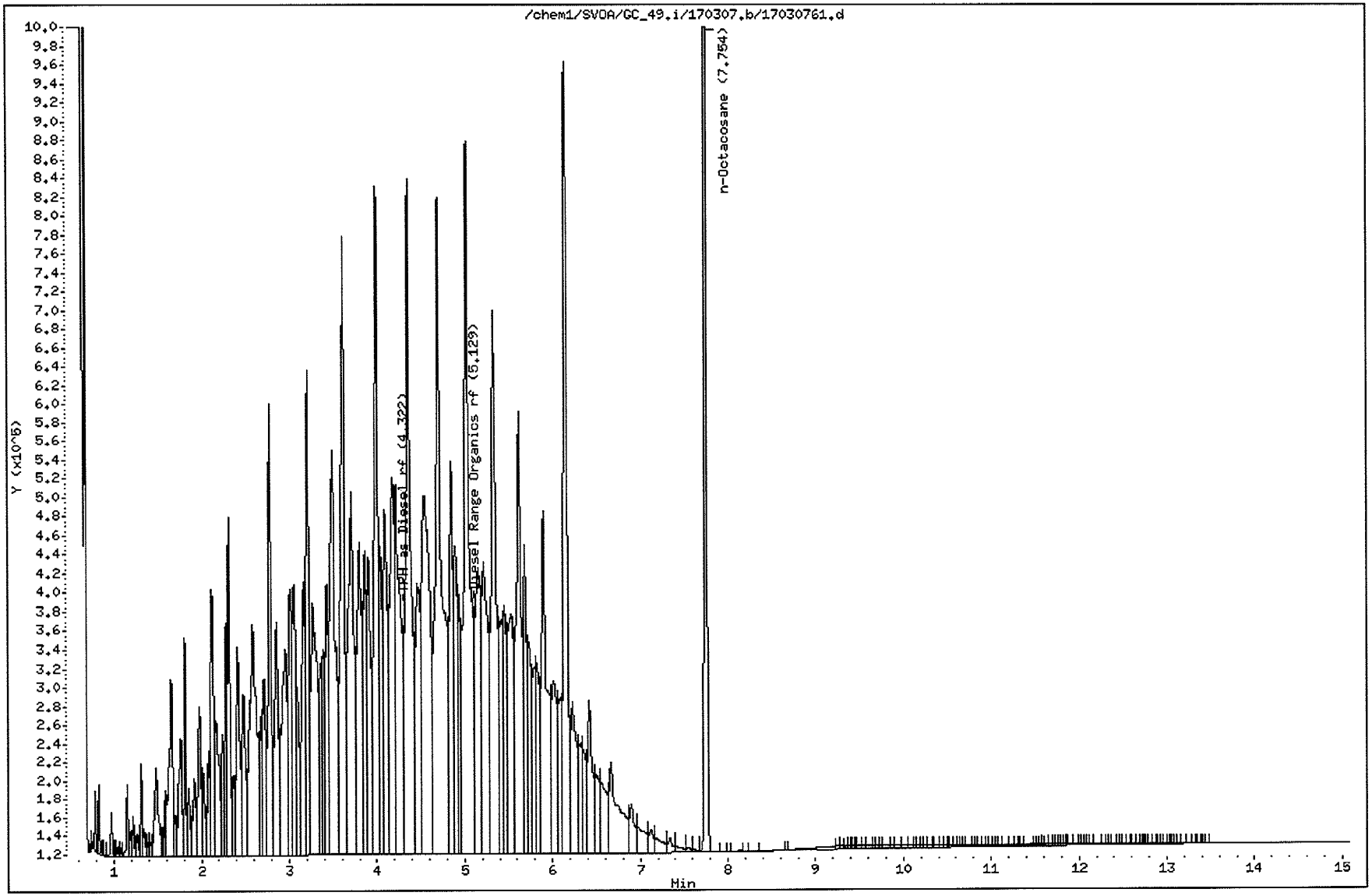
Instrument: GC_49.i

Sample Info: CCV D400 C28 50 L102516D

Operator: 682

Column phase:

Column diameter: 2.00



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================================================================================
                          External Standard Report
================================================================================

Data File Name    : /chem1/SVOA/GC_49/170307/1703070201.d
Page Number       :
Operator          : 682                          Vial Number      : Vial 2
Instrument        : GC 49                        Injection Number : 2
Sample Name       : C6-C44 L110816A              Sequence Line    : 0
                                                 Instrument Method: 8015d.m
Acquired on       : 07 MAR 17  21:18
Report Created on: 08-MAR-17  13:45              Compound Sublist : all
Software Revision: Target 3.50

Sig. 1 in  /chem1/SVOA/GC_49.i/170307.b/1703070201.d
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RT Range	Exp RT	DLT RT	Response	ppm	Compound
0.698	7.850	7.152	1878342.00	0.00	C6-Hexane
0.882	7.850	6.968	3992764.00	0.00	C7-Heptane
1.317	7.850	6.533	6722542.00	0.00	C8-Octane
1.812	7.850	6.038	6284867.00	0.00	C9-Nonane
2.313	7.850	5.537	6684334.00	0.00	C10-Decane
2.781	7.850	5.069	6825184.00	0.00	C11-Undecane
3.215	7.850	4.635	6808515.00	0.00	C12-Dodecane
3.620	7.850	4.230	7172389.00	0.00	C13-Tridecane
4.001	7.850	3.849	6804465.00	0.00	C14-Tetradecane
4.360	7.850	3.490	6825321.00	0.00	C15-pentadecane
4.700	7.850	3.150	6856853.00	0.00	C16-Hexadecane
5.022	7.850	2.828	6982119.00	0.00	C17-Heptadecane
5.328	7.850	2.522	7150278.00	0.00	C18-Octadecane
5.619	7.850	2.231	7155603.00	0.00	C19-Nonadecane
5.898	7.850	1.952	7292098.00	0.00	C20-Eicosane
6.164	7.850	1.686	7286645.00	0.00	C21-Heneicosane
6.419	7.850	1.431	7290830.00	0.00	C22-Docosane
6.663	7.850	1.187	6946679.00	0.00	C23-Tricosane
6.897	7.850	0.953	6429963.00	0.00	C24-Tetracosane
7.122	7.850	0.728	5568125.00	0.00	C25-Pentacosane
7.339	7.850	0.511	4531942.00	0.00	C26-Hexacosane
7.548	7.850	0.302	3120521.00	0.00	C27-Heptacosane
7.750	7.850	0.100	2035240.00	8.76	n-Octacosane
7.945	7.850	-0.095	1148415.00	0.00	C29-Nonacosane
8.133	7.850	-0.283	624966.00	0.00	C30-Triacontane
8.316	7.850	-0.466	352701.00	0.00	C31-Hentriacontane
8.494	7.850	-0.644	251449.00	0.00	C32-Dotricacontane
8.666	7.850	-0.816	211163.00	0.00	C33-Tritriacontane
8.833	7.850	-0.983	200449.00	0.00	C34-Tetratriacontane
8.995	7.850	-1.145	225186.00	0.00	C35-Pentatriacontane
9.154	7.850	-1.304	264278.00	0.00	C36-Hexatriacontane
9.328	7.850	-1.478	302023.00	0.00	C37-Heptatriacontane
9.529	7.850	-1.679	328381.00	0.00	C38-Octatriacontane
9.766	7.850	-1.916	193002.00	0.00	C39-Nonatriacontane
10.042	7.850	-2.192	117639.00	0.00	C40-Tetracontane
11.750	7.850	-3.900	437419.00	0.00	C44-Tetratetracontane

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End of File
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Data File: /chem1/SVOA/GC_49.i/170307.b/1703070201.d

Page 1

Date : 07-MAR-2017 21:18

Client ID:

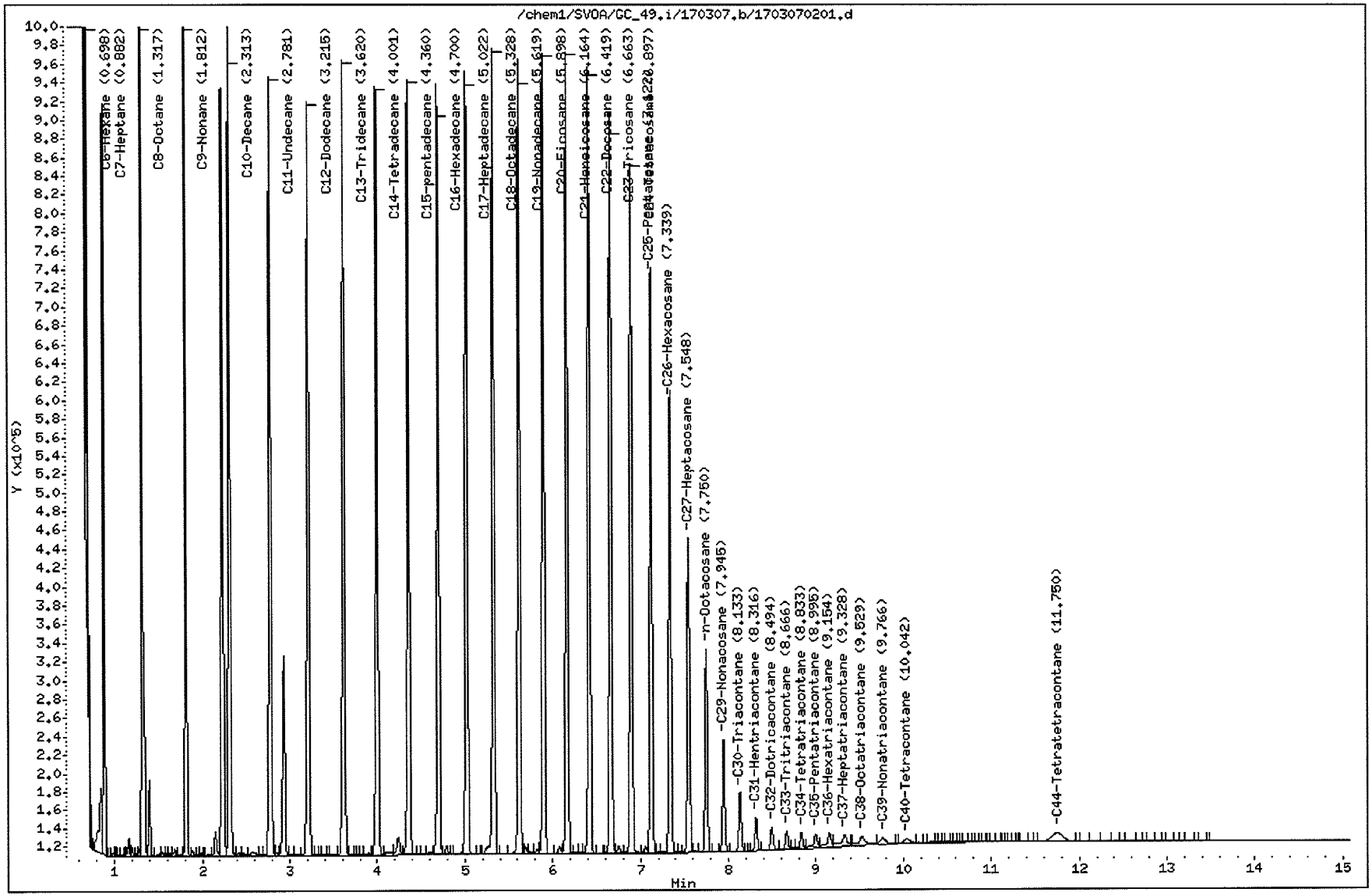
Instrument: GC_49.i

Sample Info: C6-C44 L110816A

Operator: 682

Column phase:

Column diameter: 2.00



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EPA 8015B (M)

Diesel + Motor Oil

RUN LOGS

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Sequence: C:\CHEM32\1\SEQUENCE\170306.S
Table: Rear DataPath: W:\GC_49\DATA\GC49\2017\170306\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17030600	BLK	8015D		06-Mar-17, 11:25:13
2	1	17030601	BLK	8015D		06-Mar-17, 11:45:48
3	2	17030602	C6-C44 L110816A	8015D		06-Mar-17, 12:07:03
4	4	17030604	CCV D400 C28 50 L102516D	8015D		06-Mar-17, 12:28:22
5	5	17030605	ICAL MO25 L030317B	8015D		06-Mar-17, 12:48:48
6	6	17030606	ICAL MO200 L030317C	8015D		06-Mar-17, 13:09:50
7	7	17030607	ICAL MO400 L030317D	8015D		06-Mar-17, 13:31:11
8	8	17030608	ICAL MO600 L030317E	8015D		06-Mar-17, 13:51:35
9	9	17030609	ICAL MO800 L030317F	8015D		06-Mar-17, 14:12:38
10	10	17030610	ICV MO400 L030317G	8015D		06-Mar-17, 14:33:58
11	11	17030611	CCV MO400 L030317D	8015D		06-Mar-17, 14:54:20
12	12	17030612	17-03-0253-1 5X RB	8015D		06-Mar-17, 15:35:53
13	13	17030613	17-03-0253-4 5X RB	8015D		06-Mar-17, 15:56:23
14	14	17030614	ICAL D5 C28 0.625 L102516B	8015D		06-Mar-17, 16:25:48
15	15	17030615	ICAL D200 C28 25 L102516C	8015D		06-Mar-17, 16:46:21
16	16	17030616	ICAL D400 C28 50 L102516D	8015D		06-Mar-17, 17:06:57
17	17	17030617	ICAL D800 C28 100 L102516E	8015D		06-Mar-17, 17:27:57
18	18	17030618	ICAL D1600 C28 200 L102516F	8015D		06-Mar-17, 17:48:57
19	19	17030619	ICV D400 C28 50 L102516G	8015D		06-Mar-17, 18:09:15
20	20	17030620	ICAL MO25 L030317B	8015D		06-Mar-17, 18:30:00
21	21	17030621	ICAL MO200 L030317C	8015D		06-Mar-17, 18:50:53
22	22	17030622	ICAL MO400 L030317D	8015D		06-Mar-17, 19:11:14
23	23	17030623	ICAL MO600 L030317E	8015D		06-Mar-17, 19:31:29
24	24	17030624	ICAL MO800 L030317F	8015D		06-Mar-17, 19:52:28
25	25	17030625	ICV MO400 L030317G	8015D		06-Mar-17, 20:12:56
26	26	17030626	CCV D400 C28 50 L102516D	8015D		06-Mar-17, 20:33:14
27	27	17030627	CCV MO400 L030317D	8015D		06-Mar-17, 20:53:54

1806

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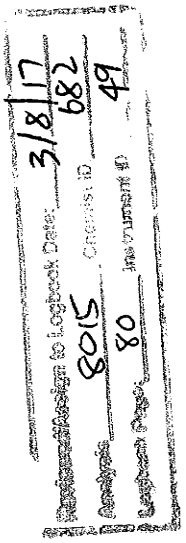
Sequence: C:\CHEM32\1\SEQUENCE\170307.S
Table: Rear DataPath: W:\GC_49\DATA\GC49\2017\170307\

Line	Vial	File	Name	Method	InjVolume	Acquired
1	1	17030701	BLK	8015D		07-Mar-17, 09:36:00
2	2	17030702	C6-C44 L110816A	8015D		07-Mar-17, 09:56:15
3	3	17030704	CCV D400 C28 50 L102516D A039	8015D		07-Mar-17, 10:16:57
4	4	17030705	CCV MO400 L030317D	8015D		07-Mar-17, 10:37:51
5	5	17030703	MB 17030701/02	8015D		07-Mar-17, 11:12:12
6	6	17030706	LCS 17030701	8015D		07-Mar-17, 11:32:49
7	7	17030707	MOLCS 17030702	8015D		07-Mar-17, 11:53:06
8	8	17030708	MS 17-03-0278-1	8015D		07-Mar-17, 12:13:20
9	9	17030709	MSD 17-03-0278-1	8015D		07-Mar-17, 12:34:11
10	10	17030710	MOMS 17-03-0278-1	8015D		07-Mar-17, 12:55:15
11	11	17030711	MOMSD 17-03-0278-1	8015D		07-Mar-17, 13:16:39
12	12	17030712	17-03-0278-1	8015D		07-Mar-17, 13:37:18
13	13	17030713	17-03-0472-1	8015D		07-Mar-17, 13:57:37
14	14	17030714	17-03-0278-3 25X	8015D		07-Mar-17, 14:18:44
15	15	17030715	17-03-0278-4 50X	8015D		07-Mar-17, 14:39:31
16	16	17030716	17-03-0278-5 5X	8015D		07-Mar-17, 14:59:48
17	17	17030717	17-03-0278-6	8015D		07-Mar-17, 15:20:40
18	18	17030718	17-03-0278-7 10X	8015D		07-Mar-17, 15:42:04
19	19	17030719	17-03-0278-8	8015D		07-Mar-17, 16:02:53
20	20	17030720	17-03-0278-9 5X	8015D		07-Mar-17, 16:23:20
21	21	17030721	17-03-0278-10 25X	8015D		07-Mar-17, 16:46:23
22	22	17030722	CCV D400 C28 50 L102516D A069	8015D		07-Mar-17, 17:07:24
23	23	17030723	CCV MO400 L030317D	8015D		07-Mar-17, 17:27:45
24	24	17030724	17-03-0278-2 10X	8015D		07-Mar-17, 17:48:10
25	25	17030725	17-02-0506-5 CONF	8015D		07-Mar-17, 18:09:05
26	26	17030726	17-02-0506-6 CONF	8015D		07-Mar-17, 18:30:01
27	27	17030727	17-02-0506-7 CONF	8015D		07-Mar-17, 18:50:34
28	28	17030728	17-03-0323-1 5X	8015D		07-Mar-17, 19:10:50
29	29	17030729	17-03-0323-2 25X	8015D		07-Mar-17, 19:31:12
30	30	17030730	17-03-0323-3 5X	8015D		07-Mar-17, 19:55:32
31	31	17030731	17-03-0323-4 5X	8015D		07-Mar-17, 20:16:08
32	32	17030732	17-03-0323-5	8015D		07-Mar-17, 20:36:22
33	33	17030733	17-03-0323-6 50X	8015D		07-Mar-17, 20:57:10
34	2	1703070201	C6-C44 L110816A	8015D		07-Mar-17, 21:18:23
35	34	17030734	CCV D400 C28 50 L102516D A070	8015D		07-Mar-17, 21:39:03
36	35	17030735	CCV MO400 L030317D	8015D		07-Mar-17, 21:59:26
37	36	17030736	MB 17030706	8015D		07-Mar-17, 22:19:42
38	37	17030737	LCS 17030706	8015D		07-Mar-17, 22:40:35
39	38	17030738	MS 17-03-0335-11	8015D		07-Mar-17, 23:01:40
40	39	17030739	MSD 17-03-0335-11	8015D		07-Mar-17, 23:22:34
41	40	17030740	17-03-0335-3	8015D		07-Mar-17, 23:43:41
42	41	17030741	17-03-0335-4	8015D		08-Mar-17, 00:04:46
43	42	17030742	17-03-0335-7	8015D		08-Mar-17, 00:25:23
44	43	17030743	17-03-0335-8	8015D		08-Mar-17, 00:45:57
45	44	17030744	17-03-0335-11	8015D		08-Mar-17, 01:06:31
46	45	17030745	17-03-0335-12	8015D		08-Mar-17, 01:26:51
47	46	17030746	17-03-0335-15	8015D		08-Mar-17, 01:47:20
48	47	17030747	17-03-0335-16	8015D		08-Mar-17, 02:08:10
49	48	17030748	17-03-0444-3	8015D		08-Mar-17, 02:29:19
50	49	17030749	17-03-0444-4	8015D		08-Mar-17, 02:50:24
51	50	17030750	CCV D400 C28 50 L102516D A071	8015D		08-Mar-17, 03:11:34
52	51	17030751	CCV MO400 L030317D	8015D		08-Mar-17, 03:32:37
53	52	17030752	17-03-0444-7	8015D		08-Mar-17, 03:53:37
54	53	17030753	17-03-0444-8	8015D		08-Mar-17, 04:14:33
55	54	17030754	17-03-0336-3	8015D		08-Mar-17, 04:35:06
56	55	17030755	17-03-0336-4	8015D		08-Mar-17, 04:55:34
57	56	17030756	17-03-0140-27	8015D		08-Mar-17, 05:16:49
58	57	17030757	17-03-0140-28	8015D		08-Mar-17, 05:37:47
59	58	17030758	17-03-0140-29	8015D		08-Mar-17, 05:58:33
60	59	17030759	17-03-0140-30	8015D		08-Mar-17, 06:19:13



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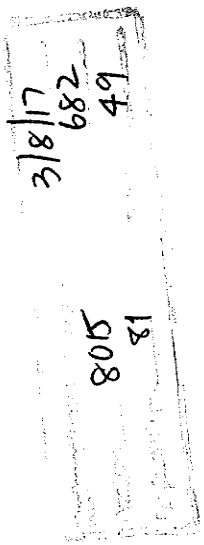
61	60	17030760 17-03-0140-31	8015D	08-Mar-17, 06:40:24
62	61	17030761 CCV D400 C28 50 L102516D	8015D	08-Mar-17, 07:01:30
63	62	17030762 CCV MO400 L030317D	8015D	08-Mar-17, 07:22:01



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EPA 8015B (M)

Diesel + Motor Oil

PREPARATION LOGS

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Analysis Method (EPA Method): ☑ TPH 8015 ☐ NWTPH 8015

Extraction Method (EPA Method): ☐ 3510 ☐ 3511 ☑ 3550

Analyst ID#: Measuring Sample- 889 Start Extraction- 1108 Blow Down- Clean Up-

Matrix: ☑ Solid ☐ Aqueous ☐ Oil ☐ Wipe / Filter | Balance ID#: 15 | Sand or Filter ID#: L6-19-20

Extraction Start Date & Time: 03-07-17 11:00 Extractions End Date & Time: 3/7/17 18:00

Drying Agent & ID#: ☑ Na_2SO_4 L6-23-20 | Spike Added to: ☑ LCS ☐ LCSD ☑ MS ☑ MSD

Surrogate Std ID# & Volume Added (mL): L011717A 0.5

Spike Std ID# & Volume Added (mL): ☑ D: L102416B 0.2 ☐ MO: ☐ ☐ ☐

Extraction Solvent & ID#: ☑ $MeCl_2$ S07-55-01 | Elution Solvent ID# & Volume (mL): 10.0

Reverse Surrogate ID#: & Volume Added (mL):

Clean Up Start Date & Time: Clean Up End Date & Time:

SGC Clean Up: ☐ 1. CEL 0.5g ☐ 2. 3630 - 2g ☐ 3. 3630 – 10g | SPE Cartridge ID#:

Clean Up Solvent ID#: | Silica Gel ID#:

QC Batch #: 17030706/07 972 3/7/17	Test Analyte	Sample W (g) / V (mL) Initial	Final	SCG Clean Up	Comments
Cel ID#: ~~17030706/07~~					
MB	D+MO	10.0	10.0	☐ NA ☐ 1 ☐ 2 ☐ 3	
LCS		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
MS 17-03-0335-11A		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
MSD -11		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0335-3A		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
-4		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
-7		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
-8		9.98		☐ NA ☐ 1 ☐ 2 ☐ 3	
-11		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
-12		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
-15		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
-16		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0444-3A		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
-4		10.0		☐ NA ☐ 1 ☐ 2 ☐ 3	
-7		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
-8		9.99		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0336-3A		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
-4		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
17-03-0140-27A		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
-28		9.99		☐ NA ☐ 1 ☐ 2 ☐ 3	
-29		10.1		☐ NA ☐ 1 ☐ 2 ☐ 3	
-30		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
-31		10.2		☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	
				☐ NA ☐ 1 ☐ 2 ☐ 3	

Peer Reviewed by: 972 Peer Reviewed Date: 3/7/17 Revision Date: 10/24/16

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EPA 6010B ICP Metals
(Solid)

RAW DATA

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EPA 6010B ICP Metals

(Solid)

Initial Calibration

ICV/ICB
CCV/CCB
ICSA/B

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Verification

ACCREDITED IN COMPLIANCE WITH nelac

Work Order No: 17-03-0336

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte Name	Initial Calibration Verification				
	True	ICV-1		Control Limit	Comment
		Observed	%D		
Silver	0.500000	0.495683	1	+/-10	
Arsenic	5.000000	5.035563	-1	+/-10	
Barium	1.000000	1.042145	-4	+/-10	
Beryllium	0.500000	0.518209	-4	+/-10	
Cadmium	1.500000	1.504425	0	+/-10	
Cobalt	1.000000	1.027255	-3	+/-10	
Chromium	0.400000	0.400117	0	+/-10	
Copper	1.000000	1.004321	0	+/-10	
Molybdenum	2.500000	2.478650	1	+/-10	
Nickel	0.400000	0.415226	-4	+/-10	
Lead	5.000000	5.088901	-2	+/-10	
Antimony	2.000000	1.988478	1	+/-10	
Selenium	2.000000	2.011083	-1	+/-10	
Thallium	2.000000	2.023142	-1	+/-10	
Vanadium	1.000000	0.988770	1	+/-10	
Zinc	1.500000	1.519628	-1	+/-10	

Report Time: 3/10/2017 1:20:16 PM

ICV-1 File: ICV-M072816C Analysis Time: 3/8/2017 10:29:06 AM

Note: Note: %D= (True-Observed) / True x 100%

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Initial Calibration Blank

Work Order No: 17-03-0336

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Initial Calibration Blank		
Analyte	ICB-1	RL	Comment
Silver	0.000251	0.005000	
Arsenic	0.001746	0.010000	
Barium	0.000075	0.010000	
Beryllium	-0.000020	0.010000	
Cadmium	0.000074	0.010000	
Cobalt	-0.000096	0.010000	
Chromium	0.000471	0.010000	
Copper	-0.001031	0.010000	
Molybdenum	-0.000116	0.010000	
Nickel	-0.000385	0.010000	
Lead	-0.000021	0.010000	
Antimony	0.003155	0.015000	
Selenium	-0.000150	0.015000	
Thallium	0.000008	0.015000	
Vanadium	-0.000818	0.010000	
Zinc	0.000195	0.010000	

Report Time: 3/10/2017 1:20:16 PM

ICB-1 File: ICB-R12091601 Analysis Time: 3/8/2017 10:31:37 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Interference Check

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0336

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Interference Check						
	ICS-A-1		ICS-AB-1				Comment
	Observed	Control Limit	True	Observed	%D	Control Limit	
Silver	-0.000573	0.005000	0.300000	0.310746	-4	+/-20	
Arsenic	0.002908	0.010000	1.000000	1.045277	-5	+/-20	
Barium	0.002568	0.010000	0.300000	0.317760	-6	+/-20	
Beryllium	-0.000073	0.010000	0.100000	0.108274	-8	+/-20	
Cadmium	0.002115	0.010000	0.300000	0.299455	0	+/-20	
Cobalt	0.001038	0.010000	0.300000	0.304743	-2	+/-20	
Chromium	-0.001353	0.010000	0.300000	0.304776	-2	+/-20	
Copper	-0.001754	0.010000	0.300000	0.312318	-4	+/-20	
Molybdenum	0.001037	0.010000	0.300000	0.306137	-2	+/-20	
Nickel	-0.000167	0.010000	0.300000	0.310032	-3	+/-20	
Lead	-0.006335	0.010000	1.000000	0.998093	0	+/-20	
Antimony	-0.004590	0.015000	1.000000	0.989200	1	+/-20	
Selenium	-0.007043	0.015000	0.500000	0.513103	-3	+/-20	
Thallium	-0.009166	0.015000	1.000000	1.017047	-2	+/-20	
Vanadium	0.000099	0.010000	0.300000	0.300437	0	+/-20	
Zinc	0.000924	0.010000	0.300000	0.304064	-1	+/-20	

Report Time: 3/10/2017 1:20:16 PM

ICS-A-1 File: ICS_A - M110116B Analysis Time: 3/8/2017 10:32:40 AM

ICS-AB-1 File: ICS_AB - M110116A Analysis Time: 3/8/2017 10:33:31 AM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-0336

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-1		CCV-2		Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.380575	-1	0.378388	-1	+/-10	
Arsenic	3.750000	3.930528	-5	3.877125	-3	+/-10	
Barium	7.500000	8.221189	-10	8.087813	-8	+/-10	
Beryllium	0.562500	0.603767	-7	0.594050	-6	+/-10	
Cadmium	0.750000	0.791276	-6	0.775044	-3	+/-10	
Cobalt	1.875000	2.002979	-7	1.970059	-5	+/-10	
Chromium	0.600000	0.627086	-5	0.620638	-3	+/-10	
Copper	0.937500	0.967153	-3	0.959345	-2	+/-10	
Molybdenum	0.600000	0.630970	-5	0.626601	-4	+/-10	
Nickel	0.600000	0.626620	-4	0.620167	-3	+/-10	
Lead	3.750000	3.977279	-6	3.890986	-4	+/-10	
Antimony	4.500000	4.703409	-5	4.674454	-4	+/-10	
Selenium	1.500000	1.588818	-6	1.575214	-5	+/-10	
Thallium	1.500000	1.603300	-7	1.589761	-6	+/-10	
Vanadium	1.875000	1.956567	-4	1.939432	-3	+/-10	
Zinc	2.500000	2.638609	-6	2.575351	-3	+/-10	

Report Time: 3/10/2017 1:20:16 PM

CCV-1 File: CCV= STD3x0.5 Analysis Time: 3/8/2017 2:16:07 PM

CCV-2 File: CCV= STD3x0.5 Analysis Time: 3/8/2017 2:26:38 PM

Note: Note: %D= (True-Observed) / True x 100%

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0336

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-1	CCB-2	RL	Qualifier
Silver	0.000295	0.001379	0.005000	
Arsenic	0.005545	-0.009042	0.010000	
Barium	0.002981	0.003586	0.010000	
Beryllium	0.000190	0.000244	0.010000	
Cadmium	0.000359	0.000327	0.010000	
Cobalt	0.000849	0.000844	0.010000	
Chromium	-0.000112	0.000419	0.010000	
Copper	-0.000248	0.000643	0.010000	
Molybdenum	0.000618	0.000328	0.010000	
Nickel	-0.000109	0.000483	0.010000	
Lead	-0.000793	0.001908	0.010000	
Antimony	0.001315	0.006976	0.015000	
Selenium	-0.001446	0.000594	0.015000	
Thallium	0.002343	0.004310	0.015000	
Vanadium	0.000754	0.001054	0.010000	
Zinc	-0.000428	-0.000256	0.010000	

Report Time: 3/10/2017 1:20:16 PM

CCB-1 File: CCB-R12091601 Analysis Time: 3/8/2017 2:17:00 PM

CCB-2 File: CCB-R12091601 Analysis Time: 3/8/2017 2:27:31 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Verification

Work Order No: 17-03-0336

Instrument ID: ICP 7300

Concentration Unit: mg/L

Analyte	Continuing Calibration Verification						
	True	CCV-3				Control Limit	Comment
		Observed	%D	Observed	%D		
Silver	0.375000	0.377950	-1			+/-10	
Arsenic	3.750000	3.763868	0			+/-10	
Barium	7.500000	8.092468	-8			+/-10	
Beryllium	0.562500	0.595990	-6			+/-10	
Cadmium	0.750000	0.782349	-4			+/-10	
Cobalt	1.875000	1.977531	-5			+/-10	
Chromium	0.600000	0.619296	-3			+/-10	
Copper	0.937500	0.956059	-2			+/-10	
Molybdenum	0.600000	0.606347	-1			+/-10	
Nickel	0.600000	0.600508	0			+/-10	
Lead	3.750000	3.917504	-4			+/-10	
Antimony	4.500000	4.525718	-1			+/-10	
Selenium	1.500000	1.530365	-2			+/-10	
Thallium	1.500000	1.536271	-2			+/-10	
Vanadium	1.875000	1.937063	-3			+/-10	
Zinc	2.500000	2.600114	-4			+/-10	

Report Time: 3/10/2017 1:20:16 PM

CCV-3 File: CCV= STD3x0.5 Analysis Time: 3/8/2017 2:31:49 PM

Note: Note: %D= (True-Observed) / True x 100%

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Calscience Environmental Laboratories, Inc.

EPA Method 6010B

Continuing Calibration Blank

ACCREDITED IN ACCORDANCE WITH nelac

Work Order No: 17-03-0336

Instrument ID: ICP 7300

Concentration Unit: mg/L

	Continuing Calibration Blank			
Analyte	CCB-3		RL	Qualifier
Silver	-0.000627		0.005000	
Arsenic	0.001995		0.010000	
Barium	0.003727		0.010000	
Beryllium	0.000266		0.010000	
Cadmium	0.000265		0.010000	
Cobalt	0.000686		0.010000	
Chromium	0.000387		0.010000	
Copper	-0.000412		0.010000	
Molybdenum	-0.000116		0.010000	
Nickel	0.000119		0.010000	
Lead	0.000165		0.010000	
Antimony	0.000235		0.015000	
Selenium	-0.002266		0.015000	
Thallium	-0.001127		0.015000	
Vanadium	-0.000390		0.010000	
Zinc	0.000228		0.010000	

Report Time: 3/10/2017 1:20:16 PM

CCB-3 File: CCB-R12091601 Analysis Time: 3/8/2017 2:32:42 PM

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Reprocessing Begun
Logged In Analyst: Oscar Gomez 935 Technique: ICP Continuous

Results Data Set (original): 170308C 1
Results Library (original): W:\pe\7300\Results\results.mdb
Results Data Set (reprocessed): 170308C1
Results Library (reprocessed): W:\pe\7300\Results\results.mdb

Sequence No.: 1 Autosampler Location: 1
Sample ID: Cal blankR12091601_935 Date Collected: 3/8/2017 10:27:03 AM
Analyst: Data Type: Reprocessed on 3/8/2017 11:06:50 AM
Logged In Analyst (Original) : Oscar Gomez 935
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time:

Mean Data: Cal blankR12091601_935

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	70607.7	579.92	0.82%	100.0	%
Tb 350	110205.4	721.72	0.65%	100.0	%
Ag 328.068*†	-907.6	9.80	1.08%	[0.00]	mg/L
Al 308.215*†	-2059.1	82.62	4.01%	[0.00]	mg/L
As 188.979†	8.1	8.41	103.43%	[0.00]	mg/L
As 193.696*†	2.6	13.25	511.56%	[0.00]	mg/L
B 249.677*†	-896.6	35.97	4.01%	[0.00]	mg/L
Ba 233.527*†	-264.1	6.23	2.36%	[0.00]	mg/L
Be 313.042*†	-899.1	13.19	1.47%	[0.00]	mg/L
Ca 317.933*†	20.1	0.71	3.50%	[0.00]	mg/L
Cd 226.502*†	-7.8	12.32	158.26%	[0.00]	mg/L
Cd 228.802†	6.9	4.33	62.75%	[0.00]	mg/L
Co 228.616*†	-88.4	1.64	1.85%	[0.00]	mg/L
Cr 267.716*†	399.1	43.27	10.84%	[0.00]	mg/L
Cu 324.752*†	1947.6	229.66	11.79%	[0.00]	mg/L
Fe 273.955*†	-227.0	9.18	4.04%	[0.00]	mg/L
K 766.490*†	1103.9	49.53	4.49%	[0.00]	mg/L
Mg 279.077*†	-7933.3	211.12	2.66%	[0.00]	mg/L
Mn 257.610*†	2010.7	3.79	0.19%	[0.00]	mg/L
Mo 202.031*†	-46.8	4.27	9.12%	[0.00]	mg/L
Na 589.592*†	353.6	18.57	5.25%	[0.00]	mg/L
Ni 231.604*†	-55.4	6.48	11.70%	[0.00]	mg/L
P 213.617*†	-133.7	1.48	1.11%	[0.00]	mg/L
P 214.914†	-40.0	10.56	26.43%	[0.00]	mg/L
Pb 220.353*†	-27.8	10.58	38.10%	[0.00]	mg/L
Sb 206.836†	21.5	4.09	19.00%	[0.00]	mg/L
Sb 217.582*†	-5.7	1.01	17.77%	[0.00]	mg/L
Se 196.026*†	6.5	3.96	60.96%	[0.00]	mg/L
Si 251.611*†	1216.2	21.13	1.74%	[0.00]	mg/L
Sn 189.927*†	-88.3	2.64	2.98%	[0.00]	mg/L
Sn 242.170†	-418.0	15.46	3.70%	[0.00]	mg/L
Sr 407.771*†	114.7	10.22	8.91%	[0.00]	mg/L
Ti 334.940†	25058.0	1.69	0.01%	[0.00]	mg/L
Ti 336.121*†	-1431.2	22.20	1.55%	[0.00]	mg/L
Tl 190.801*†	-5.4	9.37	172.66%	[0.00]	mg/L
V 292.402*†	255.7	94.70	37.03%	[0.00]	mg/L
Zn 206.200*†	-220.2	8.20	3.72%	[0.00]	mg/L
Zn 213.857*†	-52.6	0.90	1.71%	[0.00]	mg/L

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Sequence No.: 2
Sample ID: STD3-M111116A_935_ICP7300
Analyst:
Logged In Analyst (Original) : Oscar Gomez 935
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 2
Date Collected: 3/8/2017 10:28:10 AM
Data Type: Reprocessed on 3/8/2017 11:06:52 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: STD3-M111116A_935_ICP7300

Analyte	Mean Corrected Intensity	Std.Dev.	RSD	Conc.	Calib Units
Tb 384	60827.8	826.83	1.36%	86.15	%
Tb 350	98891.1	1694.29	1.71%	89.73	%
Ag 328.068*†	129856.2	198.92	0.15%	[0.75]	mg/L
Al 308.215*†	426809.3	368.46	0.09%	[27.0]	mg/L
As 188.979†	13708.4	138.69	1.01%	[7.50]	mg/L
As 193.696*†	9582.0	136.61	1.43%	[7.50]	mg/L
B 249.677*†	344304.9	1196.54	0.35%	[7.50]	mg/L
Ba 233.527*†	1980628.7	77431.43	3.91%	[15.0]	mg/L
Be 313.042*†	3633343.7	161308.94	4.44%	[1.125]	mg/L
Ca 317.933*†	104324.8	3742.32	3.59%	[60.0]	mg/L
Cd 226.502*†	103545.5	662.64	0.64%	[1.50]	mg/L
Cd 228.802†	52247.0	239.51	0.46%	[1.50]	mg/L
Co 228.616*†	94055.5	383.63	0.41%	[3.75]	mg/L
Cr 267.716*†	122879.8	119.46	0.10%	[1.20]	mg/L
Cu 324.752*†	427231.7	307.56	0.07%	[1.875]	mg/L
Fe 273.955*†	158512.6	946.16	0.60%	[7.50]	mg/L
K 766.490*†	148852.5	4971.22	3.34%	[54.0]	mg/L
Mg 279.077*†	253910.4	1719.13	0.68%	[15.0]	mg/L
Mn 257.610*†	829500.5	33242.43	4.01%	[1.50]	mg/L
Mo 202.031*†	10064.9	150.11	1.49%	[1.20]	mg/L
Na 589.592*†	291382.1	10593.08	3.64%	[72.0]	mg/L
Ni 231.604*†	26082.9	67.89	0.26%	[1.20]	mg/L
P 213.617*†	20604.8	222.90	1.08%	[12.0]	mg/L
P 214.914†	13256.2	155.57	1.17%	[12.0]	mg/L
Pb 220.353*†	53533.6	166.09	0.31%	[7.50]	mg/L
Sb 206.836†	15118.2	204.54	1.35%	[9.0]	mg/L
Sb 217.582*†	15157.2	220.65	1.46%	[9.0]	mg/L
Se 196.026*†	5738.2	59.98	1.05%	[3.0]	mg/L
Si 251.611*†	418850.0	703.20	0.17%	[12.0]	mg/L
Sn 189.927*†	32204.1	447.97	1.39%	[6.0]	mg/L
Sn 242.170†	9457.3	117.00	1.24%	[6.0]	mg/L
Sr 407.771*†	176787.4	6771.42	3.83%	[0.60]	mg/L
Ti 334.940†	870257.8	35553.32	4.09%	[1.20]	mg/L
Ti 336.121*†	635141.2	993.02	0.16%	[1.20]	mg/L
Tl 190.801*†	4895.3	81.86	1.67%	[3.0]	mg/L
V 292.402*†	465995.3	440.76	0.09%	[3.75]	mg/L
Zn 206.200*†	183796.0	1117.00	0.61%	[5.0]	mg/L
Zn 213.857*†	320730.8	1982.15	0.62%	[5.0]	mg/L

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Sequence No.: 1
Sample ID: ICV-M072816C
Analyst: 935 icp 7300
Logged In Analyst (Original) : Oscar Gomez 935
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 10
Date Collected: 3/8/2017 10:29:06 AM
Data Type: Reprocessed on 3/8/2017 11:07:29 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICV-M072816C

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	62651.5	88.73	%	1.275				1.44%
Tb 350	101442.7	92.05	%	1.598				1.74%
Ag 328.068*†	85823.3	0.4957	mg/L	0.00204	0.4957	mg/L	0.00204	0.41%
QC value within limits for Ag 328.068* Recovery = 99.14%								
Al 308.215*†	66481.7	4.206	mg/L	0.0073	4.206	mg/L	0.0073	0.17%
QC value within limits for Al 308.215* Recovery = 105.14%								
As 188.979†	9186.8	5.026	mg/L	0.0967	5.026	mg/L	0.0967	1.92%
QC value within limits for As 188.979 Recovery = 100.52%								
As 193.696*†	6433.4	5.036	mg/L	0.1054	5.036	mg/L	0.1054	2.09%
QC value within limits for As 193.696* Recovery = 100.71%								
B 249.677*†	113427.5	2.471	mg/L	0.0033	2.471	mg/L	0.0033	0.13%
QC value within limits for B 249.677* Recovery = 98.83%								
Ba 233.527*†	137606.8	1.042	mg/L	0.0023	1.042	mg/L	0.0023	0.22%
QC value within limits for Ba 233.527* Recovery = 104.21%								
Be 313.042*†	1673628.4	0.5182	mg/L	0.00328	0.5182	mg/L	0.00328	0.63%
QC value within limits for Be 313.042* Recovery = 103.64%								
Ca 317.933*†	33293.2	19.15	mg/L	0.854	19.15	mg/L	0.854	4.46%
QC value within limits for Ca 317.933* Recovery = 95.74%								
Cd 226.502*†	103851.0	1.504	mg/L	0.0097	1.504	mg/L	0.0097	0.65%
QC value within limits for Cd 226.502* Recovery = 100.29%								
Cd 228.802†	52086.6	1.495	mg/L	0.0105	1.495	mg/L	0.0105	0.70%
Co 228.616*†	25765.1	1.027	mg/L	0.0068	1.027	mg/L	0.0068	0.67%
QC value within limits for Co 228.616* Recovery = 102.73%								
Cr 267.716*†	40971.9	0.4001	mg/L	0.00134	0.4001	mg/L	0.00134	0.33%
QC value within limits for Cr 267.716* Recovery = 100.03%								
Cu 324.752*†	228841.6	1.004	mg/L	0.0017	1.004	mg/L	0.0017	0.17%
QC value within limits for Cu 324.752* Recovery = 100.43%								
Fe 273.955*†	2161374.5	102.3	mg/L	0.98	102.3	mg/L	0.98	0.95%
QC value within limits for Fe 273.955* Recovery = 102.27%								
K 766.490*†	21650.5	7.854	mg/L	0.3035	7.854	mg/L	0.3035	3.86%
QC value within limits for K 766.490* Recovery = 98.18%								
Mg 279.077*†	169269.4	10.000	mg/L	0.0098	10.000	mg/L	0.0098	0.10%
QC value within limits for Mg 279.077* Recovery = 100.00%								
Mn 257.610*†	579556.5	1.048	mg/L	0.0002	1.048	mg/L	0.0002	0.02%
QC value within limits for Mn 257.610* Recovery = 104.80%								
Mo 202.031*†	20789.6	2.479	mg/L	0.0493	2.479	mg/L	0.0493	1.99%
QC value within limits for Mo 202.031* Recovery = 99.15%								
Na 589.592*†	216634.8	53.53	mg/L	1.947	53.53	mg/L	1.947	3.64%
QC value within limits for Na 589.592* Recovery = 99.13%								
Ni 231.604*†	9025.3	0.4152	mg/L	0.00529	0.4152	mg/L	0.00529	1.27%
QC value within limits for Ni 231.604* Recovery = 103.81%								
P 213.617*†	8431.1	4.910	mg/L	0.0635	4.910	mg/L	0.0635	1.29%
QC value within limits for P 213.617* Recovery = 98.20%								
P 214.914†	5612.2	5.080	mg/L	0.0581	5.080	mg/L	0.0581	1.14%
Pb 220.353*†	36323.6	5.089	mg/L	0.0124	5.089	mg/L	0.0124	0.24%
QC value within limits for Pb 220.353* Recovery = 101.78%								
Sb 206.836†	3305.8	1.968	mg/L	0.0317	1.968	mg/L	0.0317	1.61%
QC value within limits for Sb 206.836 Recovery = 98.40%								
Sb 217.582*†	3348.9	1.988	mg/L	0.0269	1.988	mg/L	0.0269	1.35%
QC value within limits for Sb 217.582* Recovery = 99.42%								
Se 196.026*†	3846.6	2.011	mg/L	0.0256	2.011	mg/L	0.0256	1.27%
QC value within limits for Se 196.026* Recovery = 100.55%								
Si 251.611*†	334746.1	9.590	mg/L	0.0268	9.590	mg/L	0.0268	0.28%
QC value within limits for Si 251.611* Recovery = 95.90%								
Sn 189.927*†	13710.4	2.554	mg/L	0.0521	2.554	mg/L	0.0521	2.04%
QC value within limits for Sn 189.927* Recovery = 102.18%								
Sn 242.170†	4470.2	2.836	mg/L	0.0758	2.836	mg/L	0.0758	2.67%
Sr 407.771*†	57641.8	0.1956	mg/L	0.00652	0.1956	mg/L	0.00652	3.33%

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QC value within limits for Sr 407.771* Recovery = 97.82%						
Ti 334.940†	3644770.5	5.026	mg/L	0.0535	5.026 mg/L	0.0535 1.06%
Ti 336.121*†	2574192.2	4.864	mg/L	0.0545	4.864 mg/L	0.0545 1.12%
QC value within limits for Ti 336.121* Recovery = 97.27%						
Tl 190.801*†	3301.3	2.023	mg/L	0.0404	2.023 mg/L	0.0404 2.00%
QC value within limits for Tl 190.801* Recovery = 101.16%						
V 292.402*†	123078.3	0.9888	mg/L	0.00031	0.9888 mg/L	0.00031 0.03%
QC value within limits for V 292.402* Recovery = 98.88%						
Zn 206.200*†	55860.3	1.520	mg/L	0.0093	1.520 mg/L	0.0093 0.61%
QC value within limits for Zn 206.200* Recovery = 101.31%						
Zn 213.857*†	97128.6	1.506	mg/L	0.0050	1.506 mg/L	0.0050 0.33%
QC value within limits for Zn 213.857* Recovery = 100.38%						

All analyte(s) passed QC.

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Sequence No.: 2
Sample ID: ICB-R12091601
Analyst: 935 icp 7300
Logged In Analyst (Original) : Oscar Gomez 935
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 1
Date Collected: 3/8/2017 10:31:37 AM
Data Type: Reprocessed on 3/8/2017 11:07:30 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	69288.1	98.13	%	0.539				0.55%
Tb 350	108024.3	98.02	%	0.353				0.36%
Ag 328.068*†	43.5	0.0003	mg/L	0.00076	0.0003	mg/L	0.00076	300.87%
Al 308.215*†	-3.3	-0.0002	mg/L	0.00286	-0.0002	mg/L	0.00286	>999.9%
As 188.979†	0.1	0.0001	mg/L	0.00114	0.0001	mg/L	0.00114	>999.9%
As 193.696*†	2.2	0.0017	mg/L	0.00036	0.0017	mg/L	0.00036	20.59%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	778.7	0.0170	mg/L	0.00049	0.0170	mg/L	0.00049	2.89%
QC value within limits for B 249.677* Recovery = Not calculated								
Ba 233.527*†	9.9	0.0001	mg/L	0.00010	0.0001	mg/L	0.00010	135.01%
Be 313.042*†	-65.2	-0.0000	mg/L	0.00003	-0.0000	mg/L	0.00003	130.02%
Ca 317.933*†	9.5	0.0055	mg/L	0.00041	0.0055	mg/L	0.00041	7.52%
Cd 226.502*†	5.1	0.0001	mg/L	0.00009	0.0001	mg/L	0.00009	116.22%
Cd 228.802†	-11.1	-0.0003	mg/L	0.00002	-0.0003	mg/L	0.00002	5.09%
Co 228.616*†	-2.4	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	23.07%
Cr 267.716*†	48.2	0.0005	mg/L	0.00010	0.0005	mg/L	0.00010	20.34%
Cu 324.752*†	-234.9	-0.0010	mg/L	0.00044	-0.0010	mg/L	0.00044	42.73%
Fe 273.955*†	-2.7	-0.0001	mg/L	0.00078	-0.0001	mg/L	0.00078	610.02%
K 766.490*†	-437.0	-0.1585	mg/L	0.03245	-0.1585	mg/L	0.03245	20.47%
Mg 279.077*†	16.1	0.0010	mg/L	0.00586	0.0010	mg/L	0.00586	616.00%
Mn 257.610*†	18.6	0.0000	mg/L	0.00004	0.0000	mg/L	0.00004	123.29%
Mo 202.031*†	-1.0	-0.0001	mg/L	0.00046	-0.0001	mg/L	0.00046	400.87%
Na 589.592*†	211.6	0.0523	mg/L	0.02372	0.0523	mg/L	0.02372	45.38%
Ni 231.604*†	-8.4	-0.0004	mg/L	0.00019	-0.0004	mg/L	0.00019	50.51%
P 213.617*†	-18.7	-0.0109	mg/L	0.00765	-0.0109	mg/L	0.00765	70.04%
P 214.914†	-11.5	-0.0104	mg/L	0.00336	-0.0104	mg/L	0.00336	32.17%
Pb 220.353*†	-0.1	-0.0000	mg/L	0.00104	-0.0000	mg/L	0.00104	>999.9%
QC value within limits for Pb 220.353* Recovery = Not calculated								
Sb 206.836†	-3.7	-0.0022	mg/L	0.00374	-0.0022	mg/L	0.00374	167.37%
Sb 217.582*†	5.3	0.0032	mg/L	0.00907	0.0032	mg/L	0.00907	287.44%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-0.3	-0.0002	mg/L	0.00583	-0.0002	mg/L	0.00583	>999.9%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	77.7	0.0022	mg/L	0.00057	0.0022	mg/L	0.00057	25.52%
QC value within limits for Si 251.611* Recovery = Not calculated								
Sn 189.927*†	0.8	0.0002	mg/L	0.00438	0.0002	mg/L	0.00438	>999.9%
Sn 242.170†	53.8	0.0341	mg/L	0.00362	0.0341	mg/L	0.00362	10.60%
Sr 407.771*†	-34.5	-0.0001	mg/L	0.00012	-0.0001	mg/L	0.00012	100.98%
Ti 334.940†	-203.0	-0.0003	mg/L	0.00004	-0.0003	mg/L	0.00004	14.77%
Ti 336.121*†	257.5	0.0005	mg/L	0.00030	0.0005	mg/L	0.00030	61.94%
Tl 190.801*†	0.0	0.0000	mg/L	0.00366	0.0000	mg/L	0.00366	>999.9%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-101.7	-0.0008	mg/L	0.00030	-0.0008	mg/L	0.00030	36.49%
Zn 206.200*†	7.2	0.0002	mg/L	0.00002	0.0002	mg/L	0.00002	8.06%
Zn 213.857*†	16.3	0.0003	mg/L	0.00003	0.0003	mg/L	0.00003	11.09%

All analyte(s) passed QC.

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Sequence No.: 3
Sample ID: ICS_A - M110116B
Analyst: 935 icp 7300
Logged In Analyst (Original) : Oscar Gomez 935
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 8
Date Collected: 3/8/2017 10:32:40 AM
Data Type: Reprocessed on 3/8/2017 11:07:31 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICS_A - M110116B

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	59442.4	84.19	%	1.035				1.23%
Tb 350	96026.3	87.13	%	0.405				0.46%
Ag 328.068*†	-99.3	-0.0006	mg/L	0.00073	-0.0006	mg/L	0.00073	127.19%
Al 308.215*†	393617.6	24.90	mg/L	0.036	24.90	mg/L	0.036	0.14%
As 188.979†	2.6	0.0014	mg/L	0.00506	0.0014	mg/L	0.00506	354.80%
As 193.696*†	3.7	0.0029	mg/L	0.00860	0.0029	mg/L	0.00860	295.87%
B 249.677*†	561.7	0.0122	mg/L	0.00017	0.0122	mg/L	0.00017	1.38%
Ba 233.527*†	339.1	0.0026	mg/L	0.00031	0.0026	mg/L	0.00031	12.12%
Be 313.042*†	-235.0	-0.0001	mg/L	0.00003	-0.0001	mg/L	0.00003	39.91%
Ca 317.933*†	208986.6	120.2	mg/L	2.55	120.2	mg/L	2.55	2.12%
Cd 226.502*†	146.0	0.0021	mg/L	0.00032	0.0021	mg/L	0.00032	15.22%
Cd 228.802†	-1.8	-0.0001	mg/L	0.00045	-0.0001	mg/L	0.00045	868.00%
Co 228.616*†	26.0	0.0010	mg/L	0.00086	0.0010	mg/L	0.00086	82.79%
Cr 267.716*†	-138.5	-0.0014	mg/L	0.00041	-0.0014	mg/L	0.00041	30.48%
Cu 324.752*†	-399.7	-0.0018	mg/L	0.00040	-0.0018	mg/L	0.00040	23.03%
Fe 273.955*†	2024184.8	95.77	mg/L	0.087	95.77	mg/L	0.087	0.09%
K 766.490*†	25.5	0.0092	mg/L	0.03922	0.0092	mg/L	0.03922	424.83%
Mg 279.077*†	1007171.1	59.50	mg/L	0.145	59.50	mg/L	0.145	0.24%
Mn 257.610*†	-2102.0	-0.0038	mg/L	0.00012	-0.0038	mg/L	0.00012	3.09%
Mo 202.031*†	8.7	0.0010	mg/L	0.00118	0.0010	mg/L	0.00118	113.72%
Na 589.592*†	85569.6	21.14	mg/L	0.405	21.14	mg/L	0.405	1.92%
Ni 231.604*†	-3.6	-0.0002	mg/L	0.00092	-0.0002	mg/L	0.00092	552.13%
P 213.617*†	-274.2	-0.1597	mg/L	0.00022	-0.1597	mg/L	0.00022	0.13%
P 214.914†	45.1	0.0409	mg/L	0.00843	0.0409	mg/L	0.00843	20.63%
Pb 220.353*†	-45.2	-0.0063	mg/L	0.00056	-0.0063	mg/L	0.00056	8.83%
Sb 206.836†	24.6	0.0146	mg/L	0.00412	0.0146	mg/L	0.00412	28.13%
Sb 217.582*†	-7.7	-0.0046	mg/L	0.00594	-0.0046	mg/L	0.00594	129.37%
Se 196.026*†	-13.5	-0.0070	mg/L	0.00381	-0.0070	mg/L	0.00381	54.11%
Si 251.611*†	240.0	0.0069	mg/L	0.00076	0.0069	mg/L	0.00076	11.02%
Sn 189.927*†	11.2	0.0021	mg/L	0.00007	0.0021	mg/L	0.00007	3.33%
Sn 242.170†	425.0	0.2696	mg/L	0.01730	0.2696	mg/L	0.01730	6.42%
Sr 407.771*†	975.4	0.0033	mg/L	0.00018	0.0033	mg/L	0.00018	5.35%
Ti 334.940†	-1778.2	-0.0025	mg/L	0.00030	-0.0025	mg/L	0.00030	12.16%
Ti 336.121*†	-437.0	-0.0008	mg/L	0.00034	-0.0008	mg/L	0.00034	40.64%
Tl 190.801*†	-15.0	-0.0092	mg/L	0.00208	-0.0092	mg/L	0.00208	22.74%
V 292.402*†	207.5	0.0001	mg/L	0.00035	0.0001	mg/L	0.00035	352.45%
Zn 206.200*†	33.9	0.0009	mg/L	0.00070	0.0009	mg/L	0.00070	76.03%
Zn 213.857*†	470.9	-0.0006	mg/L	0.00072	-0.0006	mg/L	0.00072	116.07%

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Sequence No.: 4
Sample ID: ICS_AB - M110116A
Analyst: 935 icp 7300
Logged In Analyst (Original) : Oscar Gomez 935
Initial Sample Wt:
Dilution:
Wash Time:

Autosampler Location: 9
Date Collected: 3/8/2017 10:33:31 AM
Data Type: Reprocessed on 3/8/2017 11:07:32 AM

Initial Sample Vol:
Sample Prep Vol:

Mean Data: ICS_AB - M110116A

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	58998.3	83.56	%	0.738				0.88%
Tb 350	95753.5	86.89	%	1.810				2.08%
Ag 328.068*†	53803.1	0.3107	mg/L	0.00421	0.3107	mg/L	0.00421	1.36%
Al 308.215*†	390606.7	24.71	mg/L	0.130	24.71	mg/L	0.130	0.53%
As 188.979†	1894.6	1.037	mg/L	0.0238	1.037	mg/L	0.0238	2.29%
As 193.696*†	1335.4	1.045	mg/L	0.0257	1.045	mg/L	0.0257	2.46%
B 249.677*†	22111.0	0.4816	mg/L	0.00127	0.4816	mg/L	0.00127	0.26%
Ba 233.527*†	41957.7	0.3178	mg/L	0.00162	0.3178	mg/L	0.00162	0.51%
Be 313.042*†	349686.5	0.1083	mg/L	0.00056	0.1083	mg/L	0.00056	0.52%
Ca 317.933*†	207350.7	119.3	mg/L	4.01	119.3	mg/L	4.01	3.36%
Cd 226.502*†	20671.5	0.2995	mg/L	0.00706	0.2995	mg/L	0.00706	2.36%
Cd 228.802†	10487.7	0.3011	mg/L	0.00672	0.3011	mg/L	0.00672	2.23%
Co 228.616*†	7643.4	0.3047	mg/L	0.00729	0.3047	mg/L	0.00729	2.39%
Cr 267.716*†	31209.0	0.3048	mg/L	0.00302	0.3048	mg/L	0.00302	0.99%
Cu 324.752*†	71163.8	0.3123	mg/L	0.00147	0.3123	mg/L	0.00147	0.47%
Fe 273.955*†	2013346.7	95.26	mg/L	0.354	95.26	mg/L	0.354	0.37%
K 766.490*†	60082.6	21.80	mg/L	0.732	21.80	mg/L	0.732	3.36%
Mg 279.077*†	995881.2	58.83	mg/L	0.259	58.83	mg/L	0.259	0.44%
Mn 257.610*†	115321.3	0.2085	mg/L	0.00063	0.2085	mg/L	0.00063	0.30%
Mo 202.031*†	2567.7	0.3061	mg/L	0.00877	0.3061	mg/L	0.00877	2.86%
Na 589.592*†	84567.1	20.90	mg/L	0.654	20.90	mg/L	0.654	3.13%
Ni 231.604*†	6738.8	0.3100	mg/L	0.00660	0.3100	mg/L	0.00660	2.13%
P 213.617*†	-254.0	-0.1479	mg/L	0.00491	-0.1479	mg/L	0.00491	3.32%
P 214.914†	57.6	0.0521	mg/L	0.00981	0.0521	mg/L	0.00981	18.83%
Pb 220.353*†	7124.2	0.9981	mg/L	0.02312	0.9981	mg/L	0.02312	2.32%
Sb 206.836†	1672.9	0.9959	mg/L	0.01635	0.9959	mg/L	0.01635	1.64%
Sb 217.582*†	1665.9	0.9892	mg/L	0.02420	0.9892	mg/L	0.02420	2.45%
Se 196.026*†	981.4	0.5131	mg/L	0.02434	0.5131	mg/L	0.02434	4.74%
Si 251.611*†	7321.8	0.2098	mg/L	0.00323	0.2098	mg/L	0.00323	1.54%
Sn 189.927*†	-44.5	-0.0083	mg/L	0.00100	-0.0083	mg/L	0.00100	12.09%
Sn 242.170†	415.9	0.2639	mg/L	0.00290	0.2639	mg/L	0.00290	1.10%
Sr 407.771*†	816.5	0.0028	mg/L	0.00018	0.0028	mg/L	0.00018	6.53%
Ti 334.940†	752678.9	1.038	mg/L	0.0055	1.038	mg/L	0.0055	0.53%
Ti 336.121*†	529602.5	1.001	mg/L	0.0014	1.001	mg/L	0.0014	0.14%
Tl 190.801*†	1659.6	1.017	mg/L	0.0418	1.017	mg/L	0.0418	4.11%
V 292.402*†	37528.1	0.3004	mg/L	0.00231	0.3004	mg/L	0.00231	0.77%
Zn 206.200*†	11177.1	0.3041	mg/L	0.00691	0.3041	mg/L	0.00691	2.27%
Zn 213.857*†	19880.2	0.3020	mg/L	0.00666	0.3020	mg/L	0.00666	2.21%

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Sequence No.: 20
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 20

Autosampler Location: 3
Date Collected: 3/8/2017 2:16:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	62272.1	88.19	%	0.968				1.10%
Tb 350	103047.8	93.51	%	0.453				0.48%
Ag 328.068*†	65893.4	0.3806	mg/L	0.00040	0.3806	mg/L	0.00040	0.10%
QC value within limits for Ag 328.068* Recovery = 101.49%								
Al 308.215*†	225288.0	14.25	mg/L	0.040	14.25	mg/L	0.040	0.28%
QC value within limits for Al 308.215* Recovery = 105.57%								
As 188.979†	7173.2	3.925	mg/L	0.0151	3.925	mg/L	0.0151	0.38%
QC value within limits for As 188.979 Recovery = 104.65%								
As 193.696*†	5021.6	3.931	mg/L	0.0160	3.931	mg/L	0.0160	0.41%
QC value within limits for As 193.696* Recovery = 104.81%								
B 249.677*†	177634.2	3.869	mg/L	0.0476	3.869	mg/L	0.0476	1.23%
QC value within limits for B 249.677* Recovery = 103.18%								
Ba 233.527*†	1085541.5	8.221	mg/L	0.0176	8.221	mg/L	0.0176	0.21%
QC value within limits for Ba 233.527* Recovery = 109.62%								
Be 313.042*†	1949949.8	0.6038	mg/L	0.00065	0.6038	mg/L	0.00065	0.11%
QC value within limits for Be 313.042* Recovery = 107.34%								
Ca 317.933*†	51869.3	29.83	mg/L	0.326	29.83	mg/L	0.326	1.09%
QC value within limits for Ca 317.933* Recovery = 99.44%								
Cd 226.502*†	54622.1	0.7913	mg/L	0.00361	0.7913	mg/L	0.00361	0.46%
QC value within limits for Cd 226.502* Recovery = 105.50%								
Cd 228.802†	27576.0	0.7917	mg/L	0.00151	0.7917	mg/L	0.00151	0.19%
Co 228.616*†	50237.7	2.003	mg/L	0.0132	2.003	mg/L	0.0132	0.66%
QC value within limits for Co 228.616* Recovery = 106.83%								
Cr 267.716*†	64213.5	0.6271	mg/L	0.00378	0.6271	mg/L	0.00378	0.60%
QC value within limits for Cr 267.716* Recovery = 104.51%								
Cu 324.752*†	220372.6	0.9672	mg/L	0.00058	0.9672	mg/L	0.00058	0.06%
QC value within limits for Cu 324.752* Recovery = 103.16%								
Fe 273.955*†	84835.5	4.014	mg/L	0.0154	4.014	mg/L	0.0154	0.38%
QC value within limits for Fe 273.955* Recovery = 107.04%								
K 766.490*†	73546.9	26.68	mg/L	0.304	26.68	mg/L	0.304	1.14%
QC value within limits for K 766.490* Recovery = 98.82%								
Mg 279.077*†	135040.2	7.978	mg/L	0.0205	7.978	mg/L	0.0205	0.26%
QC value within limits for Mg 279.077* Recovery = 106.37%								
Mn 257.610*†	452727.4	0.8187	mg/L	0.00248	0.8187	mg/L	0.00248	0.30%
QC value within limits for Mn 257.610* Recovery = 109.16%								
Mo 202.031*†	5292.2	0.6310	mg/L	0.00116	0.6310	mg/L	0.00116	0.18%
QC value within limits for Mo 202.031* Recovery = 105.16%								
Na 589.592*†	147732.0	36.50	mg/L	0.523	36.50	mg/L	0.523	1.43%
QC value within limits for Na 589.592* Recovery = 101.40%								
Ni 231.604*†	13620.1	0.6266	mg/L	0.00326	0.6266	mg/L	0.00326	0.52%
QC value within limits for Ni 231.604* Recovery = 104.44%								
P 213.617*†	10614.2	6.182	mg/L	0.0432	6.182	mg/L	0.0432	0.70%
QC value within limits for P 213.617* Recovery = 103.03%								
P 214.914†	6965.0	6.305	mg/L	0.0240	6.305	mg/L	0.0240	0.38%
Pb 220.353*†	28389.1	3.977	mg/L	0.0154	3.977	mg/L	0.0154	0.39%
QC value within limits for Pb 220.353* Recovery = 106.06%								
Sb 206.836†	7943.5	4.729	mg/L	0.0032	4.729	mg/L	0.0032	0.07%
QC value within limits for Sb 206.836 Recovery = 105.09%								
Sb 217.582*†	7921.2	4.703	mg/L	0.0207	4.703	mg/L	0.0207	0.44%
QC value within limits for Sb 217.582* Recovery = 104.52%								
Se 196.026*†	3039.0	1.589	mg/L	0.0083	1.589	mg/L	0.0083	0.52%
QC value within limits for Se 196.026* Recovery = 105.92%								
Si 251.611*†	219318.2	6.283	mg/L	0.0477	6.283	mg/L	0.0477	0.76%
QC value within limits for Si 251.611* Recovery = 104.72%								
Sn 189.927*†	17187.4	3.202	mg/L	0.0002	3.202	mg/L	0.0002	0.01%
QC value within limits for Sn 189.927* Recovery = 106.74%								
Sn 242.170†	5002.7	3.174	mg/L	0.0022	3.174	mg/L	0.0022	0.07%
Sr 407.771*†	87625.7	0.2974	mg/L	0.00494	0.2974	mg/L	0.00494	1.66%
QC value within limits for Sr 407.771* Recovery = 99.13%								

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Ti 334.940†	468269.2	0.6457 mg/L	0.00214	0.6457 mg/L	0.00214	0.33%
Ti 336.121*†	330558.4	0.6245 mg/L	0.00172	0.6245 mg/L	0.00172	0.28%
QC value within limits for Ti 336.121* Recovery = 104.09%						
Tl 190.801*†	2616.2	1.603 mg/L	0.0002	1.603 mg/L	0.0002	0.01%
QC value within limits for Tl 190.801* Recovery = 106.89%						
V 292.402*†	243141.9	1.957 mg/L	0.0074	1.957 mg/L	0.0074	0.38%
QC value within limits for V 292.402* Recovery = 104.35%						
Zn 206.200*†	96993.1	2.639 mg/L	0.0078	2.639 mg/L	0.0078	0.29%
QC value within limits for Zn 206.200* Recovery = 105.54%						
Zn 213.857*†	169259.4	2.638 mg/L	0.0045	2.638 mg/L	0.0045	0.17%
QC value within limits for Zn 213.857* Recovery = 105.53%						

All analyte(s) passed QC.

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Sequence No.: 21
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/8/2017 2:17:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	70828.8	100.3	%	1.63				1.63%
Tb 350	112346.5	101.9	%	1.30				1.28%
Ag 328.068*†	51.1	0.0003	mg/L	0.00020	0.0003	mg/L	0.00020	66.97%
QC value within limits for Ag 328.068* Recovery = Not calculated								
Al 308.215*†	-101.6	-0.0064	mg/L	0.00248	-0.0064	mg/L	0.00248	38.54%
As 188.979†	-4.1	-0.0023	mg/L	0.00307	-0.0023	mg/L	0.00307	135.77%
As 193.696*†	7.1	0.0055	mg/L	0.00075	0.0055	mg/L	0.00075	13.48%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1131.6	0.0246	mg/L	0.00172	0.0246	mg/L	0.00172	6.97%
Ba 233.527*†	393.6	0.0030	mg/L	0.00006	0.0030	mg/L	0.00006	2.06%
Be 313.042*†	612.7	0.0002	mg/L	0.00003	0.0002	mg/L	0.00003	17.55%
Ca 317.933*†	22.9	0.0132	mg/L	0.00103	0.0132	mg/L	0.00103	7.79%
Cd 226.502*†	24.8	0.0004	mg/L	0.00007	0.0004	mg/L	0.00007	19.89%
Cd 228.802†	-2.8	-0.0001	mg/L	0.00030	-0.0001	mg/L	0.00030	373.59%
Co 228.616*†	21.3	0.0008	mg/L	0.00074	0.0008	mg/L	0.00074	86.65%
Cr 267.716*†	-11.5	-0.0001	mg/L	0.00045	-0.0001	mg/L	0.00045	396.19%
Cu 324.752*†	-56.5	-0.0002	mg/L	0.00073	-0.0002	mg/L	0.00073	294.45%
Fe 273.955*†	12.6	0.0006	mg/L	0.00050	0.0006	mg/L	0.00050	84.62%
K 766.490*†	-233.0	-0.0845	mg/L	0.14252	-0.0845	mg/L	0.14252	168.64%
Mg 279.077*†	81.6	0.0048	mg/L	0.00809	0.0048	mg/L	0.00809	167.93%
Mn 257.610*†	-1852.1	-0.0033	mg/L	0.00004	-0.0033	mg/L	0.00004	1.07%
Mo 202.031*†	5.2	0.0006	mg/L	0.00014	0.0006	mg/L	0.00014	21.98%
Na 589.592*†	499.6	0.1234	mg/L	0.00051	0.1234	mg/L	0.00051	0.41%
Ni 231.604*†	-2.4	-0.0001	mg/L	0.00027	-0.0001	mg/L	0.00027	247.26%
P 213.617*†	-13.2	-0.0077	mg/L	0.00612	-0.0077	mg/L	0.00612	79.62%
P 214.914†	10.7	0.0097	mg/L	0.00644	0.0097	mg/L	0.00644	66.20%
Pb 220.353*†	-5.7	-0.0008	mg/L	0.00120	-0.0008	mg/L	0.00120	151.81%
Sb 206.836†	6.2	0.0037	mg/L	0.00557	0.0037	mg/L	0.00557	151.67%
Sb 217.582*†	2.2	0.0013	mg/L	0.00495	0.0013	mg/L	0.00495	376.54%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-2.8	-0.0014	mg/L	0.00582	-0.0014	mg/L	0.00582	402.72%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	241.6	0.0069	mg/L	0.00164	0.0069	mg/L	0.00164	23.63%
Sn 189.927*†	27.0	0.0050	mg/L	0.00107	0.0050	mg/L	0.00107	21.29%
Sn 242.170†	10.3	0.0065	mg/L	0.00603	0.0065	mg/L	0.00603	92.28%
Sr 407.771*†	5.8	0.0000	mg/L	0.00009	0.0000	mg/L	0.00009	431.34%
Ti 334.940†	191.4	0.0003	mg/L	0.00006	0.0003	mg/L	0.00006	21.44%
Ti 336.121*†	205.4	0.0004	mg/L	0.00003	0.0004	mg/L	0.00003	6.52%
Tl 190.801*†	3.8	0.0023	mg/L	0.00873	0.0023	mg/L	0.00873	372.65%
V 292.402*†	93.7	0.0008	mg/L	0.00047	0.0008	mg/L	0.00047	62.10%
Zn 206.200*†	-15.7	-0.0004	mg/L	0.00016	-0.0004	mg/L	0.00016	37.17%
QC value within limits for Zn 206.200* Recovery = Not calculated								
Zn 213.857*†	-1.0	-0.0000	mg/L	0.00044	-0.0000	mg/L	0.00044	>999.9%
QC value within limits for Zn 213.857* Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 11
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/8/2017 2:26:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	63602.1	90.08	%	1.364				1.51%
Tb 350	104155.1	94.51	%	0.571				0.60%
Ag 328.068*†	65514.8	0.3784	mg/L	0.00279	0.3784	mg/L	0.00279	0.74%
QC value within limits for Ag 328.068* Recovery = 100.90%								
Al 308.215*†	222935.9	14.10	mg/L	0.064	14.10	mg/L	0.064	0.45%
QC value within limits for Al 308.215* Recovery = 104.47%								
As 188.979†	7095.6	3.882	mg/L	0.0078	3.882	mg/L	0.0078	0.20%
QC value within limits for As 188.979 Recovery = 103.52%								
As 193.696*†	4953.4	3.877	mg/L	0.0246	3.877	mg/L	0.0246	0.63%
QC value within limits for As 193.696* Recovery = 103.39%								
B 249.677*†	174516.2	3.801	mg/L	0.0809	3.801	mg/L	0.0809	2.13%
QC value within limits for B 249.677* Recovery = 101.37%								
Ba 233.527*†	1067930.2	8.088	mg/L	0.0609	8.088	mg/L	0.0609	0.75%
QC value within limits for Ba 233.527* Recovery = 107.84%								
Be 313.042*†	1918568.2	0.5941	mg/L	0.00795	0.5941	mg/L	0.00795	1.34%
QC value within limits for Be 313.042* Recovery = 105.61%								
Ca 317.933*†	51139.8	29.41	mg/L	0.185	29.41	mg/L	0.185	0.63%
QC value within limits for Ca 317.933* Recovery = 98.04%								
Cd 226.502*†	53501.6	0.7750	mg/L	0.01211	0.7750	mg/L	0.01211	1.56%
QC value within limits for Cd 226.502* Recovery = 103.34%								
Cd 228.802†	27121.7	0.7787	mg/L	0.00800	0.7787	mg/L	0.00800	1.03%
Co 228.616*†	49412.0	1.970	mg/L	0.0085	1.970	mg/L	0.0085	0.43%
QC value within limits for Co 228.616* Recovery = 105.07%								
Cr 267.716*†	63553.2	0.6206	mg/L	0.00209	0.6206	mg/L	0.00209	0.34%
QC value within limits for Cr 267.716* Recovery = 103.44%								
Cu 324.752*†	218593.5	0.9593	mg/L	0.00653	0.9593	mg/L	0.00653	0.68%
QC value within limits for Cu 324.752* Recovery = 102.33%								
Fe 273.955*†	84373.1	3.992	mg/L	0.0381	3.992	mg/L	0.0381	0.95%
QC value within limits for Fe 273.955* Recovery = 106.46%								
K 766.490*†	72917.2	26.45	mg/L	0.224	26.45	mg/L	0.224	0.85%
QC value within limits for K 766.490* Recovery = 97.97%								
Mg 279.077*†	132982.9	7.856	mg/L	0.0801	7.856	mg/L	0.0801	1.02%
QC value within limits for Mg 279.077* Recovery = 104.75%								
Mn 257.610*†	445491.0	0.8056	mg/L	0.00675	0.8056	mg/L	0.00675	0.84%
QC value within limits for Mn 257.610* Recovery = 107.41%								
Mo 202.031*†	5255.6	0.6266	mg/L	0.00354	0.6266	mg/L	0.00354	0.56%
QC value within limits for Mo 202.031* Recovery = 104.43%								
Na 589.592*†	146002.9	36.08	mg/L	0.286	36.08	mg/L	0.286	0.79%
QC value within limits for Na 589.592* Recovery = 100.21%								
Ni 231.604*†	13479.8	0.6202	mg/L	0.00314	0.6202	mg/L	0.00314	0.51%
QC value within limits for Ni 231.604* Recovery = 103.36%								
P 213.617*†	10420.9	6.069	mg/L	0.0179	6.069	mg/L	0.0179	0.30%
QC value within limits for P 213.617* Recovery = 101.15%								
P 214.914†	6878.6	6.227	mg/L	0.0060	6.227	mg/L	0.0060	0.10%
Pb 220.353*†	27773.1	3.891	mg/L	0.0436	3.891	mg/L	0.0436	1.12%
QC value within limits for Pb 220.353* Recovery = 103.76%								
Sb 206.836†	7847.5	4.672	mg/L	0.0274	4.672	mg/L	0.0274	0.59%
QC value within limits for Sb 206.836 Recovery = 103.82%								
Sb 217.582*†	7872.4	4.674	mg/L	0.0211	4.674	mg/L	0.0211	0.45%
QC value within limits for Sb 217.582* Recovery = 103.88%								
Se 196.026*†	3012.9	1.575	mg/L	0.0143	1.575	mg/L	0.0143	0.91%
QC value within limits for Se 196.026* Recovery = 105.01%								
Si 251.611*†	216253.0	6.196	mg/L	0.0657	6.196	mg/L	0.0657	1.06%
QC value within limits for Si 251.611* Recovery = 103.26%								
Sn 189.927*†	17007.8	3.169	mg/L	0.0102	3.169	mg/L	0.0102	0.32%
QC value within limits for Sn 189.927* Recovery = 105.62%								
Sn 242.170†	4959.5	3.146	mg/L	0.0124	3.146	mg/L	0.0124	0.39%
Sr 407.771*†	87050.1	0.2954	mg/L	0.00294	0.2954	mg/L	0.00294	0.99%
QC value within limits for Sr 407.771* Recovery = 98.48%								

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Ti 334.940†	470106.1	0.6482 mg/L	0.00656	0.6482 mg/L	0.00656	1.01%
Ti 336.121*†	332972.7	0.6291 mg/L	0.00473	0.6291 mg/L	0.00473	0.75%
QC value within limits for Ti 336.121* Recovery = 104.85%						
Tl 190.801*†	2594.1	1.590 mg/L	0.0108	1.590 mg/L	0.0108	0.68%
QC value within limits for Tl 190.801* Recovery = 105.98%						
V 292.402*†	241012.5	1.939 mg/L	0.0083	1.939 mg/L	0.0083	0.43%
QC value within limits for V 292.402* Recovery = 103.44%						
Zn 206.200*†	94667.8	2.575 mg/L	0.0351	2.575 mg/L	0.0351	1.36%
QC value within limits for Zn 206.200* Recovery = 103.01%						

All analyte(s) passed QC.

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Sequence No.: 12
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/8/2017 2:27:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	70431.7	99.75	%	4.786				4.80%
Tb 350	111181.0	100.9	%	3.88				3.85%
Ag 328.068*†	238.8	0.0014	mg/L	0.00081	0.0014	mg/L	0.00081	58.88%
Al 308.215*†	13.9	0.0009	mg/L	0.00057	0.0009	mg/L	0.00057	64.83%
As 188.979†	3.2	0.0018	mg/L	0.00034	0.0018	mg/L	0.00034	19.16%
As 193.696*†	-11.6	-0.0090	mg/L	0.00082	-0.0090	mg/L	0.00082	9.03%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1178.8	0.0257	mg/L	0.00169	0.0257	mg/L	0.00169	6.60%
Ba 233.527*†	473.6	0.0036	mg/L	0.00026	0.0036	mg/L	0.00026	7.38%
Be 313.042*†	789.6	0.0002	mg/L	0.00003	0.0002	mg/L	0.00003	12.95%
Ca 317.933*†	23.5	0.0135	mg/L	0.00203	0.0135	mg/L	0.00203	15.03%
Cd 226.502*†	22.6	0.0003	mg/L	0.00009	0.0003	mg/L	0.00009	27.42%
Cd 228.802†	11.5	0.0003	mg/L	0.00008	0.0003	mg/L	0.00008	23.12%
Co 228.616*†	21.2	0.0008	mg/L	0.00010	0.0008	mg/L	0.00010	11.41%
Cr 267.716*†	42.9	0.0004	mg/L	0.00011	0.0004	mg/L	0.00011	25.55%
Cu 324.752*†	146.5	0.0006	mg/L	0.00016	0.0006	mg/L	0.00016	25.39%
Fe 273.955*†	88.0	0.0042	mg/L	0.00116	0.0042	mg/L	0.00116	27.76%
K 766.490*†	180.0	0.0653	mg/L	0.01619	0.0653	mg/L	0.01619	24.80%
Mg 279.077*†	52.9	0.0031	mg/L	0.01517	0.0031	mg/L	0.01517	485.05%
Mn 257.610*†	-1745.7	-0.0032	mg/L	0.00010	-0.0032	mg/L	0.00010	3.12%
Mo 202.031*†	2.8	0.0003	mg/L	0.00072	0.0003	mg/L	0.00072	219.77%
Na 589.592*†	386.0	0.0954	mg/L	0.05076	0.0954	mg/L	0.05076	53.22%
Ni 231.604*†	10.5	0.0005	mg/L	0.00007	0.0005	mg/L	0.00007	13.77%
P 213.617*†	3.3	0.0019	mg/L	0.01694	0.0019	mg/L	0.01694	879.51%
P 214.914†	-7.6	-0.0069	mg/L	0.00397	-0.0069	mg/L	0.00397	57.81%
Pb 220.353*†	13.6	0.0019	mg/L	0.00016	0.0019	mg/L	0.00016	8.40%
Sb 206.836†	6.8	0.0041	mg/L	0.00390	0.0041	mg/L	0.00390	96.15%
Sb 217.582*†	11.7	0.0070	mg/L	0.00326	0.0070	mg/L	0.00326	46.76%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	1.1	0.0006	mg/L	0.00300	0.0006	mg/L	0.00300	505.84%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	434.6	0.0125	mg/L	0.00435	0.0125	mg/L	0.00435	34.93%
Sn 189.927*†	26.5	0.0049	mg/L	0.00071	0.0049	mg/L	0.00071	14.45%
Sn 242.170†	-3.9	-0.0025	mg/L	0.03348	-0.0025	mg/L	0.03348	>999.9%
Sr 407.771*†	20.1	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	75.65%
Ti 334.940†	633.8	0.0009	mg/L	0.00018	0.0009	mg/L	0.00018	21.06%
Ti 336.121*†	761.6	0.0014	mg/L	0.00012	0.0014	mg/L	0.00012	8.22%
Tl 190.801*†	7.0	0.0043	mg/L	0.00377	0.0043	mg/L	0.00377	87.41%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	131.0	0.0011	mg/L	0.00111	0.0011	mg/L	0.00111	105.70%
Zn 206.200*†	-9.4	-0.0003	mg/L	0.00009	-0.0003	mg/L	0.00009	33.61%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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Sequence No.: 17
Sample ID: CCV= STD3x0.5
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 3
Date Collected: 3/8/2017 2:31:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCV= STD3x0.5

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	65138.3	92.25	%	0.902				0.98%
Tb 350	106920.4	97.02	%	0.603				0.62%
Ag 328.068*†	65438.8	0.3779	mg/L	0.00303	0.3779	mg/L	0.00303	0.80%
QC value within limits for Ag 328.068* Recovery = 100.79%								
Al 308.215*†	222900.0	14.10	mg/L	0.062	14.10	mg/L	0.062	0.44%
QC value within limits for Al 308.215* Recovery = 104.45%								
As 188.979†	6852.9	3.749	mg/L	0.0323	3.749	mg/L	0.0323	0.86%
QC value within limits for As 188.979 Recovery = 99.98%								
As 193.696*†	4808.7	3.764	mg/L	0.0249	3.764	mg/L	0.0249	0.66%
QC value within limits for As 193.696* Recovery = 100.37%								
B 249.677*†	176201.0	3.838	mg/L	0.0185	3.838	mg/L	0.0185	0.48%
QC value within limits for B 249.677* Recovery = 102.35%								
Ba 233.527*†	1068545.0	8.092	mg/L	0.0469	8.092	mg/L	0.0469	0.58%
QC value within limits for Ba 233.527* Recovery = 107.90%								
Be 313.042*†	1924833.0	0.5960	mg/L	0.00094	0.5960	mg/L	0.00094	0.16%
QC value within limits for Be 313.042* Recovery = 105.95%								
Ca 317.933*†	50335.3	28.95	mg/L	0.596	28.95	mg/L	0.596	2.06%
QC value within limits for Ca 317.933* Recovery = 96.50%								
Cd 226.502*†	54005.8	0.7823	mg/L	0.00545	0.7823	mg/L	0.00545	0.70%
QC value within limits for Cd 226.502* Recovery = 104.31%								
Cd 228.802†	27248.2	0.7823	mg/L	0.00613	0.7823	mg/L	0.00613	0.78%
Co 228.616*†	49599.4	1.978	mg/L	0.0128	1.978	mg/L	0.0128	0.65%
QC value within limits for Co 228.616* Recovery = 105.47%								
Cr 267.716*†	63415.8	0.6193	mg/L	0.00505	0.6193	mg/L	0.00505	0.81%
QC value within limits for Cr 267.716* Recovery = 103.22%								
Cu 324.752*†	217844.7	0.9561	mg/L	0.00179	0.9561	mg/L	0.00179	0.19%
QC value within limits for Cu 324.752* Recovery = 101.98%								
Fe 273.955*†	85016.0	4.023	mg/L	0.0165	4.023	mg/L	0.0165	0.41%
QC value within limits for Fe 273.955* Recovery = 107.27%								
K 766.490*†	71509.7	25.94	mg/L	0.391	25.94	mg/L	0.391	1.51%
QC value within limits for K 766.490* Recovery = 96.08%								
Mg 279.077*†	133667.3	7.897	mg/L	0.0642	7.897	mg/L	0.0642	0.81%
QC value within limits for Mg 279.077* Recovery = 105.29%								
Mn 257.610*†	446399.0	0.8072	mg/L	0.00444	0.8072	mg/L	0.00444	0.55%
QC value within limits for Mn 257.610* Recovery = 107.63%								
Mo 202.031*†	5085.7	0.6063	mg/L	0.00719	0.6063	mg/L	0.00719	1.19%
QC value within limits for Mo 202.031* Recovery = 101.06%								
Na 589.592*†	143108.6	35.36	mg/L	0.611	35.36	mg/L	0.611	1.73%
QC value within limits for Na 589.592* Recovery = 98.23%								
Ni 231.604*†	13052.5	0.6005	mg/L	0.00485	0.6005	mg/L	0.00485	0.81%
QC value within limits for Ni 231.604* Recovery = 100.08%								
P 213.617*†	10177.3	5.927	mg/L	0.0716	5.927	mg/L	0.0716	1.21%
QC value within limits for P 213.617* Recovery = 98.79%								
P 214.914†	6673.5	6.041	mg/L	0.0791	6.041	mg/L	0.0791	1.31%
Pb 220.353*†	27962.4	3.918	mg/L	0.0777	3.918	mg/L	0.0777	1.98%
QC value within limits for Pb 220.353* Recovery = 104.47%								
Sb 206.836†	7582.8	4.514	mg/L	0.0441	4.514	mg/L	0.0441	0.98%
QC value within limits for Sb 206.836 Recovery = 100.31%								
Sb 217.582*†	7621.9	4.526	mg/L	0.0363	4.526	mg/L	0.0363	0.80%
QC value within limits for Sb 217.582* Recovery = 100.57%								
Se 196.026*†	2927.2	1.530	mg/L	0.0243	1.530	mg/L	0.0243	1.59%
QC value within limits for Se 196.026* Recovery = 102.02%								
Si 251.611*†	216841.1	6.212	mg/L	0.0081	6.212	mg/L	0.0081	0.13%
QC value within limits for Si 251.611* Recovery = 103.54%								
Sn 189.927*†	16517.1	3.077	mg/L	0.0309	3.077	mg/L	0.0309	1.00%
QC value within limits for Sn 189.927* Recovery = 102.58%								
Sn 242.170†	4818.9	3.057	mg/L	0.0455	3.057	mg/L	0.0455	1.49%
Sr 407.771*†	85307.5	0.2895	mg/L	0.00563	0.2895	mg/L	0.00563	1.94%
QC value within limits for Sr 407.771* Recovery = 96.51%								

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Ti 334.940†	468360.0	0.6458 mg/L	0.00120	0.6458 mg/L	0.00120	0.19%
Ti 336.121*†	330729.9	0.6249 mg/L	0.00112	0.6249 mg/L	0.00112	0.18%
QC value within limits for Ti 336.121* Recovery = 104.14%						
Tl 190.801*†	2506.8	1.536 mg/L	0.0170	1.536 mg/L	0.0170	1.11%
QC value within limits for Tl 190.801* Recovery = 102.42%						
V 292.402*†	240718.2	1.937 mg/L	0.0105	1.937 mg/L	0.0105	0.54%
QC value within limits for V 292.402* Recovery = 103.31%						
Zn 206.200*†	95578.1	2.600 mg/L	0.0168	2.600 mg/L	0.0168	0.65%
QC value within limits for Zn 206.200* Recovery = 104.00%						

All analyte(s) passed QC.

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Sequence No.: 18
Sample ID: CCB-R12091601
Analyst: 935 icp 7300
Initial Sample Wt:
Dilution:
Wash Time: 15

Autosampler Location: 1
Date Collected: 3/8/2017 2:32:42 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1

Mean Data: CCB-R12091601

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	71533.0	101.3	%	3.50				3.46%
Tb 350	114243.7	103.7	%	5.26				5.07%
Ag 328.068*†	-108.6	-0.0006	mg/L	0.00073	-0.0006	mg/L	0.00073	116.98%
Al 308.215*†	-69.1	-0.0044	mg/L	0.00438	-0.0044	mg/L	0.00438	100.12%
As 188.979†	-7.6	-0.0042	mg/L	0.00179	-0.0042	mg/L	0.00179	42.99%
As 193.696*†	2.5	0.0020	mg/L	0.00723	0.0020	mg/L	0.00723	362.65%
QC value within limits for As 193.696* Recovery = Not calculated								
B 249.677*†	1251.4	0.0273	mg/L	0.00263	0.0273	mg/L	0.00263	9.63%
Ba 233.527*†	492.1	0.0037	mg/L	0.00010	0.0037	mg/L	0.00010	2.82%
Be 313.042*†	860.1	0.0003	mg/L	0.00002	0.0003	mg/L	0.00002	8.53%
Ca 317.933*†	34.3	0.0198	mg/L	0.00768	0.0198	mg/L	0.00768	38.88%
Cd 226.502*†	18.3	0.0003	mg/L	0.00021	0.0003	mg/L	0.00021	80.32%
Cd 228.802†	10.9	0.0003	mg/L	0.00008	0.0003	mg/L	0.00008	26.74%
Co 228.616*†	17.2	0.0007	mg/L	0.00023	0.0007	mg/L	0.00023	32.87%
Cr 267.716*†	39.6	0.0004	mg/L	0.00014	0.0004	mg/L	0.00014	36.91%
Cu 324.752*†	-93.8	-0.0004	mg/L	0.00019	-0.0004	mg/L	0.00019	45.01%
Fe 273.955*†	106.3	0.0050	mg/L	0.00006	0.0050	mg/L	0.00006	1.26%
K 766.490*†	-61.6	-0.0224	mg/L	0.10601	-0.0224	mg/L	0.10601	474.06%
Mg 279.077*†	196.1	0.0116	mg/L	0.00936	0.0116	mg/L	0.00936	80.76%
Mn 257.610*†	-1737.3	-0.0031	mg/L	0.00004	-0.0031	mg/L	0.00004	1.37%
Mo 202.031*†	-1.0	-0.0001	mg/L	0.00002	-0.0001	mg/L	0.00002	21.07%
Na 589.592*†	298.6	0.0738	mg/L	0.02650	0.0738	mg/L	0.02650	35.92%
Ni 231.604*†	2.6	0.0001	mg/L	0.00101	0.0001	mg/L	0.00101	850.42%
P 213.617*†	3.9	0.0023	mg/L	0.00706	0.0023	mg/L	0.00706	309.81%
P 214.914†	9.0	0.0081	mg/L	0.00892	0.0081	mg/L	0.00892	110.13%
Pb 220.353*†	1.2	0.0002	mg/L	0.00107	0.0002	mg/L	0.00107	649.24%
Sb 206.836†	9.5	0.0057	mg/L	0.00323	0.0057	mg/L	0.00323	57.00%
Sb 217.582*†	0.4	0.0002	mg/L	0.00196	0.0002	mg/L	0.00196	835.69%
QC value within limits for Sb 217.582* Recovery = Not calculated								
Se 196.026*†	-4.3	-0.0023	mg/L	0.00262	-0.0023	mg/L	0.00262	115.58%
QC value within limits for Se 196.026* Recovery = Not calculated								
Si 251.611*†	322.3	0.0092	mg/L	0.00491	0.0092	mg/L	0.00491	53.14%
Sn 189.927*†	21.9	0.0041	mg/L	0.00140	0.0041	mg/L	0.00140	34.21%
Sn 242.170†	20.7	0.0131	mg/L	0.00214	0.0131	mg/L	0.00214	16.29%
Sr 407.771*†	26.0	0.0001	mg/L	0.00005	0.0001	mg/L	0.00005	60.11%
Ti 334.940†	741.5	0.0010	mg/L	0.00041	0.0010	mg/L	0.00041	39.68%
Ti 336.121*†	885.6	0.0017	mg/L	0.00046	0.0017	mg/L	0.00046	27.68%
Tl 190.801*†	-1.8	-0.0011	mg/L	0.00295	-0.0011	mg/L	0.00295	262.01%
QC value within limits for Tl 190.801* Recovery = Not calculated								
V 292.402*†	-48.5	-0.0004	mg/L	0.00113	-0.0004	mg/L	0.00113	288.31%
Zn 206.200*†	8.4	0.0002	mg/L	0.00013	0.0002	mg/L	0.00013	56.97%
QC value within limits for Zn 206.200* Recovery = Not calculated								

All analyte(s) passed QC.

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EPA 6010B ICP Metals

(Solid)

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-0336**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-08 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-08 14:30
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170308C1\17-03-0336-3.icp

 # 3 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-13S**

LCS/MB BATCH: 170308L01
MS/MSD BATCH: 170308S01
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 2.00 g / ACTUAL: 2.00 g
FINAL VOLUME / WEIGHT: DEFAULT: 100.00 ml / ACTUAL: 100.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Antimony	0.00300	0.976	ND	0.732	
Arsenic	-0.00860	0.976	ND	0.732	
Barium	3.49	0.976	170	0.488	
Beryllium	0.00198	0.976	ND	0.244	
Cadmium	0.00754	0.976	ND	0.488	
Chromium	0.133	0.976	6.51	0.244	
Cobalt	0.182	0.976	8.88	0.244	
Copper	0.124	0.976	6.06	0.488	
Lead	0.0204	0.976	0.996	0.488	
Molybdenum	0.0141	0.976	0.688	0.244	
Nickel	0.0816	0.976	3.98	0.244	
Selenium	-0.0231	0.976	ND	0.732	
Silver	-0.00375	0.976	ND	0.244	
Thallium	-0.0207	0.976	ND	0.732	
Vanadium	0.612	0.976	29.8	0.244	
Zinc	0.938	0.976	45.7	0.976	

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Sequence No.: 15
Sample ID: 17-03-0336-3
Analyst: 935 icp 7300
Initial Sample Wt: 2.05 g
Dilution:
Wash Time: 15

Autosampler Location: 230
Date Collected: 3/8/2017 2:30:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0336-3

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	54598.7	77.33	%	1.064				1.38%
Tb 350	100681.5	91.36	%	2.253				2.47%
Ag 328.068*†	-648.7	-0.0037	mg/L	0.00186	-0.1828	mg/kg	0.09086	49.71%
Al 308.215*†	2393224.5	151.4	mg/L	0.20	7385	mg/kg	9.66	0.13%
As 188.979†	40.6	0.0222	mg/L	0.00102	1.084	mg/kg	0.0497	4.59%
As 193.696*†	-11.0	-0.0086	mg/L	0.02881	-0.4197	mg/kg	1.40532	334.85%
B 249.677*†	-272.5	-0.0059	mg/L	0.00158	-0.2896	mg/kg	0.07713	26.64%
Ba 233.527*†	460903.4	3.491	mg/L	0.0109	170.3	mg/kg	0.53	0.31%
Be 313.042*†	6401.5	0.0020	mg/L	0.00002	0.0967	mg/kg	0.00077	0.80%
Ca 317.933*†	90850.4	52.25	mg/L	1.487	2549	mg/kg	72.56	2.85%
Cd 226.502*†	520.4	0.0075	mg/L	0.00046	0.3678	mg/kg	0.02257	6.14%
Cd 228.802†	-29.1	-0.0008	mg/L	0.00002	-0.0407	mg/kg	0.00121	2.98%
Co 228.616*†	4566.2	0.1821	mg/L	0.00310	8.881	mg/kg	0.1511	1.70%
Cr 267.716*†	13666.2	0.1335	mg/L	0.00171	6.510	mg/kg	0.0835	1.28%
Cu 324.752*†	28298.2	0.1242	mg/L	0.00036	6.058	mg/kg	0.0175	0.29%
Fe 273.955*†	5338144.1	252.6	mg/L	1.54	12320	mg/kg	75.30	0.61%
K 766.490*†	283756.9	102.9	mg/L	1.93	5021	mg/kg	94.05	1.87%
Mg 279.077*†	2118051.4	125.1	mg/L	1.01	6104	mg/kg	49.05	0.80%
Mn 257.610*†	3059187.8	5.532	mg/L	0.0276	269.9	mg/kg	1.35	0.50%
Mo 202.031*†	118.3	0.0141	mg/L	0.00111	0.6879	mg/kg	0.05394	7.84%
Na 589.592*†	14592.3	3.606	mg/L	0.0340	175.9	mg/kg	1.66	0.94%
Ni 231.604*†	1773.4	0.0816	mg/L	0.00125	3.980	mg/kg	0.0607	1.53%
P 213.617*†	23819.6	13.87	mg/L	0.269	676.7	mg/kg	13.10	1.94%
P 214.914†	16209.0	14.67	mg/L	0.181	715.8	mg/kg	8.84	1.23%
Pb 220.353*†	145.7	0.0204	mg/L	0.00065	0.9957	mg/kg	0.03171	3.19%
Sb 206.836†	-12.3	-0.0073	mg/L	0.00453	-0.3584	mg/kg	0.22092	61.64%
Sb 217.582*†	5.1	0.0030	mg/L	0.02367	0.1464	mg/kg	1.15472	788.71%
Se 196.026*†	-44.2	-0.0231	mg/L	0.03206	-1.128	mg/kg	1.5640	138.60%
Si 251.611*†	275338.3	7.888	mg/L	0.0407	384.8	mg/kg	1.98	0.52%
Sn 189.927*†	-1003.2	-0.1869	mg/L	0.00631	-9.118	mg/kg	0.3077	3.37%
Sn 242.170†	1114.8	0.7072	mg/L	0.02780	34.50	mg/kg	1.356	3.93%
Sr 407.771*†	111617.8	0.3788	mg/L	0.00781	18.48	mg/kg	0.381	2.06%
Ti 334.940†	23649064.8	32.61	mg/L	0.306	1591	mg/kg	14.92	0.94%
Ti 336.121*†	16955931.4	32.04	mg/L	0.269	1563	mg/kg	13.13	0.84%
Tl 190.801*†	-33.7	-0.0207	mg/L	0.00593	-1.008	mg/kg	0.2893	28.69%
V 292.402*†	76510.8	0.6116	mg/L	0.00397	29.83	mg/kg	0.194	0.65%
Zn 206.200*†	34469.4	0.9377	mg/L	0.01206	45.74	mg/kg	0.588	1.29%

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **17-03-0336**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-08 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-08 14:30
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170308C1\17-03-0336-4.icp

 # 4 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-25S**

LCS/MB BATCH: 170308L01
MS/MSD BATCH: 170308S01
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 2.00 g / ACTUAL: 2.00 g
FINAL VOLUME / WEIGHT: DEFAULT: 100.00 ml / ACTUAL: 100.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Antimony	-0.000812	0.957	ND	0.718	
Arsenic	0.00600	0.957	ND	0.718	
Barium	0.905	0.957	43.3	0.478	
Beryllium	0.00195	0.957	ND	0.239	
Cadmium	0.00320	0.957	ND	0.478	
Chromium	0.0680	0.957	3.25	0.239	
Cobalt	0.0661	0.957	3.16	0.239	
Copper	0.108	0.957	5.18	0.478	
Lead	0.0208	0.957	0.996	0.478	
Molybdenum	0.00677	0.957	0.324	0.239	
Nickel	0.0478	0.957	2.29	0.239	
Selenium	-0.00698	0.957	ND	0.718	
Silver	-0.00167	0.957	ND	0.239	
Thallium	-0.0130	0.957	ND	0.718	
Vanadium	0.183	0.957	8.74	0.239	
Zinc	0.386	0.957	18.5	0.957	

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Sequence No.: 16
Sample ID: 17-03-0336-4
Analyst: 935 icp 7300
Initial Sample Wt: 2.09 g
Dilution:
Wash Time: 15

Autosampler Location: 231
Date Collected: 3/8/2017 2:30:58 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0336-4

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	59204.6	83.85	%	0.670				0.80%
Tb 350	102871.1	93.34	%	0.935				1.00%
Ag 328.068*†	-288.7	-0.0017	mg/L	0.00027	-0.0798	mg/kg	0.01292	16.20%
Al 308.215*†	1226225.3	77.57	mg/L	0.317	3712	mg/kg	15.16	0.41%
As 188.979†	22.4	0.0122	mg/L	0.00043	0.5858	mg/kg	0.02080	3.55%
As 193.696*†	7.7	0.0060	mg/L	0.00845	0.2872	mg/kg	0.40418	140.75%
B 249.677*†	-30.5	-0.0007	mg/L	0.00083	-0.0318	mg/kg	0.03957	124.64%
Ba 233.527*†	119515.4	0.9051	mg/L	0.00330	43.31	mg/kg	0.158	0.36%
Be 313.042*†	6302.6	0.0020	mg/L	0.00002	0.0934	mg/kg	0.00087	0.94%
Ca 317.933*†	82049.4	47.19	mg/L	0.829	2258	mg/kg	39.68	1.76%
Cd 226.502*†	221.2	0.0032	mg/L	0.00050	0.1533	mg/kg	0.02370	15.46%
Cd 228.802†	-5.0	-0.0001	mg/L	0.00004	-0.0069	mg/kg	0.00206	29.68%
Co 228.616*†	1658.2	0.0661	mg/L	0.00013	3.163	mg/kg	0.0060	0.19%
Cr 267.716*†	6959.6	0.0680	mg/L	0.00035	3.252	mg/kg	0.0170	0.52%
Cu 324.752*†	24656.3	0.1082	mg/L	0.00067	5.177	mg/kg	0.0322	0.62%
Fe 273.955*†	2573859.8	121.8	mg/L	1.17	5827	mg/kg	56.15	0.96%
K 766.490*†	56962.3	20.66	mg/L	0.379	988.7	mg/kg	18.11	1.83%
Mg 279.077*†	669466.1	39.55	mg/L	0.419	1892	mg/kg	20.05	1.06%
Mn 257.610*†	1613095.0	2.917	mg/L	0.0250	139.6	mg/kg	1.20	0.86%
Mo 202.031*†	56.8	0.0068	mg/L	0.00023	0.3238	mg/kg	0.01083	3.35%
Na 589.592*†	11532.3	2.850	mg/L	0.0539	136.3	mg/kg	2.58	1.89%
Ni 231.604*†	1038.6	0.0478	mg/L	0.00088	2.286	mg/kg	0.0419	1.83%
P 213.617*†	19430.5	11.32	mg/L	0.019	541.4	mg/kg	0.90	0.17%
P 214.914†	13098.5	11.86	mg/L	0.038	567.3	mg/kg	1.83	0.32%
Pb 220.353*†	148.6	0.0208	mg/L	0.00120	0.9962	mg/kg	0.05755	5.78%
Sb 206.836†	-0.1	-0.0000	mg/L	0.00207	-0.0022	mg/kg	0.09892	>999.9%
Sb 217.582*†	-1.4	-0.0008	mg/L	0.00117	-0.0389	mg/kg	0.05590	143.83%
Se 196.026*†	-13.3	-0.0070	mg/L	0.01037	-0.3339	mg/kg	0.49629	148.66%
Si 251.611*†	308726.5	8.845	mg/L	0.0602	423.2	mg/kg	2.88	0.68%
Sn 189.927*†	-164.8	-0.0307	mg/L	0.00244	-1.469	mg/kg	0.1166	7.94%
Sn 242.170†	550.7	0.3494	mg/L	0.02544	16.72	mg/kg	1.217	7.28%
Sr 407.771*†	149710.1	0.5081	mg/L	0.00836	24.31	mg/kg	0.400	1.65%
Ti 334.940†	4935219.2	6.805	mg/L	0.0096	325.6	mg/kg	0.46	0.14%
Ti 336.121*†	3519608.9	6.650	mg/L	0.0086	318.2	mg/kg	0.41	0.13%
Tl 190.801*†	-21.2	-0.0130	mg/L	0.00156	-0.6219	mg/kg	0.07468	12.01%
V 292.402*†	22957.8	0.1828	mg/L	0.00349	8.744	mg/kg	0.1671	1.91%
Zn 206.200*†	14185.7	0.3859	mg/L	0.00176	18.46	mg/kg	0.084	0.46%

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EPA 6010B ICP Metals

(Solid)

Quality Control

Method Blank
LCS/LCSD
MS/MSD
PDS/PDSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 6010B

MB SAMPLE ID: **097-01-002-24425**
MB BATCH ID: 170308L01
INSTRUMENT: ICP 7300
EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-08 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-08 14:17
REVIEWED BY:
D/T REVIEWED:
MATRIX: Soil

DATA FILE: W:\ICP-DATA\170308C1\170308-b-01__174.icp

CLIENT WORK ORDER: **17-03-0336**

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
3		D-DU2-S-SG-05-13S	2017-03-08 14:30	W:\ICP-DATA\170308C1\17-03-0336-3.icp
4		D-DU2-S-SG-05-25S	2017-03-08 14:30	W:\ICP-DATA\170308C1\17-03-0336-4.icp

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RAW DATA SHEET
FOR METHOD: EPA 6010B

WORK ORDER: **097-01-002**
INSTRUMENT: ICP 7300
EXTRACTION : EPA 3050B
D/T EXTRACTED: 2017-03-08 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-08 14:17
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170308C1\170308-b-01__174.icp

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 170308L01
MS/MSD BATCH:
UNITS: mg/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 2.00 g / ACTUAL: 2.00 g
FINAL VOLUME / WEIGHT: DEFAULT: 100.00 ml / ACTUAL: 100.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Antimony	-0.000899	0.966	ND	0.725	
Arsenic	0.00452	0.966	ND	0.725	
Barium	-0.000283	0.966	ND	0.483	
Beryllium	-0.0000424	0.966	ND	0.242	
Cadmium	-0.0000319	0.966	ND	0.483	
Chromium	0.000451	0.966	ND	0.242	
Cobalt	0.000342	0.966	ND	0.242	
Copper	-0.000537	0.966	ND	0.483	
Lead	-0.00366	0.966	ND	0.483	
Molybdenum	-0.000196	0.966	ND	0.242	
Nickel	0.000141	0.966	ND	0.242	
Selenium	-0.00254	0.966	ND	0.725	
Silver	-0.000169	0.966	ND	0.242	
Thallium	-0.00763	0.966	ND	0.725	
Vanadium	-0.00201	0.966	ND	0.242	
Zinc	-0.000904	0.966	ND	0.966	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID: **097-01-002-24425**
LCS/MB BATCH ID: 170308L01
INSTRUMENT: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED: 2017-03-08 00:00

ANALYZED BY: 935
D/T ANALYZED: 2017-03-08 14:18
REVIEWED BY:
D/T REVIEWED:

DATA FILE: W:\ICP-DATA\170308C1\170308-I-01__175.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Antimony	25.00	22.68	91	80-120	73-127	PASS	
Arsenic	25.00	23.32	93	80-120	73-127	PASS	
Barium	25.00	24.77	99	80-120	73-127	PASS	
Beryllium	25.00	22.82	91	80-120	73-127	PASS	
Cadmium	25.00	23.76	95	80-120	73-127	PASS	
Chromium	25.00	24.07	96	80-120	73-127	PASS	
Cobalt	25.00	24.74	99	80-120	73-127	PASS	
Copper	25.00	24.04	96	80-120	73-127	PASS	
Lead	25.00	24.64	99	80-120	73-127	PASS	
Molybdenum	25.00	23.60	94	80-120	73-127	PASS	
Nickel	25.00	23.88	96	80-120	73-127	PASS	
Phosphorus	25.00	23.24	93	80-120	73-127	PASS	
Selenium	25.00	23.10	92	80-120	73-127	PASS	
Silver	12.50	11.16	89	80-120	73-127	PASS	
Thallium	25.00	24.03	96	80-120	73-127	PASS	
Vanadium	25.00	22.79	91	80-120	73-127	PASS	
Zinc	25.00	23.94	96	80-120	73-127	PASS	
Aluminum	25.00	24.13	97	80-120	73-127	PASS	
Calcium	25.00	23.62	94	80-120	73-127	PASS	
Iron	25.00	24.21	97	80-120	73-127	PASS	
Magnesium	25.00	23.89	96	80-120	73-127	PASS	
Manganese	25.00	24.60	98	80-120	73-127	PASS	
Potassium	250.0	204.8	82	80-120	73-127	PASS	
Sodium	250.0	225.7	90	80-120	73-127	PASS	
Strontium	25.00	22.98	92	80-120	73-127	PASS	
Tin	25.00	24.10	96	80-120	73-127	PASS	
Titanium	25.00	23.08	92	80-120	73-127	PASS	
Boron	25.00	21.29	85	80-120	73-127	PASS	
Silicon	25.00	23.17	93	80-120	73-127	PASS	

Compounds listed in bold are required to be reported.

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

LCS SAMPLE ID:	**097-01-002-24425**	EXTRACTION:	EPA 3050B	ANALYZED BY:	935
LCS/MB BATCH ID:	170308L01	D/T EXTRACTED:	2017-03-08 00:00	D/T ANALYZED:	2017-03-08 14:18
INSTRUMENT:	ICP 7300			REVIEWED BY:	
				D/T REVIEWED:	

DATA FILE: W:\ICP-DATA\170308C1\170308-I-01__175.icp

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS

Total number of LCS compounds: 29
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Compounds listed in bold are required to be reported.

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: **17-03-0335-3**
MS/MSD BATCH: 170308S01
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-08 00:00
MS: 2017-03-08 00:00
MSD: 2017-03-08 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-08 14:19
MS: 2017-03-08 14:20
MSD: 2017-03-08 14:21
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Antimony	**ND**	**0.5000**	**25.00**	**13.82**	**55**	**11.26**	**45**	**50-115**	**20**	**0-20**	**FAIL**	**3G**
Arsenic	ND	0.5000	25.00	27.61	110	27.06	108	75-125	2	0-20	PASS	
Barium	**51.72**	**0.5000**	**25.00**	**85.01**	**133**	**90.08**	**153**	**75-125**	**6**	**0-20**	**FAIL**	**3F**
Beryllium	ND	0.5000	25.00	27.97	112	26.73	107	75-125	5	0-20	PASS	
Cadmium	ND	0.5000	25.00	27.52	110	26.05	104	75-125	5	0-20	PASS	
Chromium	3.748	0.5000	25.00	31.35	110	30.09	105	75-125	4	0-20	PASS	
Cobalt	3.869	0.5000	25.00	31.23	109	30.13	105	75-125	4	0-20	PASS	
Copper	6.462	0.5000	25.00	34.33	111	34.55	112	75-125	1	0-20	PASS	
Lead	1.497	0.5000	25.00	29.61	112	28.13	107	75-125	5	0-20	PASS	
Molybdenum	ND	0.5000	25.00	26.76	107	25.49	102	75-125	5	0-20	PASS	
Nickel	3.161	0.5000	25.00	30.15	108	28.97	103	75-125	4	0-20	PASS	
Phosphorus	458.0	0.5000	25.00	532.4	4x	588.1	4x	75-125	4x	0-20	PASS	Q
Selenium	ND	0.5000	25.00	27.48	110	26.23	105	75-125	5	0-20	PASS	
Silver	ND	0.2500	12.50	13.37	107	12.41	99	75-125	7	0-20	PASS	
Thallium	ND	0.5000	25.00	26.54	106	24.78	99	75-125	7	0-20	PASS	
Vanadium	12.40	0.5000	25.00	40.93	114	38.73	105	75-125	6	0-20	PASS	
Zinc	23.37	0.5000	25.00	52.53	117	50.65	109	75-125	4	0-20	PASS	
Aluminum	4743	0.5000	25.00	5258	4x	5794	4x	75-125	4x	0-20	PASS	Q
Calcium	2440	0.5000	25.00	2642	4x	3094	4x	75-125	4x	0-20	PASS	Q
Iron	6773	0.5000	25.00	7723	4x	7381	4x	75-125	4x	0-20	PASS	Q
Magnesium	2368	0.5000	25.00	2625	4x	2562	4x	75-125	4x	0-20	PASS	Q
Manganese	146.1	0.5000	25.00	182.8	4x	169.5	4x	75-125	4x	0-20	PASS	Q
Potassium	1397	5.000	250.0	1779	4x	1774	4x	75-125	4x	0-20	PASS	Q
Sodium	**168.9**	**5.000**	**250.0**	**445.8**	**111**	**545.5**	**151**	**75-125**	**20**	**0-20**	**FAIL**	**3F**
Strontium	**22.56**	**0.5000**	**25.00**	**51.46**	**116**	**68.08**	**182**	**75-125**	**28**	**0-20**	**FAIL**	**34F**
Tin	ND	0.5000	25.00	23.91	96	23.14	93	75-125	3	0-20	PASS	
Titanium	448.3	0.5000	25.00	548.4	4x	526.5	4x	75-125	4x	0-20	PASS	Q
Boron	ND	0.5000	25.00	26.29	105	24.42	98	75-125	7	0-20	PASS	

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 6010B

SPIKED SAMPLE ID: **17-03-0335-3**
MS/MSD BATCH: 170308S01
INSTRUMENTS:
SAMPLE: ICP 7300
MS: ICP 7300
MSD: ICP 7300

EXTRACTION: EPA 3050B
D/T EXTRACTED:
SAMPLE: 2017-03-08 00:00
MS: 2017-03-08 00:00
MSD: 2017-03-08 00:00

ANALYZED BY: 935
D/T ANALYZED:
SAMPLE: 2017-03-08 14:19
MS: 2017-03-08 14:20
MSD: 2017-03-08 14:21
REVIEWED BY:
D/T REVIEWED:

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Silicon	343.0	0.5000	25.00	522.2	4x	503.0	4x	75-125	4x	0-20	PASS	Q

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-0335-3 ms.icp	W:\ICP-DATA\170308C1\
MSD	17-03-0335-3 msd.icp	W:\ICP-DATA\170308C1\

Sequence No.: 1
Sample ID: 170308-b-01
Analyst: 935 icp 7300
Initial Sample Wt: 2.07 g
Dilution:
Wash Time:

Autosampler Location: 218
Date Collected: 3/8/2017 2:17:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL

Mean Data: 170308-b-01

Analyte	Mean Corrected Intensity	Conc.	Calib. Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	69853.5	98.93	%	1.058				1.07%
Tb 350	110481.1	100.3	%	1.24				1.23%
Ag 328.068*†	-29.3	-0.0002	mg/L	0.00038	-0.0082	mg/kg	0.01846	225.66%
Al 308.215*†	-144.2	-0.0091	mg/L	0.00106	-0.4408	mg/kg	0.05108	11.59%
As 188.979†	-3.4	-0.0019	mg/L	0.00481	-0.0898	mg/kg	0.23247	258.96%
As 193.696*†	5.8	0.0045	mg/L	0.00031	0.2183	mg/kg	0.01501	6.88%
B 249.677*†	445.2	0.0097	mg/L	0.00192	0.4684	mg/kg	0.09287	19.82%
Ba 233.527*†	-37.4	-0.0003	mg/L	0.00023	-0.0137	mg/kg	0.01121	81.91%
Be 313.042*†	-136.9	-0.0000	mg/L	0.00002	-0.0020	mg/kg	0.00093	45.52%
Ca 317.933*†	12.6	0.0073	mg/L	0.00250	0.3507	mg/kg	0.12092	34.48%
Cd 226.502*†	-2.2	-0.0000	mg/L	0.00016	-0.0015	mg/kg	0.00779	506.54%
Cd 228.802†	-0.1	-0.0000	mg/L	0.00022	-0.0002	mg/kg	0.01062	>999.9%
Co 228.616*†	8.6	0.0003	mg/L	0.00027	0.0165	mg/kg	0.01284	77.67%
Cr 267.716*†	46.2	0.0005	mg/L	0.00050	0.0218	mg/kg	0.02430	111.54%
Cu 324.752*†	-122.4	-0.0005	mg/L	0.00048	-0.0259	mg/kg	0.02297	88.51%
Fe 273.955*†	56.9	0.0027	mg/L	0.00023	0.1302	mg/kg	0.01093	8.40%
K 766.490*†	-212.1	-0.0769	mg/L	0.11601	-3.717	mg/kg	5.6043	150.79%
Mg 279.077*†	-74.1	-0.0044	mg/L	0.01784	-0.2116	mg/kg	0.86201	407.45%
Mn 257.610*†	-1852.2	-0.0033	mg/L	0.00005	-0.1618	mg/kg	0.00258	1.59%
Mo 202.031*†	-1.6	-0.0002	mg/L	0.00083	-0.0095	mg/kg	0.04005	422.43%
Na 589.592*†	483.9	0.1196	mg/L	0.02213	5.776	mg/kg	1.0691	18.51%
Ni 231.604*†	3.1	0.0001	mg/L	0.00052	0.0068	mg/kg	0.02496	367.39%
P 213.617*†	-41.3	-0.0240	mg/L	0.00528	-1.161	mg/kg	0.2553	21.99%
P 214.914†	-1.2	-0.0011	mg/L	0.01034	-0.0539	mg/kg	0.49960	926.77%
Pb 220.353*†	-26.1	-0.0037	mg/L	0.00088	-0.1766	mg/kg	0.04253	24.08%
Sb 206.836†	-0.6	-0.0004	mg/L	0.00600	-0.0181	mg/kg	0.28972	>999.9%
Sb 217.582*†	-1.5	-0.0009	mg/L	0.00386	-0.0434	mg/kg	0.18652	429.53%
Se 196.026*†	-4.9	-0.0025	mg/L	0.00501	-0.1226	mg/kg	0.24188	197.23%
Si 251.611*†	720.5	0.0206	mg/L	0.01119	0.9972	mg/kg	0.54075	54.22%
Sn 189.927*†	0.3	0.0000	mg/L	0.00085	0.0024	mg/kg	0.04120	>999.9%
Sn 242.170†	-15.7	-0.0099	mg/L	0.01674	-0.4802	mg/kg	0.80881	168.43%
Sr 407.771*†	-6.9	-0.0000	mg/L	0.00004	-0.0011	mg/kg	0.00215	190.37%
Ti 334.940†	-181.4	-0.0003	mg/L	0.00004	-0.0121	mg/kg	0.00192	15.93%
Ti 336.121*†	236.9	0.0004	mg/L	0.00025	0.0216	mg/kg	0.01199	55.47%
Tl 190.801*†	-12.4	-0.0076	mg/L	0.00126	-0.3685	mg/kg	0.06072	16.48%
V 292.402*†	-249.6	-0.0020	mg/L	0.00051	-0.0970	mg/kg	0.02459	25.34%
Zn 206.200*†	-33.2	-0.0009	mg/L	0.00022	-0.0437	mg/kg	0.01073	24.57%

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Sequence No.: 2
Sample ID: 170308-1-01
Analyst: 935 icp 7300
Initial Sample Wt: 2.07 g
Dilution:
Wash Time: 15

Autosampler Location: 219
Date Collected: 3/8/2017 2:18:59 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 170308-1-01

Analyte	Mean Corrected Intensity	Calib. Conc.	Calib. Units	Std.Dev.	Sample Conc.	Sample Units	Std.Dev.	RSD
Tb 384	66929.3	94.79	%	1.072				1.13%
Tb 350	108667.1	98.60	%	0.298				0.30%
Ag 328.068*†	40007.9	0.2311	mg/L	0.00090	11.16	mg/kg	0.044	0.39%
Al 308.215*†	7894.8	0.4994	mg/L	0.00186	24.13	mg/kg	0.090	0.37%
As 188.979†	876.8	0.4797	mg/L	0.00344	23.17	mg/kg	0.166	0.72%
As 193.696*†	616.7	0.4827	mg/L	0.00987	23.32	mg/kg	0.477	2.05%
B 249.677*†	20228.4	0.4406	mg/L	0.00065	21.29	mg/kg	0.031	0.15%
Ba 233.527*†	67692.2	0.5127	mg/L	0.00027	24.77	mg/kg	0.013	0.05%
Be 313.042*†	1525665.1	0.4724	mg/L	0.00874	22.82	mg/kg	0.422	1.85%
Ca 317.933*†	850.2	0.4890	mg/L	0.03210	23.62	mg/kg	1.551	6.56%
Cd 226.502*†	33946.6	0.4918	mg/L	0.00379	23.76	mg/kg	0.183	0.77%
Cd 228.802†	16978.1	0.4874	mg/L	0.00093	23.55	mg/kg	0.045	0.19%
Co 228.616*†	12843.2	0.5121	mg/L	0.00258	24.74	mg/kg	0.125	0.50%
Cr 267.716*†	51015.8	0.4982	mg/L	0.00214	24.07	mg/kg	0.104	0.43%
Cu 324.752*†	113387.5	0.4976	mg/L	0.00021	24.04	mg/kg	0.010	0.04%
Fe 273.955*†	10589.9	0.5011	mg/L	0.00576	24.21	mg/kg	0.278	1.15%
K 766.490*†	11685.0	4.239	mg/L	0.0583	204.8	mg/kg	2.82	1.38%
Mg 279.077*†	8372.1	0.4946	mg/L	0.00506	23.89	mg/kg	0.244	1.02%
Mn 257.610*†	281596.5	0.5092	mg/L	0.00240	24.60	mg/kg	0.116	0.47%
Mo 202.031*†	4098.2	0.4886	mg/L	0.00225	23.60	mg/kg	0.109	0.46%
Na 589.592*†	18908.2	4.672	mg/L	0.1383	225.7	mg/kg	6.68	2.96%
Ni 231.604*†	10744.2	0.4943	mg/L	0.00319	23.88	mg/kg	0.154	0.65%
P 213.617*†	825.9	0.4810	mg/L	0.01585	23.24	mg/kg	0.766	3.29%
P 214.914†	509.3	0.4611	mg/L	0.01263	22.27	mg/kg	0.610	2.74%
Pb 220.353*†	3640.2	0.5100	mg/L	0.00084	24.64	mg/kg	0.041	0.16%
Sb 206.836†	806.0	0.4798	mg/L	0.00124	23.18	mg/kg	0.060	0.26%
Sb 217.582*†	790.5	0.4694	mg/L	0.00536	22.68	mg/kg	0.259	1.14%
Se 196.026*†	914.6	0.4782	mg/L	0.00275	23.10	mg/kg	0.133	0.58%
Si 251.611*†	16742.1	0.4797	mg/L	0.00263	23.17	mg/kg	0.127	0.55%
Sn 189.927*†	2677.6	0.4989	mg/L	0.00031	24.10	mg/kg	0.015	0.06%
Sn 242.170†	746.5	0.4736	mg/L	0.00723	22.88	mg/kg	0.349	1.53%
Sr 407.771*†	140148.3	0.4757	mg/L	0.01328	22.98	mg/kg	0.641	2.79%
Ti 334.940†	350456.5	0.4832	mg/L	0.01445	23.35	mg/kg	0.698	2.99%
Ti 336.121*†	252919.7	0.4779	mg/L	0.00025	23.08	mg/kg	0.012	0.05%
Tl 190.801*†	811.6	0.4974	mg/L	0.00079	24.03	mg/kg	0.038	0.16%
V 292.402*†	58633.6	0.4718	mg/L	0.00346	22.79	mg/kg	0.167	0.73%
Zn 206.200*†	18215.7	0.4955	mg/L	0.00034	23.94	mg/kg	0.017	0.07%

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Sequence No.: 4
Sample ID: 17-03-0335-3 ms
Analyst: 935 icp 7300
Initial Sample Wt: 2.01 g
Dilution:
Wash Time: 15

Autosampler Location: 221
Date Collected: 3/8/2017 2:20:41 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0335-3 ms

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	54060.5	76.56	%	1.718				2.24%
Tb 350	99360.9	90.16	%	3.644				4.04%
Ag 328.068*†	46520.5	0.2687	mg/L	0.00125	13.37	mg/kg	0.062	0.47%
Al 308.215*†	1670508.6	105.7	mg/L	0.22	5258	mg/kg	11.00	0.21%
As 188.979†	1054.3	0.5768	mg/L	0.00746	28.70	mg/kg	0.371	1.29%
As 193.696*†	709.0	0.5549	mg/L	0.00750	27.61	mg/kg	0.373	1.35%
B 249.677*†	24259.5	0.5284	mg/L	0.00959	26.29	mg/kg	0.477	1.81%
Ba 233.527*†	225626.3	1.709	mg/L	0.0123	85.01	mg/kg	0.612	0.72%
Be 313.042*†	1815966.1	0.5623	mg/L	0.00022	27.97	mg/kg	0.011	0.04%
Ca 317.933*†	92337.5	53.11	mg/L	0.732	2642	mg/kg	36.43	1.38%
Cd 226.502*†	38188.5	0.5532	mg/L	0.00644	27.52	mg/kg	0.320	1.16%
Cd 228.802†	19039.0	0.5466	mg/L	0.02046	27.19	mg/kg	1.018	3.74%
Co 228.616*†	15745.9	0.6278	mg/L	0.02261	31.23	mg/kg	1.125	3.60%
Cr 267.716*†	64533.1	0.6302	mg/L	0.00058	31.35	mg/kg	0.029	0.09%
Cu 324.752*†	157229.5	0.6900	mg/L	0.00135	34.33	mg/kg	0.067	0.20%
Fe 273.955*†	3280972.8	155.2	mg/L	9.15	7723	mg/kg	455.06	5.89%
K 766.490*†	98580.0	35.76	mg/L	0.377	1779	mg/kg	18.77	1.05%
Mg 279.077*†	893109.5	52.76	mg/L	0.635	2625	mg/kg	31.57	1.20%
Mn 257.610*†	2032408.8	3.675	mg/L	0.0184	182.8	mg/kg	0.92	0.50%
Mo 202.031*†	4510.9	0.5378	mg/L	0.01838	26.76	mg/kg	0.914	3.42%
Na 589.592*†	36264.9	8.961	mg/L	0.0218	445.8	mg/kg	1.09	0.24%
Ni 231.604*†	13170.4	0.6059	mg/L	0.02424	30.15	mg/kg	1.206	4.00%
P 213.617*†	18373.1	10.70	mg/L	0.404	532.4	mg/kg	20.09	3.77%
P 214.914†	12383.1	11.21	mg/L	0.381	557.7	mg/kg	18.94	3.40%
Pb 220.353*†	4247.7	0.5951	mg/L	0.02470	29.61	mg/kg	1.229	4.15%
Sb 206.836†	456.7	0.2719	mg/L	0.01537	13.53	mg/kg	0.765	5.65%
Sb 217.582*†	467.7	0.2777	mg/L	0.01335	13.82	mg/kg	0.664	4.81%
Se 196.026*†	1056.4	0.5523	mg/L	0.01531	27.48	mg/kg	0.762	2.77%
Si 251.611*†	366395.4	10.50	mg/L	0.075	522.2	mg/kg	3.74	0.72%
Sn 189.927*†	2579.7	0.4806	mg/L	0.01412	23.91	mg/kg	0.703	2.94%
Sn 242.170†	1536.5	0.9748	mg/L	0.02813	48.50	mg/kg	1.399	2.89%
Sr 407.771*†	304771.6	1.034	mg/L	0.0042	51.46	mg/kg	0.211	0.41%
Ti 334.940†	8183859.8	11.28	mg/L	0.632	561.4	mg/kg	31.46	5.60%
Ti 336.121*†	5833741.1	11.02	mg/L	0.620	548.4	mg/kg	30.84	5.62%
Tl 190.801*†	870.6	0.5335	mg/L	0.01356	26.54	mg/kg	0.675	2.54%
V 292.402*†	102549.0	0.8227	mg/L	0.00184	40.93	mg/kg	0.092	0.22%
Zn 206.200*†	38811.9	1.056	mg/L	0.0101	52.53	mg/kg	0.503	0.96%

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Sequence No.: 5
Sample ID: 17-03-0335-3 msd
Analyst: 935 icp 7300
Initial Sample Wt: 2.02 g
Dilution:
Wash Time: 15

Autosampler Location: 222
Date Collected: 3/8/2017 2:21:32 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0335-3 msd

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	53575.5	75.88	%	0.157				0.21%
Tb 350	98527.5	89.40	%	0.717				0.80%
Ag 328.068*†	43394.3	0.2506	mg/L	0.00119	12.41	mg/kg	0.059	0.47%
Al 308.215*†	1849973.8	117.0	mg/L	0.29	5794	mg/kg	14.29	0.25%
As 188.979†	1001.7	0.5480	mg/L	0.00087	27.13	mg/kg	0.043	0.16%
As 193.696*†	698.3	0.5466	mg/L	0.00085	27.06	mg/kg	0.042	0.16%
B 249.677*†	22645.1	0.4933	mg/L	0.00413	24.42	mg/kg	0.205	0.84%
Ba 233.527*†	240270.8	1.820	mg/L	0.0068	90.08	mg/kg	0.339	0.38%
Be 313.042*†	1743515.2	0.5398	mg/L	0.00030	26.73	mg/kg	0.015	0.06%
Ca 317.933*†	108656.2	62.49	mg/L	4.593	3094	mg/kg	227.36	7.35%
Cd 226.502*†	36331.3	0.5263	mg/L	0.00086	26.05	mg/kg	0.042	0.16%
Cd 228.802†	18417.7	0.5288	mg/L	0.00836	26.18	mg/kg	0.414	1.58%
Co 228.616*†	15263.4	0.6086	mg/L	0.00923	30.13	mg/kg	0.457	1.52%
Cr 267.716*†	62237.6	0.6078	mg/L	0.00082	30.09	mg/kg	0.041	0.14%
Cu 324.752*†	159028.2	0.6979	mg/L	0.00005	34.55	mg/kg	0.003	0.01%
Fe 273.955*†	3151125.3	149.1	mg/L	2.60	7381	mg/kg	128.55	1.74%
K 766.490*†	98767.8	35.83	mg/L	2.099	1774	mg/kg	103.89	5.86%
Mg 279.077*†	876076.9	51.76	mg/L	0.008	2562	mg/kg	0.40	0.02%
Mn 257.610*†	1893100.8	3.423	mg/L	0.0032	169.5	mg/kg	0.16	0.09%
Mo 202.031*†	4318.1	0.5148	mg/L	0.00688	25.49	mg/kg	0.341	1.34%
Na 589.592*†	44590.0	11.02	mg/L	0.613	545.5	mg/kg	30.36	5.57%
Ni 231.604*†	12719.9	0.5852	mg/L	0.00817	28.97	mg/kg	0.404	1.40%
P 213.617*†	20399.6	11.88	mg/L	0.165	588.1	mg/kg	8.18	1.39%
P 214.914†	13750.5	12.45	mg/L	0.200	616.2	mg/kg	9.88	1.60%
Pb 220.353*†	4056.4	0.5683	mg/L	0.01173	28.13	mg/kg	0.581	2.06%
Sb 206.836†	387.3	0.2306	mg/L	0.00422	11.41	mg/kg	0.209	1.83%
Sb 217.582*†	383.1	0.2275	mg/L	0.00404	11.26	mg/kg	0.200	1.78%
Se 196.026*†	1013.4	0.5298	mg/L	0.00142	26.23	mg/kg	0.071	0.27%
Si 251.611*†	354648.4	10.16	mg/L	0.005	503.0	mg/kg	0.25	0.05%
Sn 189.927*†	2508.7	0.4674	mg/L	0.00520	23.14	mg/kg	0.257	1.11%
Sn 242.170†	1450.5	0.9202	mg/L	0.02846	45.56	mg/kg	1.409	3.09%
Sr 407.771*†	405192.9	1.375	mg/L	0.0749	68.08	mg/kg	3.709	5.45%
Ti 334.940†	7893278.5	10.88	mg/L	0.182	538.8	mg/kg	9.03	1.68%
Ti 336.121*†	5629176.1	10.64	mg/L	0.172	526.5	mg/kg	8.50	1.62%
Tl 190.801*†	816.8	0.5005	mg/L	0.00186	24.78	mg/kg	0.092	0.37%
V 292.402*†	97526.9	0.7824	mg/L	0.00131	38.73	mg/kg	0.065	0.17%
Zn 206.200*†	37609.5	1.023	mg/L	0.0150	50.65	mg/kg	0.742	1.46%

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Sequence No.: 3
Sample ID: 17-03-0335-3
Analyst: 935 icp 7300
Initial Sample Wt: 2.06 g
Dilution:
Wash Time: 15

Autosampler Location: 220
Date Collected: 3/8/2017 2:19:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Mean Data: 17-03-0335-3

Analyte	Mean Corrected Intensity	Calib. Conc.	Units	Std.Dev.	Sample Conc.	Units	Std.Dev.	RSD
Tb 384	54902.7	77.76	%	2.776				3.57%
Tb 350	100795.5	91.46	%	2.879				3.15%
Ag 328.068*†	-358.7	-0.0021	mg/L	0.00086	-0.1006	mg/kg	0.04187	41.63%
Al 308.215*†	1544664.5	97.72	mg/L	2.347	4743	mg/kg	113.95	2.40%
As 188.979†	38.7	0.0212	mg/L	0.00261	1.028	mg/kg	0.1265	12.31%
As 193.696*†	13.8	0.0108	mg/L	0.00929	0.5232	mg/kg	0.45114	86.22%
B 249.677*†	253.2	0.0055	mg/L	0.00012	0.2677	mg/kg	0.00587	2.19%
Ba 233.527*†	140681.2	1.065	mg/L	0.0025	51.72	mg/kg	0.120	0.23%
Be 313.042*†	9662.0	0.0030	mg/L	0.00002	0.1452	mg/kg	0.00075	0.52%
Ca 317.933*†	87378.9	50.25	mg/L	1.418	2440	mg/kg	68.85	2.82%
Cd 226.502*†	290.4	0.0042	mg/L	0.00001	0.2042	mg/kg	0.00048	0.24%
Cd 228.802†	8.9	0.0003	mg/L	0.00038	0.0124	mg/kg	0.01828	147.89%
Co 228.616*†	1999.2	0.0797	mg/L	0.00218	3.869	mg/kg	0.1058	2.73%
Cr 267.716*†	7905.7	0.0772	mg/L	0.00235	3.748	mg/kg	0.1141	3.05%
Cu 324.752*†	30332.6	0.1331	mg/L	0.00064	6.462	mg/kg	0.0309	0.48%
Fe 273.955*†	2948842.4	139.5	mg/L	3.16	6773	mg/kg	153.25	2.26%
K 766.490*†	79314.6	28.77	mg/L	1.034	1397	mg/kg	50.20	3.59%
Mg 279.077*†	825710.6	48.78	mg/L	1.154	2368	mg/kg	56.01	2.37%
Mn 257.610*†	1663873.1	3.009	mg/L	0.0729	146.1	mg/kg	3.54	2.42%
Mo 202.031*†	4.8	0.0006	mg/L	0.00120	0.0276	mg/kg	0.05838	211.86%
Na 589.592*†	14081.9	3.480	mg/L	0.1404	168.9	mg/kg	6.82	4.03%
Ni 231.604*†	1415.3	0.0651	mg/L	0.00198	3.161	mg/kg	0.0963	3.05%
P 213.617*†	16200.4	9.435	mg/L	0.2969	458.0	mg/kg	14.41	3.15%
P 214.914†	10980.2	9.940	mg/L	0.2802	482.5	mg/kg	13.60	2.82%
Pb 220.353*†	220.2	0.0308	mg/L	0.00192	1.497	mg/kg	0.0932	6.23%
Sb 206.836†	6.4	0.0038	mg/L	0.00183	0.1850	mg/kg	0.08885	48.03%
Sb 217.582*†	2.0	0.0012	mg/L	0.00218	0.0571	mg/kg	0.10595	185.67%
Se 196.026*†	-27.3	-0.0143	mg/L	0.00093	-0.6932	mg/kg	0.04516	6.52%
Si 251.611*†	246629.5	7.066	mg/L	0.0069	343.0	mg/kg	0.34	0.10%
Sn 189.927*†	-271.6	-0.0506	mg/L	0.00509	-2.456	mg/kg	0.2472	10.06%
Sn 242.170†	639.1	0.4054	mg/L	0.01197	19.68	mg/kg	0.581	2.95%
Sr 407.771*†	136925.7	0.4647	mg/L	0.01538	22.56	mg/kg	0.747	3.31%
Ti 334.940†	6842060.5	9.435	mg/L	0.2471	458.0	mg/kg	11.99	2.62%
Ti 336.121*†	4887848.9	9.235	mg/L	0.2256	448.3	mg/kg	10.95	2.44%
Tl 190.801*†	-12.1	-0.0074	mg/L	0.00580	-0.3593	mg/kg	0.28140	78.32%
V 292.402*†	32031.8	0.2555	mg/L	0.00218	12.40	mg/kg	0.106	0.85%
Zn 206.200*†	17699.8	0.4815	mg/L	0.01426	23.37	mg/kg	0.692	2.96%

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EPA 6010B ICP Metals (Solid)

Run Logs

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170308C1

M006-032-05 0.050 ml

INT STD M120716A PDS/PDSD 10 ml

R.B. R12091602 M006-032-06 0.050 ml

Carrier/wash sol R12091604/R12091603

No.	File Name	Date	Time	Analyst Name	A/S Location
1	Cal blankR12091601_935	3/8/2017	10:27:03 AM	935 icp 7300	1
2	STD3-M111116A_935_ICP7300	3/8/2017	10:28:10 AM	935 icp 7300	2
3	ICV-M072816C	3/8/2017	10:29:06 AM	935 icp 7300	10
4	ICB-R12091601	3/8/2017	10:31:37 AM	935 icp 7300	1
5	ICS_A - M110116B	3/8/2017	10:32:40 AM	935 icp 7300	8
6	ICS_AB - M110116A	3/8/2017	10:33:31 AM	935 icp 7300	9
7	CCV= STD3x0.5	3/8/2017	10:34:21 AM	935 icp 7300	3
8	CCB-R12091601	3/8/2017	10:35:13 AM	935 icp 7300	1
9	LLCV-M082616A	3/8/2017	10:36:05 AM	935 icp 7300	459
10	LLCV--M082616A	3/8/2017	10:37:11 AM	935 icp 7300	460
11	170307-b-03	3/8/2017	10:38:10 AM	935 icp 7300	104
12	170307-l-03	3/8/2017	10:39:11 AM	935 icp 7300	105
13	17-03-0457x5-1	3/8/2017	10:40:02 AM	935 icp 7300	106
14	17-03-0457-1	3/8/2017	10:40:51 AM	935 icp 7300	107
15	17-03-0457-1 ms	3/8/2017	10:41:42 AM	935 icp 7300	108
16	17-03-0457-1 msd	3/8/2017	10:42:33 AM	935 icp 7300	109
17	17-03-0457-1 pds	3/8/2017	10:43:25 AM	935 icp 7300	110
18	17-03-0457-2	3/8/2017	10:44:16 AM	935 icp 7300	111
19	CCV= STD3x0.5	3/8/2017	10:45:07 AM	935 icp 7300	3
20	CCB-R12091601	3/8/2017	10:46:00 AM	935 icp 7300	1
21	17-03-0457-3	3/8/2017	10:47:01 AM	935 icp 7300	112
22	17-03-0457-4	3/8/2017	10:47:55 AM	935 icp 7300	113
23	17-03-0457-5	3/8/2017	10:48:46 AM	935 icp 7300	114
24	17-03-0458x5-1	3/8/2017	10:49:37 AM	935 icp 7300	115

B, Mn out

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Reviewed/Assign to Logbook Date: 3/9/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 10 Instrument ID: ICP7

No.	File Name	Date	Time	Analyst Name	A/S Location
153	170303-ba-7	3/8/2017	1:57:31 PM	935 icp 7300	201
154	170303-la-1	3/8/2017	1:58:36 PM	935 icp 7300	202
155	17-02-1890-5 ms	3/8/2017	1:59:42 PM	935 icp 7300	203
156	17-02-1890-5 ms	3/8/2017	2:00:36 PM	935 icp 7300	204
157	170308-ba-3	3/8/2017	2:01:30 PM	935 icp 7300	205
158	170308-la-3	3/8/2017	2:02:35 PM	935 icp 7300	206
159	17-02-2463-tc-1	3/8/2017	2:03:31 PM	935 icp 7300	207
160	17-02-2463-tc-1 ms	3/8/2017	2:04:36 PM	935 icp 7300	208
161	17-02-2463-tc-1 msd	3/8/2017	2:05:32 PM	935 icp 7300	209
162	17-03-0521-tc-1	3/8/2017	2:06:28 PM	935 icp 7300	210
163	CCV= STD3x0.5	3/8/2017	2:07:20 PM	935 icp 7300	3
164	CCB-R12091601	3/8/2017	2:08:14 PM	935 icp 7300	1
165	17-03-0521-tc-2	3/8/2017	2:09:15 PM	935 icp 7300	211
166	17-02-2444-tc-1	3/8/2017	2:10:11 PM	935 icp 7300	212
167	17-03-0016-tc-3	3/8/2017	2:11:06 PM	935 icp 7300	213
168	17-03-0192-tc-1	3/8/2017	2:12:00 PM	935 icp 7300	214
169	17-03-0192-tc-3	3/8/2017	2:12:54 PM	935 icp 7300	215
170	17-03-0192-tc-6	3/8/2017	2:13:58 PM	935 icp 7300	216
171	17-03-0192-tc-7	3/8/2017	2:15:03 PM	935 icp 7300	217
172	CCV= STD3x0.5	3/8/2017	2:16:07 PM	935 icp 7300	3
173	CCB-R12091601	3/8/2017	2:17:00 PM	935 icp 7300	1
174	170308-b-01	3/8/2017	2:17:52 PM	935 icp 7300	218
175	170308-l-01	3/8/2017	2:18:59 PM	935 icp 7300	219
176	17-03-0335-3	3/8/2017	2:19:50 PM	935 icp 7300	220
177	17-03-0335-3 ms	3/8/2017	2:20:41 PM	935 icp 7300	221
178	17-03-0335-3 msd	3/8/2017	2:21:32 PM	935 icp 7300	222
179	17-03-0335-4	3/8/2017	2:22:23 PM	935 icp 7300	223
180	17-03-0335-7	3/8/2017	2:23:14 PM	935 icp 7300	224
181	17-03-0335-8	3/8/2017	2:24:05 PM	935 icp 7300	225
182	17-03-0335-11	3/8/2017	2:24:56 PM	935 icp 7300	226
183	17-03-0335-12	3/8/2017	2:25:47 PM	935 icp 7300	227
184	CCV= STD3x0.5	3/8/2017	2:26:38 PM	935 icp 7300	3

Reviewed/Au... Date: 3/9/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 15 Instrument ID: ICP7

No.	File Name	Date	Time	Analyst Name	A/S Location
185	CCB-R12091601	3/8/2017	2:27:31 PM	935 icp 7300	1
186	17-03-0335-15	3/8/2017	2:28:31 PM	935 icp 7300	228
187	17-03-0335-16	3/8/2017	2:29:25 PM	935 icp 7300	229
188	17-03-0336-3	3/8/2017	2:30:16 PM	935 icp 7300	230
189	17-03-0336-4	3/8/2017	2:30:58 PM	935 icp 7300	231
190	CCV= STD3x0.5	3/8/2017	2:31:49 PM	935 icp 7300	3
191	CCB-R12091601	3/8/2017	2:32:42 PM	935 icp 7300	1
192	CCV= STD3x0.5	3/8/2017	2:52:04 PM	935 icp 7300	3
193	CCB-R12091601	3/8/2017	2:53:02 PM	935 icp 7300	1
194	170308-ba-4	3/8/2017	2:59:44 PM	935 icp 7300	232
195	170308-la-4	3/8/2017	3:00:56 PM	935 icp 7300	233
196	17-03-0496-st-1	3/8/2017	3:02:03 PM	935 icp 7300	234
197	17-03-0496-st-1 ms	3/8/2017	3:03:03 PM	935 icp 7300	235
198	17-03-0496-st-1 msd	3/8/2017	3:03:54 PM	935 icp 7300	236
199	17-03-0095-st-2	3/8/2017	3:04:45 PM	935 icp 7300	237
200	17-02-2444-st-1	3/8/2017	3:05:39 PM	935 icp 7300	238
201	CCV= STD3x0.5	3/8/2017	3:06:33 PM	935 icp 7300	3
202	CCB-R12091601	3/8/2017	3:07:26 PM	935 icp 7300	1
203	170308-b-03	3/8/2017	3:08:18 PM	935 icp 7300	239
204	170308-l-03	3/8/2017	3:09:25 PM	935 icp 7300	240
205	17-03-0573-1	3/8/2017	3:10:26 PM	935 icp 7300	241
206	17-03-0573-1 ms	3/8/2017	3:11:17 PM	935 icp 7300	242
207	17-03-0573-1 msd	3/8/2017	3:12:08 PM	935 icp 7300	243
208	17-03-0573-2	3/8/2017	3:12:59 PM	935 icp 7300	244
209	17-03-0573-3	3/8/2017	3:13:50 PM	935 icp 7300	245
210	17-03-0573-4	3/8/2017	3:14:41 PM	935 icp 7300	246
211	17-03-0573-5	3/8/2017	3:15:32 PM	935 icp 7300	247
212	CCV= STD3x0.5	3/8/2017	3:16:23 PM	935 icp 7300	3
213	CCB-R12091601	3/8/2017	3:17:16 PM	935 icp 7300	1
214	CCV= STD3x0.5	3/8/2017	4:54:17 PM	935 icp 7300	3
215	CCB-R12091601	3/8/2017	4:55:15 PM	935 icp 7300	1
216	17-02-1890-tc-5 ms	3/8/2017	4:58:25 PM	935 icp 7300	402

* T22 + minerals (6010 B soil)

** T22 + minerals (6010 B water)

Reviewed/Assign to Logbook Date: 3/9/17
Analysis: 200.7/6010 Chemist ID: 1012
Logbook Page: 16 Instrument ID: IC21

EPA 6010B ICP Metals (Solid)

Preparation Logs

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Metals Sample Preparation Logbook (Solid / Other)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	STANDARD ID #
☑ EPA 3050B	☑ Solid	Thermometer HP16 (CF -2.0 °C)	HNO_3 R0131701 20 mL	Spike 1 M0220 17A
☐ EPA 200.7	☐ Other (Specify)	Block Digester 8	HCl R1230102 15 mL	Spike 2 M0206 17C
☐ EPA 200.8		Pipetter / Dispenser P-072 / D-027 / D-028	H_2O_2 M006-0410-13 3.0 mL	Spike 3

BATCH NUMBER	SUPPLY LOT #	BALANCE ID #	QUALITY SYSTEM MATRIX ID #	SAMPLE HANDLING
MS/MSD 170308-501	Tube / Container 170104	65	Teflon Chip M006-035-15	1 = Composite 2 = Subsample
(Specify)	Filter		(Specify)	3 = Homogenize 4 = None

DIGESTION											SAMPLE		SPIKE STANDARD		
	START			END							INITIAL	FINAL	1	2	3
DATE	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #	SAMPLE HANDLING	ECI ID #	ANALYTE(S)		(g)	(mL)	(µL)	(µL)	(µL)
3/8/17	12:00	95	1080	13:30	95	1080	4	MS 17-03-0335-3A	metals		2.01	100	500	500	
								MSD "			2.02				
								LCS 17-0308-L01			2.07				
								LCSD / MB " -B01			2.07				
								17-03-0335-3A			2.06				
								" -4A			2.08				
								" -7A 3/8/17 1080			2.05				
								" -8A			2.09				
								" -11A			2.03				
								" -12A			2.05				
								" -15A			2.06				
								" -16A			2.03				
								17-03-0336-3A			2.05				
								" -4A			2.09				

COMMENTS:

EPA 7471A Mercury
(Solid)

RAW DATA

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EPA 7471A Mercury

(Solid)

Initial Calibration
ICV/ICB
CCV/CCB

Sample Data

Quality Control
Method Blank
LCS/LCSD
MS/MSD
PDS/PDSD

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Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Initial Calibration Verification

Work Order No.: 17-03-0336

Instrument ID: HG 8 (H)

Concentration Unit: µg/L Test Method: EPA 7471A

	Initial Calibration Verification			
		ICV-1		Control
Analyte	True	Observed	%D	Limit
Mercury	5.000000	4.807788	4	0 – 10

03/09/2017 12:31

ICV-1 File: ICV M030617B 03/08/2017 12:12:46 PM

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7440 Lincoln Way, Garden Grove, CA 92841-1427 • TEL:(714) 895-5494 • FAX:(714) 894-7501

Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Continuing Calibration Verification

Work Order No.: 17-03-0336
Instrument ID: HG 8 (H)
Concentration Unit: µg/L

Test Method: EPA 7471A

	Continuing Calibration Verification									
		CCV-1		CCV-2		CCV-3		CCV-4		Control
Analyte	True	Observed	%D	Observed	%D	Observed	%D	Observed	%D	Limit
Mercury	2.000000	1.993902	0	1.974421	1	2.004488	0	2.004381	0	0 – 20

03/09/2017 12:31

CCV-1 File: CCV 0.2x10ppb 03/08/2017 03:08:38 PM
CCV-2 File: CCV 0.2x10ppb 03/08/2017 03:36:55 PM
CCV-3 File: CCV 0.2x10ppb 03/08/2017 04:03:55 PM
CCV-4 File: CCV 0.2x10ppb 03/08/2017 04:31:07 PM

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Calscience Environmental Laboratories, Inc.

EPA Method 7471A
Initial and Continuing Calibration Blanks

Work Order No.: 17-03-0336
Instrument ID: HG 8 (H)
Concentration Unit: µg/L
Test Method: EPA 7471A

Analyte	Initial and Continuing Calibration Blanks					
	ICB-1	CCB-1	CCB-2	CCB-3	CCB-4	RL (No PF)
Mercury	0.011460	0.016483	-0.004304	-0.005495	-0.000072	0.500000

03/09/2017 12:31

ICB-1 File: ICB 03/08/2017 12:15:00 PM
CCB-1 File: CCB 03/08/2017 03:10:54 PM
CCB-2 File: CCB 03/08/2017 03:39:10 PM
CCB-3 File: CCB 03/08/2017 04:06:11 PM
CCB-4 File: CCB 03/08/2017 04:33:23 PM
Note: Preparation factor (PF) = 167 L/kg

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER:	**17-03-0336**	ANALYZED BY:	868
INSTRUMENT:	Mercury 08	D/T ANALYZED:	2017-03-08 16:10
EXTRACTION :	EPA 7471A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-08 00:00	D/T REVIEWED:	2017-03-09 12:21

DATA FILE: W:\MERCURY_DATA\FINAL\170308H1\17-03-0336-3.icp

 # 3 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-13S**

LCS/MB BATCH:	170308L03	SAMPLE VOLUME / WEIGHT:	DEFAULT: 0.60 g / ACTUAL: 0.61 g
MS/MSD BATCH:	170308S03	FINAL VOLUME / WEIGHT:	DEFAULT: 100.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	0.98

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.0000616	1.00	ND	0.0820	

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER:	**17-03-0336**	ANALYZED BY:	868
INSTRUMENT:	Mercury 08	D/T ANALYZED:	2017-03-08 16:12
EXTRACTION :	EPA 7471A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-08 00:00	D/T REVIEWED:	2017-03-09 12:21

DATA FILE: W:\MERCURY_DATA\FINAL\170308H1\17-03-0336-4.icp

 # 4 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-25S**

LCS/MB BATCH:	170308L03	SAMPLE VOLUME / WEIGHT:	DEFAULT: 0.60 g / ACTUAL: 0.62 g
MS/MSD BATCH:	170308S03	FINAL VOLUME / WEIGHT:	DEFAULT: 100.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	0.97

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	0.000273	1.00	ND	0.0806	

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 7471A

MB SAMPLE ID:	**099-16-272-2864**	ANALYZED BY:	868
MB BATCH ID:	170308L03	D/T ANALYZED:	2017-03-08 15:33
INSTRUMENT:	Mercury 08	REVIEWED BY:	309
EXTRACTION:	EPA 7471A Total	D/T REVIEWED:	2017-03-09 12:19
D/T EXTRACTED:	2017-03-08 00:00	MATRIX:	Soil

DATA FILE: W:\MERCURY_DATA\FINAL\170308H1\170308-B-03.icp

CLIENT WORK ORDER: 17-03-0336

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
3		D-DU2-S-SG-05-13S	2017-03-08 16:10	W:\MERCURY_DATA\FINAL\170308H1\17-03-0336-3.icp
4		D-DU2-S-SG-05-25S	2017-03-08 16:12	W:\MERCURY_DATA\FINAL\170308H1\17-03-0336-4.icp

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RAW DATA SHEET
FOR METHOD: EPA 7471A

WORK ORDER:	**099-16-272**	ANALYZED BY:	868
INSTRUMENT:	Mercury 08	D/T ANALYZED:	2017-03-08 15:33
EXTRACTION :	EPA 7471A Total	REVIEWED BY:	309
D/T EXTRACTED:	2017-03-08 00:00	D/T REVIEWED:	2017-03-09 12:19

DATA FILE: W:\MERCURY_DATA\FINAL\170308H1\170308-B-03.icp

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH:	170308L03	SAMPLE VOLUME / WEIGHT:	DEFAULT: 0.60 g / ACTUAL: 0.60 g
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 100.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Mercury	-0.0000110	1.00	ND	0.0833	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 7471A

LCS SAMPLE ID:	**099-16-272- 2864**	EXTRACTION :	EPA 7471A Total	ANALYZED BY:	868
LCS/MB BATCH ID:	170308L03	D/T EXTRACTED:	2017-03-08 00:00	D/T ANALYZED:	2017-03-08 15:41
INSTRUMENT:	Mercury 08			REVIEWED BY:	309
				D/T REVIEWED:	2017-03-09 12:19

DATA FILE: W:\MERCURY_DATA\FINAL\170308H1\170308-L-03.icp

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Mercury	0.8350	0.7976	96	85-121	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 7471A

SPIKED SAMPLE ID: **17-03-0335-3**
MS/MSD BATCH: 170308S03
INSTRUMENTS:
SAMPLE: Mercury 08
MS: Mercury 08
MSD: Mercury 08

EXTRACTION: EPA 7471A Total
D/T EXTRACTED:
SAMPLE: 2017-03-08 00:00
MS: 2017-03-08 00:00
MSD: 2017-03-08 00:00

ANALYZED BY: 868
D/T ANALYZED:
SAMPLE: 2017-03-08 15:43
MS: 2017-03-08 15:45
MSD: 2017-03-08 15:48
REVIEWED BY: 309
D/T REVIEWED: 2017-03-09 12:20

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Mercury	**ND**	**0.005000**	**0.8350**	**0.7637**	**91**	**0.6569**	**79**	**71-137**	**15**	**0-14**	**FAIL**	**4**

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17-03-0335-3 MS.icp	W:\MERCURY_DATA\FINAL\170308H1\
MSD	17-03-0335-3 MSD.icp	W:\MERCURY_DATA\FINAL\170308H1\

Analysis Begun

Logged In Analyst: US26_SVC_INSTRUMENT Technique: AA FIMS-MHS
Spectrometer: FIMS-400, S/N B050-9560 Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\170308Hl.sifx
Batch ID:
Results Data Set: 170308Hl
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1 Autosampler Location: 1
Sample ID: Calib blank_868 Date Collected: 3/8/2017 11:48:40 AM
Analyst: 868 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: Calib blank_868 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.00]	0.0001	-0.0103	0.0001	11:49:43 AM	Yes
2		[0.00]	0.0002	-0.0035	0.0002	11:50:28 AM	Yes
Mean:		[0.00]	0.0001				
SD:		0.0000	0.0001				
%RSD:		0.00%	66.80				

Auto-zero performed.

Sequence No.: 2 Autosampler Location: 2
Sample ID: 0.025ppb 0.005x5ppb Date Collected: 3/8/2017 11:50:53 AM
Analyst: 868 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 0.025ppb 0.005x5ppb Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.025]	0.0002	-0.0014	0.0003	11:51:57 AM	Yes
2		[0.025]	0.0002	-0.0013	0.0003	11:52:41 AM	Yes
Mean:		[0.025]	0.0002				
SD:		0.00000	0.0000				
%RSD:		0.00%	7.40				

Standard number 1 applied. [0.025]
Correlation Coef.: 1.000000 Slope: 0.00648 Intercept: 0.00000

Sequence No.: 3 Autosampler Location: 3
Sample ID: 0.10ppb M030617AX0.0001 Date Collected: 3/8/2017 11:53:07 AM
Analyst: 868 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 0.10ppb M030617AX0.0001 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[0.100]	0.0010	0.0024	0.0012	11:54:11 AM	Yes
2		[0.100]	0.0010	0.0034	0.0012	11:54:56 AM	Yes
Mean:		[0.100]	0.0010				
SD:		0.00000	0.0000				
%RSD:		0.00%	1.82				

Standard number 2 applied. [0.100]
Correlation Coef.: 0.995447 Slope: 0.01057 Intercept: -0.00004

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Sequence No.: 4 Autosampler Location: 4
Sample ID: 1.00ppb M030617AX0.001 Date Collected: 3/8/2017 11:55:22 AM
Analyst: 868 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 1.00ppb M030617AX0.001 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[1.000]	0.0118	0.0424	0.0119	11:56:26 AM	Yes
2		[1.000]	0.0111	0.0372	0.0112	11:57:11 AM	Yes
Mean:		[1.000]	0.0114				
SD:		0.00000	0.0005				
%RSD:		0.00%	4.44				

Standard number 3 applied. [1.000]
Correlation Coef.: 0.999943 Slope: 0.01151 Intercept: -0.00008

Sequence No.: 5 Autosampler Location: 5
Sample ID: 2.00ppb M030617AX0.002 Date Collected: 3/8/2017 11:57:37 AM
Analyst: 868 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 2.00ppb M030617AX0.002 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[2.000]	0.0239	0.0846	0.0241	11:58:42 AM	Yes
2		[2.000]	0.0223	0.0743	0.0225	11:59:27 AM	Yes
Mean:		[2.000]	0.0231				
SD:		0.00000	0.0011				
%RSD:		0.00%	4.87				

Standard number 4 applied. [2.000]
Correlation Coef.: 0.999979 Slope: 0.01160 Intercept: -0.00010

Sequence No.: 6 Autosampler Location: 6
Sample ID: 5.00ppb M030617AX0.005 Date Collected: 3/8/2017 11:59:53 AM
Analyst: 868 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 5.00ppb M030617AX0.005 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1		[5.000]	0.0611	0.2166	0.0612	12:00:57 PM	Yes
2		[5.000]	0.0565	0.1893	0.0567	12:01:41 PM	Yes
Mean:		[5.000]	0.0588				
SD:		0.00000	0.0032				
%RSD:		0.00%	5.50				

Standard number 5 applied. [5.000]
Correlation Coef.: 0.999976 Slope: 0.01177 Intercept: -0.00018

Sequence No.: 7 Autosampler Location: 7
Sample ID: 10.0ppb M030617AX0.01 Date Collected: 3/8/2017 12:02:06 PM
Analyst: 868 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 10.0ppb M030617AX0.01 Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

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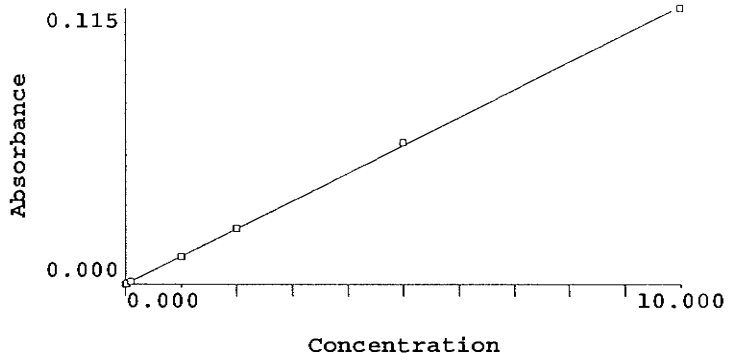
1	[10.00]	0.1179	0.4222	0.1180	12:03:10 PM	Yes
2	[10.00]	0.1113	0.3695	0.1114	12:03:55 PM	Yes
Mean:	[10.00]	0.1146				
SD:	0.0000	0.0047				
%RSD:	0.00%	4.08				

Standard number 6 applied. [10.00]
Correlation Coef.: 0.999917 Slope: 0.01151 Intercept: 0.00008



Calibration data for Hg 253.7 Equation: Linear, Calculated Intercept

ID	Mean Signal (Abs)	Entered Conc. ug/L	Calculated Conc. ug/L	Standard Deviation	%RSD
Calib blank_868	0.0000	0	-0.006791	0.00	66.80
0.025ppb 0.005x5ppb	0.0002	0.025	0.007280	0.00	7.40
0.10ppb M030617AX0.0001	0.0010	0.100	0.082482	0.00	1.82
1.00ppb M030617AX0.001	0.0114	1.000	0.986952	0.00	4.44
2.00ppb M030617AX0.002	0.0231	2.000	2.003249	0.00	4.87
5.00ppb M030617AX0.005	0.0588	5.000	5.101909	0.00	5.50
10.0ppb M030617AX0.01	0.1146	10.00	9.949920	0.00	4.08

Correlation Coef.: 0.999917 Slope: 0.01151 Intercept: 0.00008

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Analysis Begun

Logged In Analyst: US26_SVC_INSTRUMENT Technique: AA FIMS-MHS
Spectrometer: FIMS-400, S/N B050-9560 Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170308H1.sifx
Batch ID:
Results Data Set: 170308H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

Sequence No.: 1 Autosampler Location: 8
Sample ID: ICV M030617B Date Collected: 3/8/2017 12:10:56 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICV M030617B Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00495	4.95	0.0571	0.2066	0.0572	12:12:01 PM	Yes
2	0.00466	4.66	0.0537	0.1790	0.0539	12:12:46 PM	Yes
Mean:	0.00481	4.81	0.0554				
SD:	0.000208	0.208	0.0024				
%RSD:	4.32%	4.32%	4.32				

QC value within limits for Hg 253.7 Recovery = 96.16%
All analyte(s) passed QC.

Sequence No.: 2 Autosampler Location: 1
Sample ID: ICB Date Collected: 3/8/2017 12:13:12 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: ICB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000016	0.0161	0.0003	0.0003	0.0004	12:14:15 PM	Yes
2	0.000007	0.00682	0.0002	-0.0010	0.0003	12:15:00 PM	Yes
Mean:	0.000011	0.0115	0.0002				
SD:	0.0000066	0.00656	0.0001				
%RSD:	57.23%	57.23%	35.93				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 3 Autosampler Location: 9
Sample ID: CRQL 0.25 Date Collected: 3/8/2017 12:15:25 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.6 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: CRQL 0.25 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0433	0.260	0.0031	0.0106	0.0032	12:16:30 PM	Yes
2	0.0405	0.243	0.0029	0.0092	0.0030	12:17:14 PM	Yes
Mean:	0.0419	0.251	0.0030				
SD:	0.00201	0.0121	0.0001				
%RSD:	4.80%	4.80%	4.67				

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Dilution: 5X 309 03/09/17
Wash Time (before sample): 0
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0458-1 5X
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00473	0.0293	0.0004	0.0021	0.0006	3:00:59 PM	Yes
2	0.00444 X5	0.0275	0.0004	0.0018	0.0005	3:01:44 PM	Yes
Mean:	0.00458	0.0284	0.0004				
SD:	0.000204	0.00126	0.0000				
%RSD:	4.45%	4.45%	3.59				

==========

Sequence No.: 9
Sample ID: 17-03-0458-2
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 135
Date Collected: 3/8/2017 3:02:11 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0458-2
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0293	0.176	0.0021	0.0084	0.0022	3:03:16 PM	Yes
2	0.0276	0.166	0.0020	0.0083	0.0021	3:04:01 PM	Yes
Mean:	0.0284	0.171	0.0020				
SD:	0.00117	0.0070	0.0001				
%RSD:	4.12%	4.12%	3.96				

==========

Sequence No.: 10
Sample ID: 17-03-0457-1
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0
Autosampler Location: 136
Date Collected: 3/8/2017 3:04:28 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0457-1
Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0513	0.308	0.0036	0.0140	0.0038	3:05:34 PM	Yes
2	0.0484	0.290	0.0034	0.0123	0.0036	3:06:18 PM	Yes
Mean:	0.0498	0.299	0.0035				
SD:	0.00208	0.0125	0.0001				
%RSD:	4.17%	4.17%	4.08				

==========

Sequence No.: 11
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0
Autosampler Location: 5
Date Collected: 3/8/2017 3:06:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb
Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00205	2.05	0.0237	0.0852	0.0238	3:07:52 PM	Yes
2	0.00194	1.94	0.0224	0.0765	0.0225	3:08:38 PM	Yes
Mean:	0.00199	1.99	0.0230				
SD:	0.000080	0.080	0.0009				
%RSD:	4.03%	4.03%	4.02				

QC value within limits for Hg 253.7 Recovery = 99.70%
All analyte(s) passed QC.

==========

Sequence No.: 12
Sample ID: CCB
Autosampler Location: 1
Date Collected: 3/8/2017 3:09:05 PM

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Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB — Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000018	0.0176	0.0003	0.0011	0.0004	3:10:09 PM	Yes
2	0.000015	0.0154	0.0003	0.0007	0.0004	3:10:54 PM	Yes
Mean:	0.000016	0.0165	0.0003				
SD:	0.0000015	0.00153	0.0000				
%RSD:	9.30%	9.30%	6.59				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 13
Sample ID: 17-03-0457-2
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 137
Date Collected: 3/8/2017 3:11:19 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0457-2 — Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0468	0.290	0.0034	0.0128	0.0036	3:12:25 PM	Yes
2	0.0437	0.271	0.0032	0.0119	0.0033	3:13:09 PM	Yes
Mean:	0.0452	0.280	0.0033				
SD:	0.00218	0.0135	0.0002				
%RSD:	4.83%	4.83%	4.71				

==========

Sequence No.: 14
Sample ID: 17-03-0457-3
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 138
Date Collected: 3/8/2017 3:13:37 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0457-3 — Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0233	0.145	0.0017	0.0076	0.0019	3:14:42 PM	Yes
2	0.0220	0.136	0.0016	0.0068	0.0018	3:15:27 PM	Yes
Mean:	0.0226	0.140	0.0017				
SD:	0.00096	0.0060	0.0001				
%RSD:	4.24%	4.24%	4.04				

==========

Sequence No.: 15
Sample ID: 17-03-0457-4
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 139
Date Collected: 3/8/2017 3:15:55 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0457-4 — Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0314	0.192	0.0023	0.0084	0.0024	3:17:00 PM	Yes
2	0.0307	0.187	0.0022	0.0083	0.0024	3:17:45 PM	Yes
Mean:	0.0310	0.189	0.0023				
SD:	0.00055	0.0034	0.0000				
%RSD:	1.78%	1.78%	1.72				

==========

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Sequence No.: 16
Sample ID: 17-03-0457-5
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 140
Date Collected: 3/8/2017 3:18:13 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0457-5 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0151	0.0905	0.0011	0.0047	0.0013	3:19:19 PM	Yes
2	0.0141	0.0846	0.0011	0.0037	0.0012	3:20:04 PM	Yes
Mean:	0.0146	0.0876	0.0011				
SD:	0.00069	0.00415	0.0000				
%RSD:	4.74%	4.74%	4.40				

Sequence No.: 17
Sample ID: 17-03-0542-1
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 141
Date Collected: 3/8/2017 3:20:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0542-1 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0290	0.180	0.0021	0.0074	0.0023	3:21:37 PM	Yes
2	0.0271	0.168	0.0020	0.0062	0.0021	3:22:23 PM	Yes
Mean:	0.0281	0.174	0.0021				
SD:	0.00136	0.0084	0.0001				
%RSD:	4.85%	4.85%	4.67				

Sequence No.: 18
Sample ID: 17-03-0542-2
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 142
Date Collected: 3/8/2017 3:22:50 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0542-2 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0466	0.280	0.0033	0.0102	0.0034	3:23:56 PM	Yes
2	0.0438	0.263	0.0031	0.0093	0.0032	3:24:41 PM	Yes
Mean:	0.0452	0.271	0.0032				
SD:	0.00204	0.0122	0.0001				
%RSD:	4.51%	4.51%	4.40				

Sequence No.: 19
Sample ID: 17-03-0542-3
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 143
Date Collected: 3/8/2017 3:25:09 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0542-3 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0210	0.132	0.0016	0.0046	0.0017	3:26:14 PM	Yes
2	0.0210	0.132	0.0016	0.0046	0.0017	3:27:00 PM	Yes
Mean:	0.0210	0.132	0.0016				
SD:	0.00001	0.0001	0.0000				
%RSD:	0.06%	0.06%	0.06				

Return to Contents

Sequence No.: 20
Sample ID: 17-03-0542-4
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 144
Date Collected: 3/8/2017 3:27:28 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0542-4 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0148	0.0916	0.0011	0.0039	0.0013	3:28:34 PM	Yes
2	0.0144	0.0890	0.0011	0.0038	0.0012	3:29:19 PM	Yes
Mean:	0.0146	0.0903	0.0011				
SD:	0.00029	0.00179	0.0000				
%RSD:	1.98%	1.98%	1.85				

==========

Sequence No.: 21
Sample ID: CRQL 0.25
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 9
Date Collected: 3/8/2017 3:29:47 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: CRQL 0.25 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0444	0.266	0.0031	0.0113	0.0033	3:30:51 PM	Yes
2	0.0415	0.249	0.0029	0.0103	0.0031	3:31:37 PM	Yes
Mean:	0.0430	0.258	0.0030				
SD:	0.00202	0.0121	0.0001				
%RSD:	4.71%	4.71%	4.59				

==========

Sequence No.: 22
Sample ID: 170308-B-03
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 10
Date Collected: 3/8/2017 3:32:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 170308-B-03 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.00216	-0.0129	-0.0001	-0.0004	0.0001	3:33:08 PM	Yes
2	-0.00151	-0.00904	-0.0000	0.0004	0.0001	3:33:53 PM	Yes
Mean:	-0.00183	-0.0110	-0.0000				
SD:	0.000461	0.00276	0.0000				
%RSD:	25.14%	25.14%	65.78				

User canceled analysis.

==========

Analysis Begun

Logged In Analyst: US26_SVC_INSTRUMENT
Spectrometer: FIMS-400, S/N B050-9560

Technique: AA FIMS-MHS
Autosampler: S10

Sample Information File: C:\Users\Public\PerkinElmer Syngistix\AA\Data\Sample Information\
170308H1.sifx
Batch ID:
Results Data Set: 170308H1
Results Library: U:\MERCURY_8\Data\Results\results.mdb

==========

Sequence No.: 23
Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:

Autosampler Location: 5
Date Collected: 3/8/2017 3:35:05 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:

Return to Contents

Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00204	2.04	0.0235	0.0871	0.0236	3:36:10 PM	Yes
2	0.00191	1.91	0.0221	0.0763	0.0222	3:36:55 PM	Yes
Mean:	0.00197	1.97	0.0228				
SD:	0.000086	0.086	0.0010				
%RSD:	4.37%	4.37%	4.35				

QC value within limits for Hg 253.7 Recovery = 98.72%
All analyte(s) passed QC.

==========

Sequence No.: 24 Autosampler Location: 1
Sample ID: CCB Date Collected: 3/8/2017 3:37:22 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: CCB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000004	-0.00367	0.0000	0.0006	0.0002	3:38:25 PM	Yes
2	-0.000005	-0.00494	0.0000	0.0005	0.0002	3:39:10 PM	Yes
Mean:	-0.000004	-0.00430	0.0000				
SD:	0.0000009	0.000903	0.0000				
%RSD:	20.98%	20.98%	36.31				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 25 Autosampler Location: 11
Sample ID: 170308-L-03 Date Collected: 3/8/2017 3:39:35 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.6 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 170308-L-03 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.817	4.90	0.0565	0.2055	0.0566	3:40:40 PM	Yes
2	0.778	4.67	0.0538	0.1876	0.0540	3:41:25 PM	Yes
Mean:	0.798	4.79	0.0552				
SD:	0.0275	0.165	0.0019				
%RSD:	3.45%	3.45%	3.45				

==========

Sequence No.: 26 Autosampler Location: 12
Sample ID: 17-03-0335-3 Date Collected: 3/8/2017 3:41:51 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.62 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0335-3 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0244	0.151	0.0018	0.0072	0.0020	3:42:55 PM	Yes
2	0.0229	0.142	0.0017	0.0066	0.0018	3:43:40 PM	Yes
Mean:	0.0237	0.147	0.0018				
SD:	0.00108	0.0067	0.0001				
%RSD:	4.55%	4.55%	4.35				

==========

Sequence No.: 27 Autosampler Location: 13

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Sample ID: 17-03-0335-3 MS
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Date Collected: 3/8/2017 3:44:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0335-3 MS

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.784	4.70	0.0542	0.1993	0.0544	3:45:12 PM	Yes
2	0.743	4.46	0.0514	0.1806	0.0515	3:45:57 PM	Yes
Mean:	0.764	4.58	0.0528				
SD:	0.0288	0.173	0.0020				
%RSD:	3.77%	3.77%	3.76				

Sequence No.: 28
Sample ID: 17-03-0335-3 MSD
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 14
Date Collected: 3/8/2017 3:46:24 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0335-3 MSD

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.674	4.11	0.0474	0.1736	0.0475	3:47:28 PM	Yes
2	0.640	3.91	0.0450	0.1574	0.0452	3:48:13 PM	Yes
Mean:	0.657	4.01	0.0462				
SD:	0.0235	0.143	0.0016				
%RSD:	3.57%	3.57%	3.57				

Sequence No.: 29
Sample ID: 17-03-0335-4
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 15
Date Collected: 3/8/2017 3:48:38 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0335-4

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0292	0.184	0.0022	0.0095	0.0023	3:49:42 PM	Yes
2	0.0267	0.168	0.0020	0.0077	0.0021	3:50:27 PM	Yes
Mean:	0.0279	0.176	0.0021				
SD:	0.00180	0.0113	0.0001				
%RSD:	6.45%	6.45%	6.21				

Sequence No.: 30
Sample ID: 17-03-0335-7
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 16
Date Collected: 3/8/2017 3:50:53 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0335-7

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0301	0.184	0.0022	0.0085	0.0023	3:51:57 PM	Yes
2	0.0287	0.175	0.0021	0.0082	0.0022	3:52:41 PM	Yes
Mean:	0.0294	0.180	0.0021				
SD:	0.00097	0.0059	0.0001				
%RSD:	3.28%	3.28%	3.16				

Sequence No.: 31

Autosampler Location: 17

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Sample ID: 17-03-0335-8
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Date Collected: 3/8/2017 3:53:07 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0335-8 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0238	0.147	0.0018	0.0068	0.0019	3:54:10 PM	Yes
2	0.0224	0.139	0.0017	0.0062	0.0018	3:54:55 PM	Yes
Mean:	0.0231	0.143	0.0017				
SD:	0.00095	0.0059	0.0001				
%RSD:	4.11%	4.11%	3.93				

Sequence No.: 32
Sample ID: 17-03-0335-11
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 18
Date Collected: 3/8/2017 3:55:20 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0335-11 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0254	0.155	0.0019	0.0057	0.0020	3:56:24 PM	Yes
2	0.0235	0.144	0.0017	0.0051	0.0019	3:57:09 PM	Yes
Mean:	0.0245	0.149	0.0018				
SD:	0.00132	0.0081	0.0001				
%RSD:	5.40%	5.40%	5.16				

Sequence No.: 33
Sample ID: 17-03-0335-12
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 19
Date Collected: 3/8/2017 3:57:34 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0335-12 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0185	0.117	0.0014	0.0041	0.0016	3:58:38 PM	Yes
2	0.0176	0.111	0.0014	0.0042	0.0015	3:59:23 PM	Yes
Mean:	0.0180	0.114	0.0014				
SD:	0.00066	0.0042	0.0000				
%RSD:	3.69%	3.69%	3.48				

Sequence No.: 34
Sample ID: 17-03-0335-15
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 20
Date Collected: 3/8/2017 3:59:49 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0335-15 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0272	0.169	0.0020	0.0071	0.0022	4:00:53 PM	Yes
2	0.0268	0.166	0.0020	0.0078	0.0021	4:01:39 PM	Yes
Mean:	0.0270	0.167	0.0020				
SD:	0.00032	0.0020	0.0000				
%RSD:	1.17%	1.17%	1.12				

Sequence No.: 35
Autosampler Location: 5

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Sample ID: CCV 0.2x10ppb
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Date Collected: 3/8/2017 4:02:04 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00205	2.05	0.0237	0.0863	0.0239	4:03:10 PM	Yes
2	0.00195	1.95	0.0226	0.0786	0.0227	4:03:55 PM	Yes
Mean:	0.00200	2.00	0.0231				
SD:	0.000071	0.071	0.0008				
%RSD:	3.56%	3.56%	3.55				

QC value within limits for Hg 253.7 Recovery = 100.22%
All analyte(s) passed QC.

==========

Sequence No.: 36
Sample ID: CCB
Analyst: 868 HG-8
Initial Sample Wt:
Dilution:
Wash Time (before sample): 0

Autosampler Location: 1
Date Collected: 3/8/2017 4:04:22 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol:
Auto Dilution Factor: 1.0000

Replicate Data: CCB

Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	-0.000006	-0.00617	0.0000	0.0000	0.0001	4:05:26 PM	Yes
2	-0.000005	-0.00482	0.0000	0.0005	0.0002	4:06:11 PM	Yes
Mean:	-0.000005	-0.00550	0.0000				
SD:	0.0000009	0.000949	0.0000				
%RSD:	17.27%	17.27%	73.25				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

==========

Sequence No.: 37
Sample ID: 17-03-0335-16
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 21
Date Collected: 3/8/2017 4:06:36 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0335-16

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0148	0.0931	0.0011	0.0043	0.0013	4:07:40 PM	Yes
2	0.0145	0.0912	0.0011	0.0045	0.0013	4:08:26 PM	Yes
Mean:	0.0146	0.0921	0.0011				
SD:	0.00021	0.00130	0.0000				
%RSD:	1.41%	1.41%	1.31				

==========

Sequence No.: 38
Sample ID: 17-03-0336-3
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 22
Date Collected: 3/8/2017 4:08:52 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0336-3

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0101	0.0615	0.0008	0.0032	0.0009	4:09:57 PM	Yes
2	0.0101	0.0617	0.0008	0.0041	0.0009	4:10:42 PM	Yes
Mean:	0.0101	0.0616	0.0008				
SD:	0.00002	0.00015	0.0000				

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%RSD: 0.24% 0.24% 0.22

Sequence No.: 39
Sample ID: 17-03-0336-4
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 23
Date Collected: 3/8/2017 4:11:08 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0336-4 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0451	0.280	0.0033	0.0131	0.0034	4:12:13 PM	Yes
2	0.0431	0.267	0.0032	0.0121	0.0033	4:12:58 PM	Yes
Mean:	0.0441	0.273	0.0032				
SD:	0.00147	0.0091	0.0001				
%RSD:	3.33%	3.33%	3.25				

Sequence No.: 40
Sample ID: 17-03-0140-27
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 24
Date Collected: 3/8/2017 4:13:25 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0140-27 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0164	0.1000	0.0012	0.0050	0.0014	4:14:30 PM	Yes
2	0.0158	0.0962	0.0012	0.0047	0.0013	4:15:16 PM	Yes
Mean:	0.0161	0.0981	0.0012				
SD:	0.00043	0.00265	0.0000				
%RSD:	2.70%	2.70%	2.53				

Sequence No.: 41
Sample ID: 17-03-0140-28
Analyst: 868 HG-8
Initial Sample Wt: 0.63 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 25
Date Collected: 3/8/2017 4:15:42 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0140-28 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0192	0.121	0.0015	0.0057	0.0016	4:16:48 PM	Yes
2	0.0184	0.116	0.0014	0.0055	0.0015	4:17:33 PM	Yes
Mean:	0.0188	0.118	0.0014				
SD:	0.00055	0.0035	0.0000				
%RSD:	2.94%	2.94%	2.78				

Sequence No.: 42
Sample ID: 17-03-0140-29
Analyst: 868 HG-8
Initial Sample Wt: 0.6 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 26
Date Collected: 3/8/2017 4:18:00 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0140-29 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0229	0.137	0.0017	0.0059	0.0018	4:19:04 PM	Yes
2	0.0219	0.131	0.0016	0.0058	0.0017	4:19:50 PM	Yes
Mean:	0.0224	0.134	0.0016				
SD:	0.00071	0.0043	0.0000				

Return to Contents

%RSD: 3.17% 3.17% 3.02

Sequence No.: 43
Sample ID: 17-03-0140-30
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 27
Date Collected: 3/8/2017 4:20:16 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0140-30

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0238	0.147	0.0018	0.0051	0.0019	4:21:20 PM	Yes
2	0.0228	0.141	0.0017	0.0049	0.0018	4:22:05 PM	Yes
Mean:	0.0233	0.144	0.0017				
SD:	0.00070	0.0043	0.0001				
%RSD:	3.01%	3.01%	2.88				

Sequence No.: 44
Sample ID: 17-03-0140-31
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 28
Date Collected: 3/8/2017 4:22:31 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0140-31

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0218	0.133	0.0016	0.0067	0.0017	4:23:35 PM	Yes
2	0.0199	0.122	0.0015	0.0044	0.0016	4:24:21 PM	Yes
Mean:	0.0209	0.127	0.0015				
SD:	0.00135	0.0082	0.0001				
%RSD:	6.44%	6.44%	6.11				

Sequence No.: 45
Sample ID: 17-03-0141-27
Analyst: 868 HG-8
Initial Sample Wt: 0.62 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 29
Date Collected: 3/8/2017 4:24:46 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0141-27

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0104	0.0642	0.0008	0.0028	0.0010	4:25:50 PM	Yes
2	0.00881	0.0546	0.0007	0.0026	0.0008	4:26:36 PM	Yes
Mean:	0.00958	0.0594	0.0008				
SD:	0.001091	0.00676	0.0001				
%RSD:	11.38%	11.38%	10.21				

Sequence No.: 46
Sample ID: 17-03-0141-28
Analyst: 868 HG-8
Initial Sample Wt: 0.61 g
Dilution:
Wash Time (before sample): 0

Autosampler Location: 30
Date Collected: 3/8/2017 4:27:01 PM
Data Type: Original
Initial Sample Vol:
Sample Prep Vol: 100 mL
Auto Dilution Factor: 1

Replicate Data: 17-03-0141-28

Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.0237	0.144	0.0017	0.0089	0.0019	4:28:05 PM	Yes
2	0.0202	0.123	0.0015	0.0058	0.0016	4:28:51 PM	Yes
Mean:	0.0219	0.134	0.0016				
SD:	0.00245	0.0150	0.0002				

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%RSD: 11.18% 11.18% 10.64

Sequence No.: 47 Autosampler Location: 5
Sample ID: CCV 0.2x10ppb Date Collected: 3/8/2017 4:29:17 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: CCV 0.2x10ppb Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.00206	2.06	0.0238	0.0873	0.0239	4:30:22 PM	Yes
2	0.00195	1.95	0.0225	0.0794	0.0226	4:31:07 PM	Yes
Mean:	0.00200	2.00	0.0231				
SD:	0.000081	0.081	0.0009				
%RSD:	4.06%	4.06%	4.05				

QC value within limits for Hg 253.7 Recovery = 100.22%
All analyte(s) passed QC.

Sequence No.: 48 Autosampler Location: 1
Sample ID: CCB Date Collected: 3/8/2017 4:31:34 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: Initial Sample Vol:
Dilution: Sample Prep Vol:
Wash Time (before sample): 0 Auto Dilution Factor: 1.0000

Replicate Data: CCB Analyte: Hg 253.7

Repl #	SampleConc mg/L	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.000001	0.00139	0.0001	0.0017	0.0002	4:32:38 PM	Yes
2	-0.000002	-0.00153	0.0001	0.0013	0.0002	4:33:23 PM	Yes
Mean:	-0.000000	-0.000072	0.0001				
SD:	0.0000021	0.0020660	0.0000				
%RSD:	>999.9%	>999.9%	30.75				

QC value within limits for Hg 253.7 Recovery = Not calculated
All analyte(s) passed QC.

Sequence No.: 49 Autosampler Location: 31
Sample ID: 17-03-0141-29 Date Collected: 3/8/2017 4:33:48 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.63 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0141-29 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored
1	0.102	0.640	0.0074	0.0276	0.0076	4:34:52 PM	Yes
2	0.0957	0.603	0.0070	0.0261	0.0072	4:35:37 PM	Yes
Mean:	0.0986	0.621	0.0072				
SD:	0.00414	0.0261	0.0003				
%RSD:	4.19%	4.19%	4.15				

Sequence No.: 50 Autosampler Location: 32
Sample ID: 17-03-0141-30 Date Collected: 3/8/2017 4:36:03 PM
Analyst: 868 HG-8 Data Type: Original
Initial Sample Wt: 0.6 g Initial Sample Vol:
Dilution: Sample Prep Vol: 100 mL
Wash Time (before sample): 0 Auto Dilution Factor: 1

Replicate Data: 17-03-0141-30 Analyte: Hg 253.7

Repl #	SampleConc mg/kg	StndConc ug/L	BlnkCorr Signal	Peak Area	Peak Height	Time	Peak Stored

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EPA 7471A Mercury (Solid)

Run Logs

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170308H1

Carrier solution R07141602 **Reducing Agent R07141603**

Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
Calib blank_868	868 HG-8		Hg 253.7	3/8/2017	11:50:28 AM		ug/L		mg/L	
0.025ppb 0.005x5ppb	868 HG-8		Hg 253.7	3/8/2017	11:52:41 AM		ug/L		mg/L	
0.10ppb M030617AX0.0001	868 HG-8		Hg 253.7	3/8/2017	11:54:56 AM		ug/L		mg/L	
1.00ppb M030617AX0.001	868 HG-8		Hg 253.7	3/8/2017	11:57:11 AM		ug/L		mg/L	
2.00ppb M030617AX0.002	868 HG-8		Hg 253.7	3/8/2017	11:59:27 AM		ug/L		mg/L	
5.00ppb M030617AX0.005	868 HG-8		Hg 253.7	3/8/2017	12:01:41 PM		ug/L		mg/L	
10.0ppb M030617AX0.01	868 HG-8		Hg 253.7	3/8/2017	12:03:55 PM		ug/L		mg/L	
ICV M030617B	868 HG-8		Hg 253.7	3/8/2017	12:12:46 PM	4.807788	ug/L	0.004808	mg/L	0.999917
ICB	868 HG-8		Hg 253.7	3/8/2017	12:15:00 PM	0.01146	ug/L	1.15E-05	mg/L	0.999917
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/8/2017	12:17:14 PM	0.251262	ug/L	0.041877	mg/kg	0.999917
17-03-0095-1	868 HG-8	0.61	Hg 253.7	3/8/2017	12:19:29 PM	0.135703	ug/L	0.022246	mg/kg	0.999917
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/8/2017	12:21:45 PM	1.963129	ug/L	0.001963	mg/L	0.999917
CCB	868 HG-8		Hg 253.7	3/8/2017	12:23:59 PM	0.011141	ug/L	1.11E-05	mg/L	0.999917
17-03-0187-3 10X	868 HG-8	0.61	Hg 253.7	3/8/2017	1:16:59 PM	1.992736	ug/L	3.26678	mg/kg	0.999917
170308-B-01	868 HG-8	0.6	Hg 253.7	3/8/2017	1:19:16 PM	-0.0082	ug/L	-0.00137	mg/kg	0.999917
170308-L-01	868 HG-8	0.6	Hg 253.7	3/8/2017	1:21:32 PM	4.691487	ug/L	0.781915	mg/kg	0.999917
17-03-0221-1	868 HG-8	0.61	Hg 253.7	3/8/2017	1:23:50 PM	0.037136	ug/L	0.006088	mg/kg	0.999917
17-03-0221-1 MS	868 HG-8	0.62	Hg 253.7	3/8/2017	1:26:07 PM	4.865908	ug/L	0.784824	mg/kg	0.999917
17-03-0221-1 MSD	868 HG-8	0.61	Hg 253.7	3/8/2017	1:28:25 PM	5.566896	ug/L	0.912606	mg/kg	0.999917
17-03-0221-2	868 HG-8	0.6	Hg 253.7	3/8/2017	1:30:42 PM	0.012982	ug/L	0.002164	mg/kg	0.999917
17-03-0221-5	868 HG-8	0.6	Hg 253.7	3/8/2017	1:33:00 PM	-0.00468	ug/L	-0.00078	mg/kg	0.999917
17-03-0221-6	868 HG-8	0.59	Hg 253.7	3/8/2017	1:35:17 PM	-0.01885	ug/L	-0.00319	mg/kg	0.999917
17-03-0221-9	868 HG-8	0.61	Hg 253.7	3/8/2017	1:37:34 PM	0.044651	ug/L	0.00732	mg/kg	0.999917
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/8/2017	1:39:50 PM	2.009831	ug/L	0.00201	mg/L	0.999917
CCB	868 HG-8		Hg 253.7	3/8/2017	1:42:05 PM	0.011703	ug/L	1.17E-05	mg/L	0.999917

Reviewed/Assigned to Logbook Date: 03-09-17
Analysis: Hg Chemist ID: 309
Logbook Page: 18 Instrument ID: Hg-8

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Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-0221-10	868 HG-8	0.62	Hg 253.7	3/8/2017	1:44:20 PM	0.007925	ug/L	0.001278	mg/kg	0.999917
17-03-0221-13	868 HG-8	0.6	Hg 253.7	3/8/2017	1:46:37 PM	0.002139	ug/L	0.000357	mg/kg	0.999917
17-03-0221-14	868 HG-8	0.61	Hg 253.7	3/8/2017	1:48:54 PM	0.007794	ug/L	0.001278	mg/kg	0.999917
17-03-0128-1	868 HG-8	0.58	Hg 253.7	3/8/2017	1:51:11 PM	0.485535	ug/L	0.083713	mg/kg	0.999917
17-03-0128-4	868 HG-8	0.61	Hg 253.7	3/8/2017	1:53:28 PM	0.454294	ug/L	0.074474	mg/kg	0.999917
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/8/2017	1:55:44 PM	1.984692	ug/L	0.001985	mg/L	0.999917
CCB	868 HG-8		Hg 253.7	3/8/2017	1:57:58 PM	0.016753	ug/L	1.68E-05	mg/L	0.999917
170307-B-02	868 HG-8	0.6	Hg 253.7	3/8/2017	2:19:49 PM	-0.01237	ug/L	-0.00206	mg/kg	0.999917
170307-L-02	868 HG-8	0.6	Hg 253.7	3/8/2017	2:22:07 PM	4.542766	ug/L	0.757128	mg/kg	0.999917
17-03-0154-1	868 HG-8	0.61	Hg 253.7	3/8/2017	2:24:25 PM	6.095209	ug/L	0.999215	mg/kg	0.999917
17-03-0154-1 MS	868 HG-8	0.62	Hg 253.7	3/8/2017	2:26:42 PM	9.167473	ug/L	1.478625	mg/kg	0.999917
17-03-0154-1 MSD	868 HG-8	0.61	Hg 253.7	3/8/2017	2:28:59 PM	8.862963	ug/L	1.452945	mg/kg	0.999917
17-03-0518-1	868 HG-8	0.6	Hg 253.7	3/8/2017	2:31:16 PM	0.003397	ug/L	0.000566	mg/kg	0.999917
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/8/2017	2:33:33 PM	2.020521	ug/L	0.002021	mg/L	0.999917
CCB	868 HG-8		Hg 253.7	3/8/2017	2:35:48 PM	0.017314	ug/L	1.73E-05	mg/L	0.999917
17-02-2480-5	868 HG-8	0.62	Hg 253.7	3/8/2017	2:45:44 PM	0.585836	ug/L	0.09449	mg/kg	0.999917
170308-B-02	868 HG-8	0.6	Hg 253.7	3/8/2017	2:48:01 PM	-0.00863	ug/L	-0.00144	mg/kg	0.999917
170308-L-02	868 HG-8	0.6	Hg 253.7	3/8/2017	2:50:18 PM	4.770499	ug/L	0.795083	mg/kg	0.999917
17-03-0458-1	868 HG-8	0.62	Hg 253.7	3/8/2017	2:52:35 PM	0.199314	ug/L	0.032147	mg/kg	0.999917
17-03-0458-1 MS	868 HG-8	0.6	Hg 253.7	3/8/2017	2:54:52 PM	4.444273	ug/L	0.740712	mg/kg	0.999917
17-03-0458-1 MSD	868 HG-8	0.62	Hg 253.7	3/8/2017	2:57:09 PM	4.45869	ug/L	0.719144	mg/kg	0.999917
17-03-0458-1 PDS	868 HG-8	0.62	Hg 253.7	3/8/2017	2:59:26 PM	4.480489	ug/L	0.72266	mg/kg	0.999917
17-03-0458-1 5X	868 HG-8	0.62	Hg 253.7	3/8/2017	3:01:44 PM	0.028423	ug/L	0.022922	mg/kg	0.999917
17-03-0458-2	868 HG-8	0.6	Hg 253.7	3/8/2017	3:04:01 PM	0.170539	ug/L	0.028423	mg/kg	0.999917
17-03-0457-1	868 HG-8	0.6	Hg 253.7	3/8/2017	3:06:18 PM	0.299	ug/L	0.049833	mg/kg	0.999917
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/8/2017	3:08:38 PM	1.993902	ug/L	0.001994	mg/L	0.999917
CCB	868 HG-8		Hg 253.7	3/8/2017	3:10:54 PM	0.016483	ug/L	1.65E-05	mg/L	0.999917
17-03-0457-2	868 HG-8	0.62	Hg 253.7	3/8/2017	3:13:09 PM	0.28045	ug/L	0.045234	mg/kg	0.999917
17-03-0457-3	868 HG-8	0.62	Hg 253.7	3/8/2017	3:15:27 PM	0.140396	ug/L	0.022644	mg/kg	0.999917

Reviewed/Assign to Logbook Date: 03-09-17
Analysis Hg Chemist ID: 309
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Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-0457-4	868 HG-8	0.61	Hg 253.7	3/8/2017	3:17:45 PM	0.189384	ug/L	0.031047	mg/kg	0.999917
17-03-0457-5	868 HG-8	0.6	Hg 253.7	3/8/2017	3:20:04 PM	0.087569	ug/L	0.014595	mg/kg	0.999917
17-03-0542-1	868 HG-8	0.62	Hg 253.7	3/8/2017	3:22:23 PM	0.173912	ug/L	0.02805	mg/kg	0.999917
17-03-0542-2	868 HG-8	0.6	Hg 253.7	3/8/2017	3:24:41 PM	0.271186	ug/L	0.045198	mg/kg	0.999917
17-03-0542-3	868 HG-8	0.63	Hg 253.7	3/8/2017	3:27:00 PM	0.132441	ug/L	0.021022	mg/kg	0.999917
17-03-0542-4	868 HG-8	0.62	Hg 253.7	3/8/2017	3:29:19 PM	0.090313	ug/L	0.014567	mg/kg	0.999917
CRQL 0.25	868 HG-8	0.6	Hg 253.7	3/8/2017	3:31:37 PM	0.257799	ug/L	0.042967	mg/kg	0.999917
170308-B-03	868 HG-8	0.6	Hg 253.7	3/8/2017	3:33:53 PM	-0.01099	ug/L	-0.00183	mg/kg	0.999917
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/8/2017	3:36:55 PM	1.974421	ug/L	0.001974	mg/L	0.999917
CCB	868 HG-8		Hg 253.7	3/8/2017	3:39:10 PM	-0.0043	ug/L	-4.30E-06	mg/L	0.999917
170308-L-03	868 HG-8	0.6	Hg 253.7	3/8/2017	3:41:25 PM	4.785791	ug/L	0.797632	mg/kg	0.999917
17-03-0335-3	868 HG-8	0.62	Hg 253.7	3/8/2017	3:43:40 PM	0.146672	ug/L	0.023657	mg/kg	0.999917
17-03-0335-3 MS	868 HG-8	0.6	Hg 253.7	3/8/2017	3:45:57 PM	4.582061	ug/L	0.763677	mg/kg	0.999917
17-03-0335-3 MSD	868 HG-8	0.61	Hg 253.7	3/8/2017	3:48:13 PM	4.007181	ug/L	0.656915	mg/kg	0.999917
17-03-0335-4	868 HG-8	0.63	Hg 253.7	3/8/2017	3:50:27 PM	0.176047	ug/L	0.027944	mg/kg	0.999917
17-03-0335-7	868 HG-8	0.61	Hg 253.7	3/8/2017	3:52:41 PM	0.179509	ug/L	0.029428	mg/kg	0.999917
17-03-0335-8	868 HG-8	0.62	Hg 253.7	3/8/2017	3:54:55 PM	0.143104	ug/L	0.023081	mg/kg	0.999917
17-03-0335-11	868 HG-8	0.61	Hg 253.7	3/8/2017	3:57:09 PM	0.149329	ug/L	0.02448	mg/kg	0.999917
17-03-0335-12	868 HG-8	0.63	Hg 253.7	3/8/2017	3:59:23 PM	0.113615	ug/L	0.018034	mg/kg	0.999917
17-03-0335-15	868 HG-8	0.62	Hg 253.7	3/8/2017	4:01:39 PM	0.167234	ug/L	0.026973	mg/kg	0.999917
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/8/2017	4:03:55 PM	2.004488	ug/L	0.002004	mg/L	0.999917
CCB	868 HG-8		Hg 253.7	3/8/2017	4:06:11 PM	-0.0055	ug/L	-5.50E-06	mg/L	0.999917
17-03-0335-16	868 HG-8	0.63	Hg 253.7	3/8/2017	4:08:26 PM	0.092148	ug/L	0.014627	mg/kg	0.999917
17-03-0336-3	868 HG-8	0.61	Hg 253.7	3/8/2017	4:10:42 PM	0.061562	ug/L	0.010092	mg/kg	0.999917
17-03-0336-4	868 HG-8	0.62	Hg 253.7	3/8/2017	4:12:58 PM	0.273378	ug/L	0.044093	mg/kg	0.999917
17-03-0140-27	868 HG-8	0.61	Hg 253.7	3/8/2017	4:15:16 PM	0.09808	ug/L	0.016079	mg/kg	0.999917
17-03-0140-28	868 HG-8	0.63	Hg 253.7	3/8/2017	4:17:33 PM	0.118324	ug/L	0.018782	mg/kg	0.999917
17-03-0140-29	868 HG-8	0.6	Hg 253.7	3/8/2017	4:19:50 PM	0.134214	ug/L	0.022369	mg/kg	0.999917
17-03-0140-30	868 HG-8	0.62	Hg 253.7	3/8/2017	4:22:05 PM	0.144241	ug/L	0.023265	mg/kg	0.999917

Reviewed/Assign to Logbook Date: 03-09-17
Analysis Hg Chemist ID: 309
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Sample ID	Analyst Name	Initial Sample Wt	Analyte Name	Date	Time	Conc (Calib)	Units (Calib)	Conc (Samp)	Units (Samp)	Corr Coef
17-03-0140-31	868 HG-8	0.61	Hg 253.7	3/8/2017	4:24:21 PM	0.127391	ug/L	0.020884	mg/kg	0.999917
17-03-0141-27	868 HG-8	0.62	Hg 253.7	3/8/2017	4:26:36 PM	0.059416	ug/L	0.009583	mg/kg	0.999917
17-03-0141-28	868 HG-8	0.61	Hg 253.7	3/8/2017	4:28:51 PM	0.133866	ug/L	0.021945	mg/kg	0.999917
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/8/2017	4:31:07 PM	2.004381	ug/L	0.002004	mg/L	0.999917
CCB	868 HG-8		Hg 253.7	3/8/2017	4:33:23 PM	-7.25E-05	ug/L	-7.25E-08	mg/L	0.999917
17-03-0141-29	868 HG-8	0.63	Hg 253.7	3/8/2017	4:35:37 PM	0.621358	ug/L	0.098628	mg/kg	0.999917
17-03-0141-30	868 HG-8	0.6	Hg 253.7	3/8/2017	4:37:53 PM	0.075767	ug/L	0.012628	mg/kg	0.999917
17-03-0141-31	868 HG-8	0.62	Hg 253.7	3/8/2017	4:40:09 PM	0.145055	ug/L	0.023396	mg/kg	0.999917
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/8/2017	4:42:25 PM	1.981489	ug/L	0.001981	mg/L	0.999917
CCB	868 HG-8		Hg 253.7	3/8/2017	4:44:41 PM	-0.00321	ug/L	-3.21E-06	mg/L	0.999917
17-03-0254-1	868 HG-8	0.61	Hg 253.7	3/8/2017	5:26:02 PM	0.92864	ug/L	0.152236	mg/kg	0.999917
17-03-0261-1	868 HG-8	0.63	Hg 253.7	3/8/2017	5:28:19 PM	0.026399	ug/L	0.00419	mg/kg	0.999917
17-03-0262-1	868 HG-8	0.62	Hg 253.7	3/8/2017	5:30:35 PM	0.456701	ug/L	0.073661	mg/kg	0.999917
17-03-0263-1	868 HG-8	0.63	Hg 253.7	3/8/2017	5:32:53 PM	0.399731	ug/L	0.063449	mg/kg	0.999917
17-03-0265-1	868 HG-8	0.61	Hg 253.7	3/8/2017	5:35:08 PM	0.137598	ug/L	0.022557	mg/kg	0.999917
17-03-0265-3	868 HG-8	0.62	Hg 253.7	3/8/2017	5:37:22 PM	0.046507	ug/L	0.007501	mg/kg	0.999917
17-03-0267-1	868 HG-8	0.61	Hg 253.7	3/8/2017	5:39:38 PM	0.258294	ug/L	0.042343	mg/kg	0.999917
17-03-0291-1	868 HG-8	0.63	Hg 253.7	3/8/2017	5:41:53 PM	0.070434	ug/L	0.01118	mg/kg	0.999917
17-03-0607-1	868 HG-8	0.6	Hg 253.7	3/8/2017	5:44:09 PM	0.025224	ug/L	0.004204	mg/kg	0.999917
CCV 0.2x10ppb	868 HG-8		Hg 253.7	3/8/2017	5:46:23 PM	1.980812	ug/L	0.001981	mg/L	0.999917
CCB	868 HG-8		Hg 253.7	3/8/2017	5:48:38 PM	0.000409	ug/L	4.09E-07	mg/L	0.999917

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Analysis Hg Chemist ID: 309
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EPA 7471A Mercury (Solid)

Preparation Logs

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Mercury Sample Preparation Logbook (Solid / Other)

METHOD	MATRIX	EQUIPMENT ID #	REAGENT ID #	STANDARD ID #
☑ EPA 7471A	☑ Solid	Thermometer 1711147995 (CF 0.0 °C)	Aqua Regia R0479166 10 mL	Spike M030617A
☐ EPA 7471B	☐ Other (Specify)	Block Digester 5	5% $KMnO_4$ R1006166	IC A
		Pipetter / Dispenser P071 ✗	NaCl-H_3NO-HCl R1026166 6 mL	ICV B

BATCH NUMBER	SUPPLY LOT #	BALANCE ID #	QUALITY SYSTEM MATRIX ID #	SAMPLE HANDLING
MS/MSD 170308-503	Tube / Container 160925	36	Teflon Chip M006-351	1 = Composite 2 = Subsample
(Specify)	Filter		(Specify)	3 = Homogenize 4 = None

DIGESTION												
	START			END					SAMPLE		5% $KMNO_4$	SPIKE OR IC/ICV
DATE	TIME	TEMP W/O CF (°C)	PREP TECH ID #	TIME	TEMP W/O CF (°C)	PREP TECH ID #	SAMPLE HANDLING	ECI ID #	INITIAL (g)	FINAL (mL)	V (mL)	V (µL)
3/8/17	13:00	95	868	13:45	95	868	4	MS 17-03-0335-3A	0.60	100	15	500
								MSD	0.61			
								LCS 170308-L03	0.60			
								LCSD / MB 170308-B03	0.60			
								17-03-0335-3A	0.62			
								4	0.63			
								7	0.61			
								8	0.62			
								11	0.61			
								12	0.63			
								15	0.62			
								16	0.63			
								17-03-0336-3A	0.61			
								4A	0.62			
								17-03-0140-27A	0.61			
								28	0.63			
								29	0.40			
								30	0.62			
								31	0.61			
								17-03-0141-27A	0.62			
								28	0.61			
								29	0.63			
								30	0.60			
								31	0.62			
								IC				
								ICV				
								CB				

COMMENTS: ✗ D-003 / MD-043 / D-058

EPA METHOD 8082
PCB

RAW DATA

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EPA METHOD 8082
PCB

Initial Calibration

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8082

ICAL WORK ORDER: 099-12-532-9393-5154
ICAL BATCH ID: 170304I001
INSTRUMENT: GC 31

ANALYZED BY: 1,028
ICAL D/T ANALYZED: 2017-03-04 10:22
REVIEWED BY: 27
D/T REVIEWED: 2017-03-06 17:02

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	Avg. RF	Min. RF	%RSD	%RSD CL	R or R^2	R or R^2 CL	STATUS
Aroclor-1016	C	Avg RF	19,249,615	18,706,288	17,015,642	17,289,182	15,623,019					17,576,749	0.00	8	0-20			PASS
Aroclor-1260	C	Avg RF	26,230,863	26,789,816	25,221,137	26,147,934	24,408,278					25,759,606	0.00	4	0-20			PASS

Data Files:

Level #	D/T Analyzed	Data File
1	2017-03-04 10:22	/chem1/SVOA/GC_31/170304/b1703040117030401
2	2017-03-04 10:41	/chem1/SVOA/GC_31/170304/b1703040217030402
3	2017-03-04 11:00	/chem1/SVOA/GC_31/170304/b1703040317030403
4	2017-03-04 11:19	/chem1/SVOA/GC_31/170304/b1703040417030404
5	2017-03-04 11:38	/chem1/SVOA/GC_31/170304/b1703040517030405

LR - E: Linear Regression (Equal Weight)
LR - IC: Linear Regression (Inverse Concentration Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)
Avg RF: Average Response Factor
QR - E: Quadratic Regression (Equal Weight)

INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

ICV WORK ORDER: **099-12-532-9393-5154**
INITIAL BATCH: 170304I001
INSTRUMENT: GC 31

DATA FILE: /chem1/SVOA/GC_31/170304/b1703040617030406

ANALYZED BY: 1028
D/T ANALYZED:
INITIAL: 2017-03-04 10:22
ICV: 2017-03-04 11:57
REVIEWED BY: 27
D/T REVIEWED: 2017-03-06 17:02

COMPOUND NAME	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV CONC	ICV %D	ICV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	17576749.207	19696440.288			-12	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	25759605.728	29007372.118			-13	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 06-Mar-2017 17:42 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 20-FEB-2017 15:04
End Cal Date : 04-MAR-2017 13:13
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Cal Date : 06-Mar-2017 17:42 uj3k
Curve Type : Average

Calibration File Names:
Level 1: /chem1/SVOA/GC_31.i/170304.b/b17030401.d
Level 2: /chem1/SVOA/GC_31.i/170304.b/b17030402.d
Level 3: /chem1/SVOA/GC_31.i/170304.b/b17030410.d
Level 4: /chem1/SVOA/GC_31.i/170304.b/b17030404.d
Level 5: /chem1/SVOA/GC_31.i/170304.b/b17030405.d

		100.000	250.000	500.000	750.000	2000.000		
	Compound	Level 1	Level 2	Level 3	Level 4	Level 5	RRF	% RSD
M	2 Aroclor-1016	19249615	18706288	17015642	17289182	15623019	17576749	8
	3 Aroclor 1016 (1)	1983085	1885965	1683438	1690801	1481968	1745051	11
	4 Aroclor 1016 (2)	3632807	3452678	3087749	3094435	2735552	3200644	11
	5 Aroclor 1016 (3)	7966622	7861253	7225962	7402995	6797514	7450869	6
	6 Aroclor 1016 (4)	3527818	3409886	3088396	3129991	2806775	3192573	9
	7 Aroclor 1016 (5)	2139284	2096506	1930097	1970959	1801211	1987611	7
M	8 Aroclor-1260	26230863	26789816	25221137	26147934	24408278	25759606	4
	9 Aroclor 1260 (1)	8789079	8866860	8284457	8558423	7953637	8490491	4
	10 Aroclor 1260 (2)	6550552	6706313	6284875	6513710	6071780	6425446	4
	11 Aroclor 1260 (3)	5530864	5631827	5283737	5465561	5100326	5402463	4
	12 Aroclor 1260 (4)	1785336	1872330	1795191	1867271	1753301	1814686	3
	13 Aroclor 1260 (5)	3575031	3712486	3572876	3742970	3529235	3626520	3
M	14 Aroclor-1221	+++++	+++++	5969514	+++++	+++++	5969514	0
	15 Aroclor 1221 (1)	+++++	+++++	860886	+++++	+++++	860886	0
	16 Aroclor 1221 (2)	+++++	+++++	1169075	+++++	+++++	1169075	0
	17 Aroclor 1221 (3)	+++++	+++++	715120	+++++	+++++	715120	0
	18 Aroclor 1221 (4)	+++++	+++++	2809197	+++++	+++++	2809197	0
	19 Aroclor 1221 (5)	+++++	+++++	415237	+++++	+++++	415237	0
M	20 Aroclor-1232	+++++	+++++	9615252	+++++	+++++	9615252	0
	21 Aroclor 1232 (1)	+++++	+++++	1925678	+++++	+++++	1925678	0
	22 Aroclor 1232 (2)	+++++	+++++	1576358	+++++	+++++	1576358	0
	23 Aroclor 1232 (3)	+++++	+++++	3590708	+++++	+++++	3590708	0

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Report Date : 06-Mar-2017 17:42 Page 2

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 20-FEB-2017 15:04
End Cal Date : 04-MAR-2017 13:13
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Cal Date : 06-Mar-2017 17:42 uj3k
Curve Type : Average

	Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	750.000 Level 4	2000.000 Level 5	RRF	% RSD
	24 Aroclor 1232 (4)	+++++	+++++	1540058	+++++	+++++	1540058	0
	25 Aroclor 1232 (5)	+++++	+++++	982449	+++++	+++++	982449	0
M	26 Aroclor-1242	+++++	+++++	14059923	+++++	+++++	14059923	0
	27 Aroclor 1242 (1)	+++++	+++++	1379943	+++++	+++++	1379943	0
	28 Aroclor 1242 (2)	+++++	+++++	2583673	+++++	+++++	2583673	0
	29 Aroclor 1242 (3)	+++++	+++++	5947418	+++++	+++++	5947418	0
	30 Aroclor 1242 (4)	+++++	+++++	2555790	+++++	+++++	2555790	0
	31 Aroclor 1242 (5)	+++++	+++++	1593100	+++++	+++++	1593100	0
M	32 Aroclor-1248	+++++	+++++	13176520	+++++	+++++	13176520	0
	33 Aroclor 1248 (1)	+++++	+++++	3966685	+++++	+++++	3966685	0
	34 Arcolor 1248 (2)	+++++	+++++	1745177	+++++	+++++	1745177	0
	35 Aroclor 1248 (3)	+++++	+++++	1372014	+++++	+++++	1372014	0
	36 Aroclor 1248 (4)	+++++	+++++	3938668	+++++	+++++	3938668	0
	37 Aroclor 1248 (5)	+++++	+++++	2153975	+++++	+++++	2153975	0
M	38 Aroclor-1254	+++++	+++++	28971309	+++++	+++++	28971309	0
	39 Aroclor 1254 (1)	+++++	+++++	3542745	+++++	+++++	3542745	0
	40 Aroclor 1254 (2)	+++++	+++++	7162081	+++++	+++++	7162081	0
	41 Arcolor 1254 (3)	+++++	+++++	7758459	+++++	+++++	7758459	0
	42 Aroclor 1254 (4)	+++++	+++++	5910202	+++++	+++++	5910202	0
	43 Aroclor 1254 (5)	+++++	+++++	4597822	+++++	+++++	4597822	0
M	44 Aroclor-1262	+++++	+++++	32017792	+++++	+++++	32017792	0
	45 Aroclor 1262 (1)	+++++	+++++	6340146	+++++	+++++	6340146	0
	46 Aroclor 1262 (2)	+++++	+++++	9736368	+++++	+++++	9736368	0
	47 Aroclor 1262 (3)	+++++	+++++	7178488	+++++	+++++	7178488	0
	48 Aroclor 1262 (4)	+++++	+++++	2632364	+++++	+++++	2632364	0
	49 Aroclor 1262 (5)	+++++	+++++	6130426	+++++	+++++	6130426	0
M	50 Aroclor-1268	+++++	+++++	114984779	+++++	+++++	114984779	0
	51 Aroclor 1268 (1)	+++++	+++++	21643288	+++++	+++++	21643288	0
	52 Aroclor 1268 (2)	+++++	+++++	18907197	+++++	+++++	18907197	0

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Report Date : 06-Mar-2017 17:42 Page 3

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 20-FEB-2017 15:04
End Cal Date : 04-MAR-2017 13:13
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Cal Date : 06-Mar-2017 17:42 uj3k
Curve Type : Average

Compound	100.000 Level 1	250.000 Level 2	500.000 Level 3	750.000 Level 4	2000.000 Level 5	___ RRF	% RSD
53 Aroclor 1268 (3)	+++++	+++++	16479388	+++++	+++++	16479388	0
54 Aroclor 1268 (4)	+++++	+++++	6708239	+++++	+++++	6708239	0
55 Aroclor 1268 (5)	+++++	+++++	51246667	+++++	+++++	51246667	0
$ 1 2,4,5,6-Tetrachloro-m-xylene	120250383	124492405	117939301	122922039	117891264	120699078	2
$ 56 Decachlorobiphenyl	138531667	143418298	137990673	144864454	140562313	141073481	2

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 20-FEB-2017 15:04
End Cal Date : 04-MAR-2017 13:13
Quant Method : ESTD
Origin : Disabled
Target Version : 3.50
Integrator : HP Genie
Method file : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Cal Date : 06-Mar-2017 17:42 uj3k
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 5.60073
Maximun Average %RSD = 20.00000
* Passed Average %RSD Test.

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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030406.d
Report Date: 03/06/2017 13:41

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_31.i
Sample Name: ICV 500 P021517H
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m

Injection Date and Time: 04-MAR-2017 11:57
Initial Calibration Date(s): 20-FEB-2017 04-MAR-2017
Initial Calibration Time(s): 15:04 11:38

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type	
Aroclor-1016	17576749.207	19696440.288	0.01	-12	15	Averaged	
Aroclor 1016 (1)	1745051.275	2085704.676	0.01	-20	15	Averaged	<-Failed
Aroclor 1016 (2)	3200644.184	3506833.022	0.01	-10	15	Averaged	
Aroclor 1016 (3)	7450869.197	8327245.412	0.01	-12	15	Averaged	
Aroclor 1016 (4)	3192573.193	3544592.018	0.01	-11	15	Averaged	
Aroclor 1016 (5)	1987611.359	2232065.160	0.01	-12	15	Averaged	
Aroclor 1260 (4)	1814685.680	1972480.858	0.01	-9	15	Averaged	
Aroclor-1260	25759605.727	29007372.117	0.01	-13	15	Averaged	
Aroclor 1260 (5)	3626519.827	4073151.701	0.01	-12	15	Averaged	
Aroclor 1260 (1)	8490491.306	10027132.506	0.01	-18	15	Averaged	<-Failed
Aroclor 1260 (2)	6425445.977	7030129.425	0.01	-9	15	Averaged	
Aroclor 1260 (3)	5402462.938	5904477.627	0.01	-9	15	Averaged	
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**	
2,4,5,6-Tetrachloro-m-xylene	120699078.403	113721274.432	0.01	6	15	Averaged	
Decachlorobiphenyl	141073480.845	134637184.912	0.01	5	15	Averaged	

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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030401.d
Report Date: 06-Mar-2017 13:37

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170304.b/b17030401.d
Lab Smp Id:
Inj Date : 04-MAR-2017 10:22
Operator : 944 Inst ID: GC_31.i
Smp Info : ICAL-1 P021517F
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Meth Date : 06-Mar-2017 13:36 uj3k Quant Type: ESTD
Cal Date : 04-MAR-2017 10:22 Cal File: b17030401.d
Als bottle: 1 Calibration Sample, Level: 1
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.025	5.025	0.000	2405007666	20.0000	19.9
M	2 Aroclor-1016				1924961548	100.000	110
	3 Aroclor 1016 (1)	5.552	5.552	0.000	198308499	100.000	114
	4 Aroclor 1016 (2)	6.037	6.037	0.000	363280725	100.000	114
	5 Aroclor 1016 (3)	6.644	6.644	0.000	796662161	100.000	107
	6 Aroclor 1016 (4)	6.814	6.814	0.000	352781794	100.000	110
	7 Aroclor 1016 (5)	6.892	6.892	0.000	213928369	100.000	108
M	8 Aroclor-1260				2623086267	100.000	102
	9 Aroclor 1260 (1)	9.071	9.071	0.000	878907891	100.000	104
	10 Aroclor 1260 (2)	9.517	9.517	0.000	655055232	100.000	102
	11 Aroclor 1260 (3)	9.799	9.799	0.000	553086415	100.000	102
	12 Aroclor 1260 (4)	10.871	10.871	0.000	178533585	100.000	98.4(a)
	13 Aroclor 1260 (5)	11.157	11.157	0.000	357503144	100.000	98.6(a)
$	56 Decachlorobiphenyl	11.684	11.684	0.000	2770633335	20.0000	19.6

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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030401.d
Report Date: 06-Mar-2017 13:37

QC Flag Legend

a - Target compound detected but, quantitated amount
Below Limit Of Quantitation(BLOQ).

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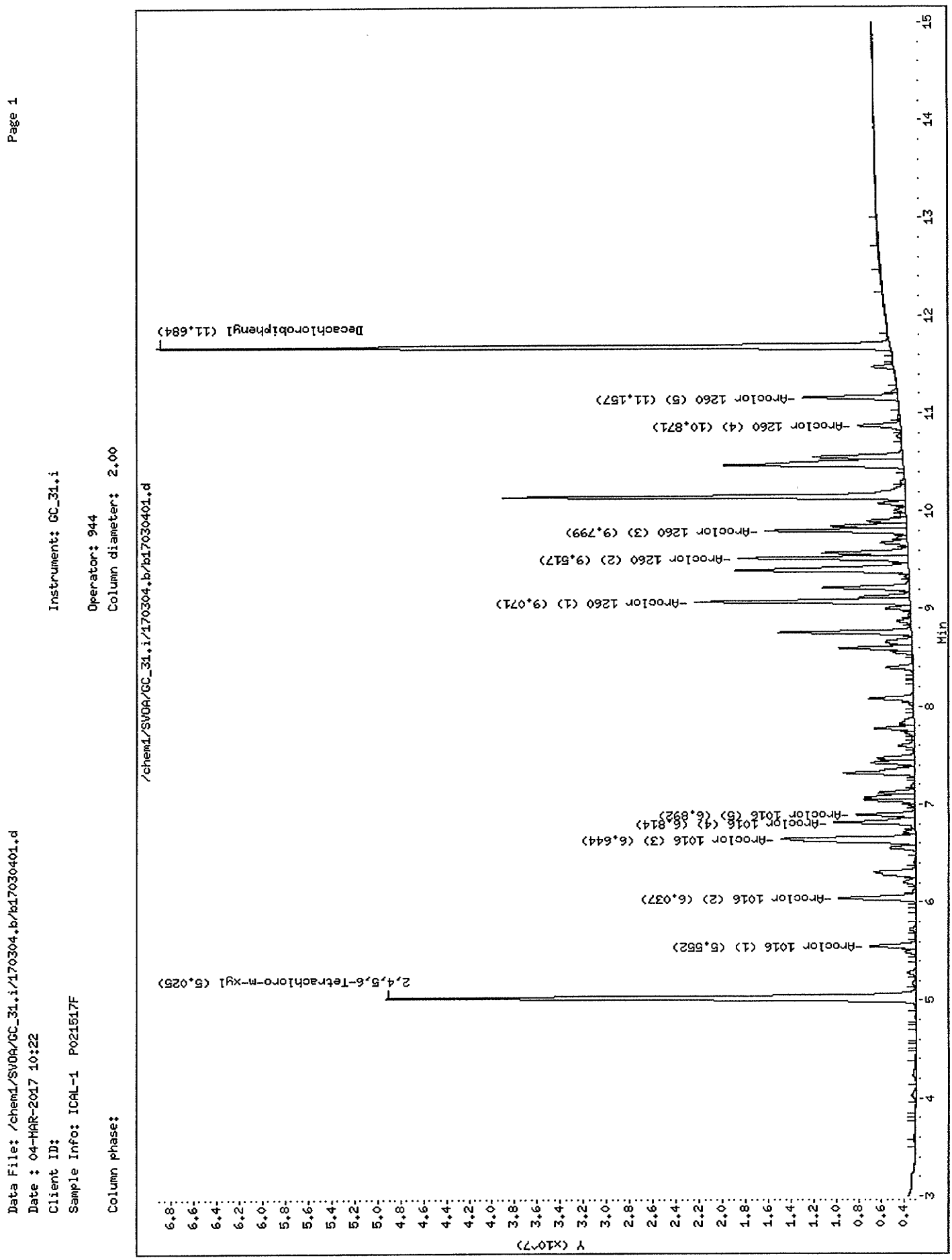

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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030402.d
Report Date: 06-Mar-2017 13:37

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170304.b/b17030402.d
Lab Smp Id:
Inj Date : 04-MAR-2017 10:41
Operator : 944 Inst ID: GC_31.i
Smp Info : ICAL-2 P021517E
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Meth Date : 06-Mar-2017 13:37 uj3k Quant Type: ESTD
Cal Date : 04-MAR-2017 10:41 Cal File: b17030402.d
Als bottle: 2 Calibration Sample, Level: 2
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.027	5.027	0.000	6224620237	50.0000	51.6
M	2 Aroclor-1016				4676571916	250.000	266
	3 Aroclor 1016 (1)	5.552	5.552	0.000	471491190	250.000	270
	4 Aroclor 1016 (2)	6.039	6.039	0.000	863169516	250.000	270
	5 Aroclor 1016 (3)	6.644	6.644	0.000	1965313221	250.000	264
	6 Aroclor 1016 (4)	6.814	6.814	0.000	852471442	250.000	267
	7 Aroclor 1016 (5)	6.893	6.893	0.000	524126547	250.000	264
M	8 Aroclor-1260				6697454078	250.000	260
	9 Aroclor 1260 (1)	9.071	9.071	0.000	2216715064	250.000	261
	10 Aroclor 1260 (2)	9.518	9.518	0.000	1676578224	250.000	261
	11 Aroclor 1260 (3)	9.799	9.799	0.000	1407956764	250.000	261
	12 Aroclor 1260 (4)	10.871	10.871	0.000	468082486	250.000	258
	13 Aroclor 1260 (5)	11.157	11.157	0.000	928121540	250.000	256
$	56 Decachlorobiphenyl	11.683	11.683	0.000	7170914886	50.0000	50.8

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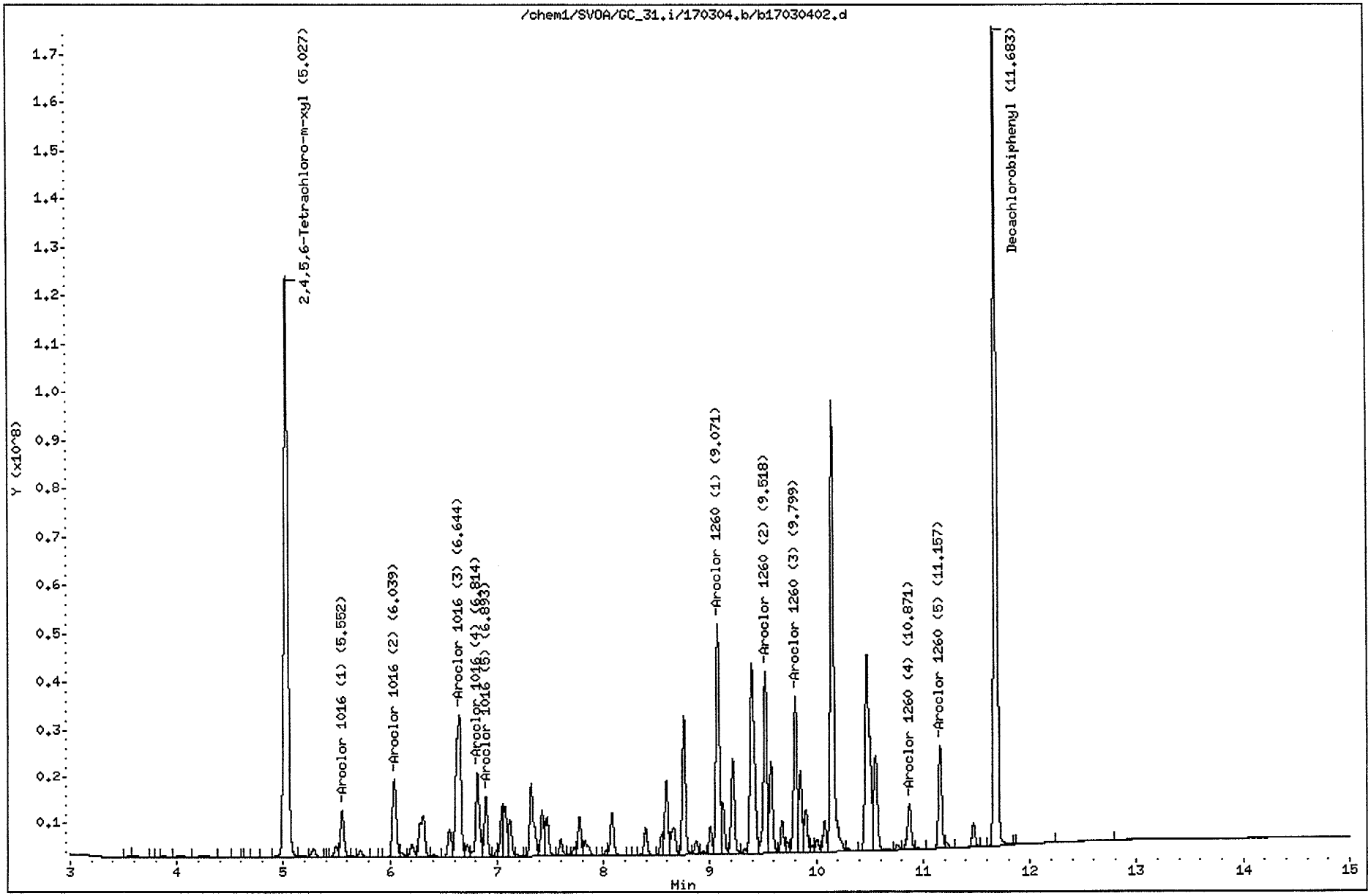
Data File: /chem1/SVOA/GC_31.i/170304.b/b17030402.d
Date : 04-MAR-2017 10:41
Client ID:
Sample Info: ICAL-2 P021517E

Instrument: GC_31.i
Operator: 944
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030403.d
Report Date: 06-Mar-2017 13:37

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170304.b/b17030403.d
Lab Smp Id:
Inj Date : 04-MAR-2017 11:00
Operator : 944 Inst ID: GC_31.i
Smp Info : ICAL-3 P021517D
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Meth Date : 06-Mar-2017 13:37 uj3k Quant Type: ESTD
Cal Date : 20-FEB-2017 17:55 Cal File: b17022011.d
Als bottle: 3 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

		Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1	2,4,5,6-Tetrachloro-m-xylene	5.026	5.026	0.000	11793930052	100.000	97.7
M	2	Aroclor-1016				8507820834	500.000	484
	3	Aroclor 1016 (1)	5.552	5.552	0.000	841719008	500.000	482
	4	Aroclor 1016 (2)	6.038	6.038	0.000	1543874358	500.000	482
	5	Aroclor 1016 (3)	6.645	6.645	0.000	3612980978	500.000	485
	6	Aroclor 1016 (4)	6.813	6.813	0.000	1544197970	500.000	484
	7	Aroclor 1016 (5)	6.892	6.892	0.000	965048520	500.000	486
M	8	Aroclor-1260				12610568611	500.000	490
	9	Aroclor 1260 (1)	9.071	9.071	0.000	4142228685	500.000	488
	10	Aroclor 1260 (2)	9.517	9.517	0.000	3142437485	500.000	489
	11	Aroclor 1260 (3)	9.799	9.799	0.000	2641868598	500.000	489
	12	Aroclor 1260 (4)	10.872	10.872	0.000	897595681	500.000	495
	13	Aroclor 1260 (5)	11.156	11.156	0.000	1786438162	500.000	493
$	56	Decachlorobiphenyl	11.684	11.684	0.000	13799067307	100.000	97.8

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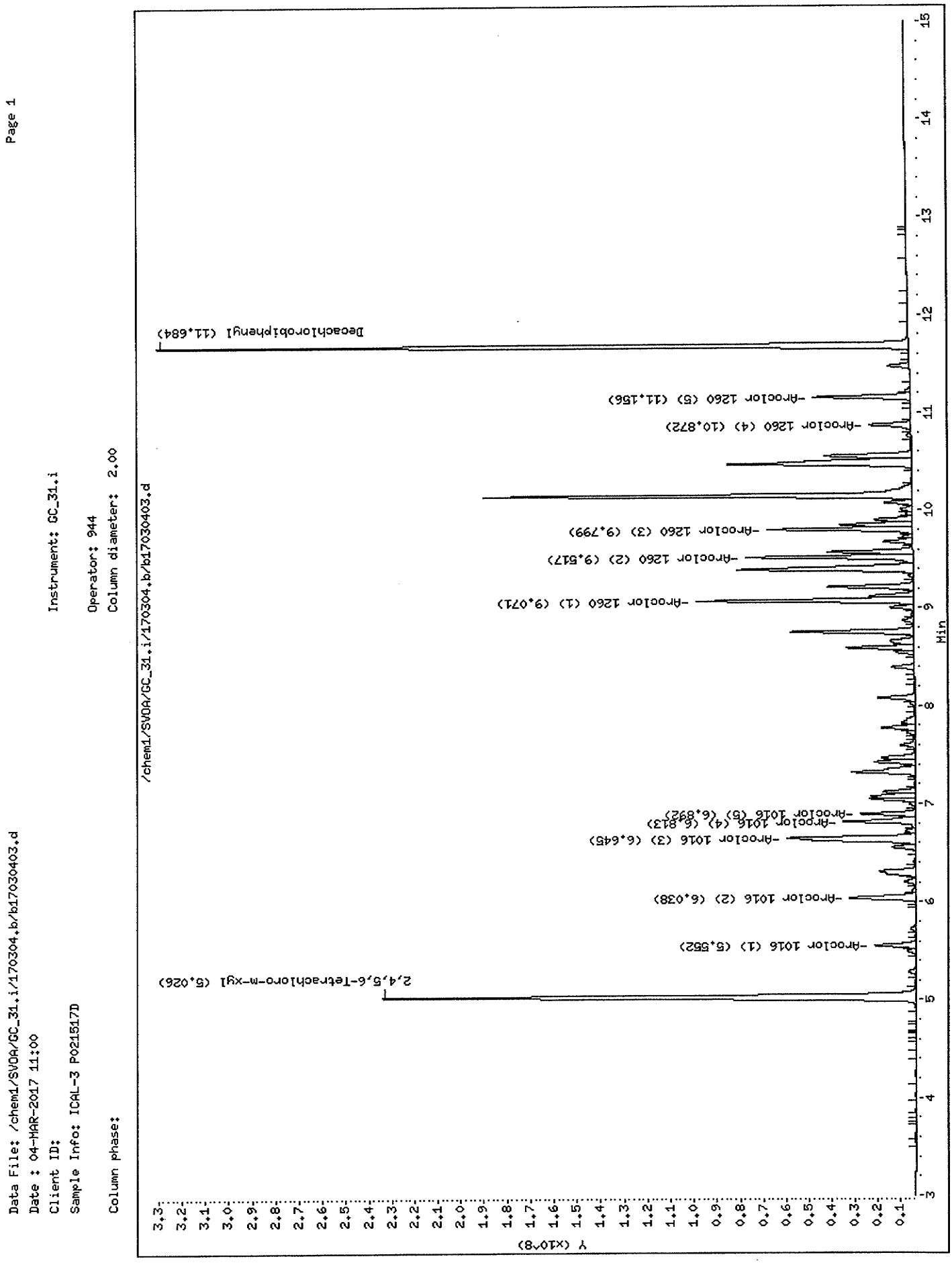

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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030404.d
Report Date: 06-Mar-2017 13:37

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170304.b/b17030404.d
Lab Smp Id:
Inj Date : 04-MAR-2017 11:19
Operator : 944 Inst ID: GC_31.i
Smp Info : ICAL-4 P021517C
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Meth Date : 06-Mar-2017 13:37 uj3k Quant Type: ESTD
Cal Date : 04-MAR-2017 11:19 Cal File: b17030404.d
Als bottle: 4 Calibration Sample, Level: 4
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.027	5.027	0.000	18438305845	150.000	153
M	2 Aroclor-1016				12966886409	750.000	738
	3 Aroclor 1016 (1)	5.553	5.553	0.000	1268100693	750.000	727
	4 Aroclor 1016 (2)	6.039	6.039	0.000	2320826194	750.000	725
	5 Aroclor 1016 (3)	6.646	6.646	0.000	5552246620	750.000	745
	6 Aroclor 1016 (4)	6.815	6.815	0.000	2347493470	750.000	735
	7 Aroclor 1016 (5)	6.893	6.893	0.000	1478219432	750.000	744
M	8 Aroclor-1260				19610950761	750.000	761
	9 Aroclor 1260 (1)	9.070	9.070	0.000	6418817433	750.000	756
	10 Aroclor 1260 (2)	9.516	9.516	0.000	4885282199	750.000	760
	11 Aroclor 1260 (3)	9.798	9.798	0.000	4099170588	750.000	759
	12 Aroclor 1260 (4)	10.870	10.870	0.000	1400452971	750.000	772
	13 Aroclor 1260 (5)	11.155	11.155	0.000	2807227570	750.000	774
$	56 Decachlorobiphenyl	11.683	11.683	0.000	21729668071	150.000	154

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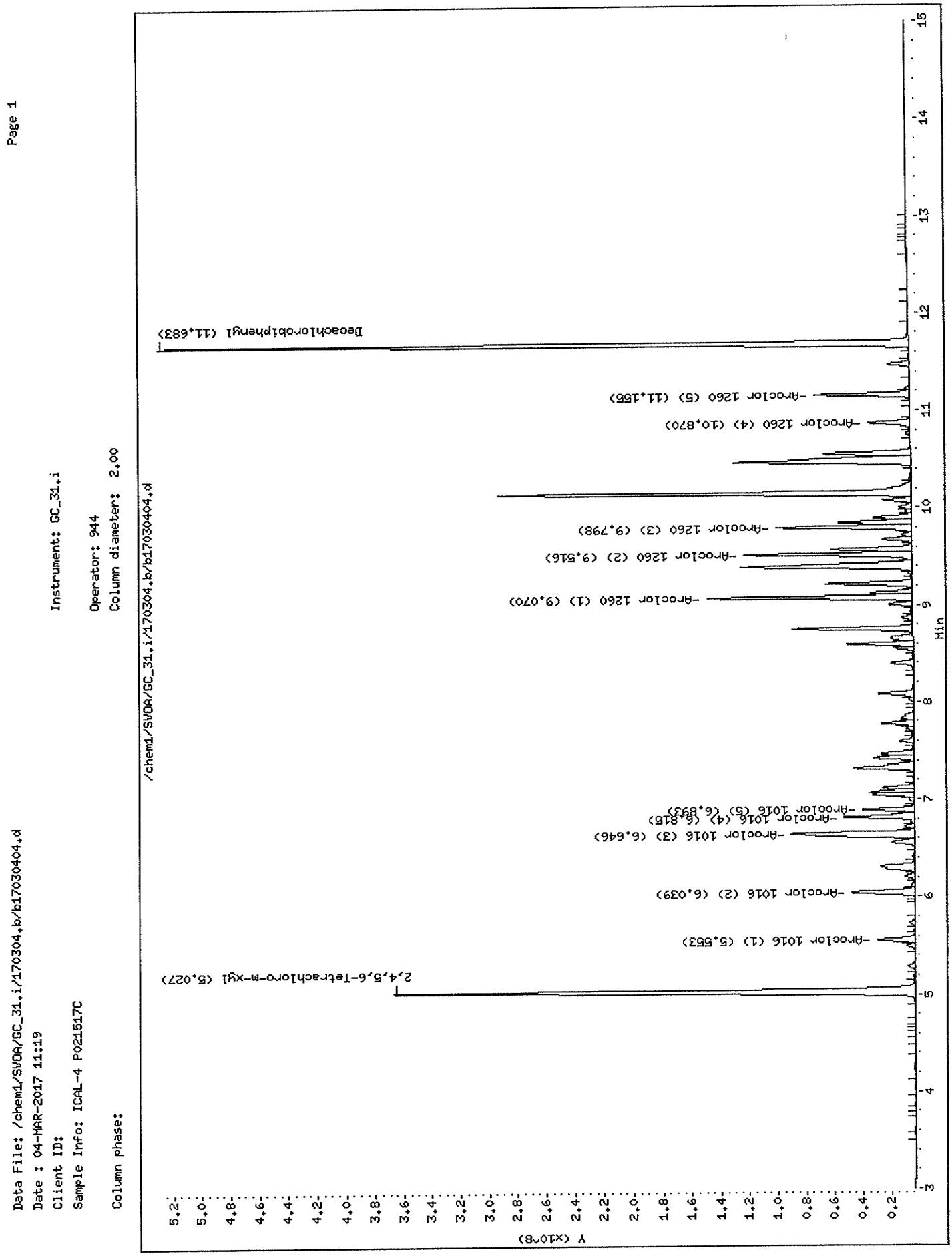

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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030405.d
Report Date: 06-Mar-2017 13:37

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170304.b/b17030405.d
Lab Smp Id:
Inj Date : 04-MAR-2017 11:38
Operator : 944 Inst ID: GC_31.i
Smp Info : ICAL-5 P021517B
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Meth Date : 06-Mar-2017 13:37 uj3k Quant Type: ESTD
Cal Date : 04-MAR-2017 11:38 Cal File: b17030405.d
Als bottle: 5 Calibration Sample, Level: 5
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.027	5.027	0.000	47156505791	400.000	391
M	2 Aroclor-1016				31246038687	2000.00	1780
	3 Aroclor 1016 (1)	5.552	5.552	0.000	2963935368	2000.00	1700
	4 Aroclor 1016 (2)	6.038	6.038	0.000	5471103923	2000.00	1710
	5 Aroclor 1016 (3)	6.645	6.645	0.000	13595028085	2000.00	1820
	6 Aroclor 1016 (4)	6.814	6.814	0.000	5613550046	2000.00	1760
	7 Aroclor 1016 (5)	6.893	6.893	0.000	3602421266	2000.00	1810
M	8 Aroclor-1260				48816556174	2000.00	1900
	9 Aroclor 1260 (1)	9.070	9.070	0.000	15907273501	2000.00	1870
	10 Aroclor 1260 (2)	9.516	9.516	0.000	12143560198	2000.00	1890
	11 Aroclor 1260 (3)	9.797	9.797	0.000	10200651004	2000.00	1890
	12 Aroclor 1260 (4)	10.870	10.870	0.000	3506601231	2000.00	1930
	13 Aroclor 1260 (5)	11.154	11.154	0.000	7058470239	2000.00	1950
$	56 Decachlorobiphenyl	11.683	11.683	0.000	56224925147	400.000	398

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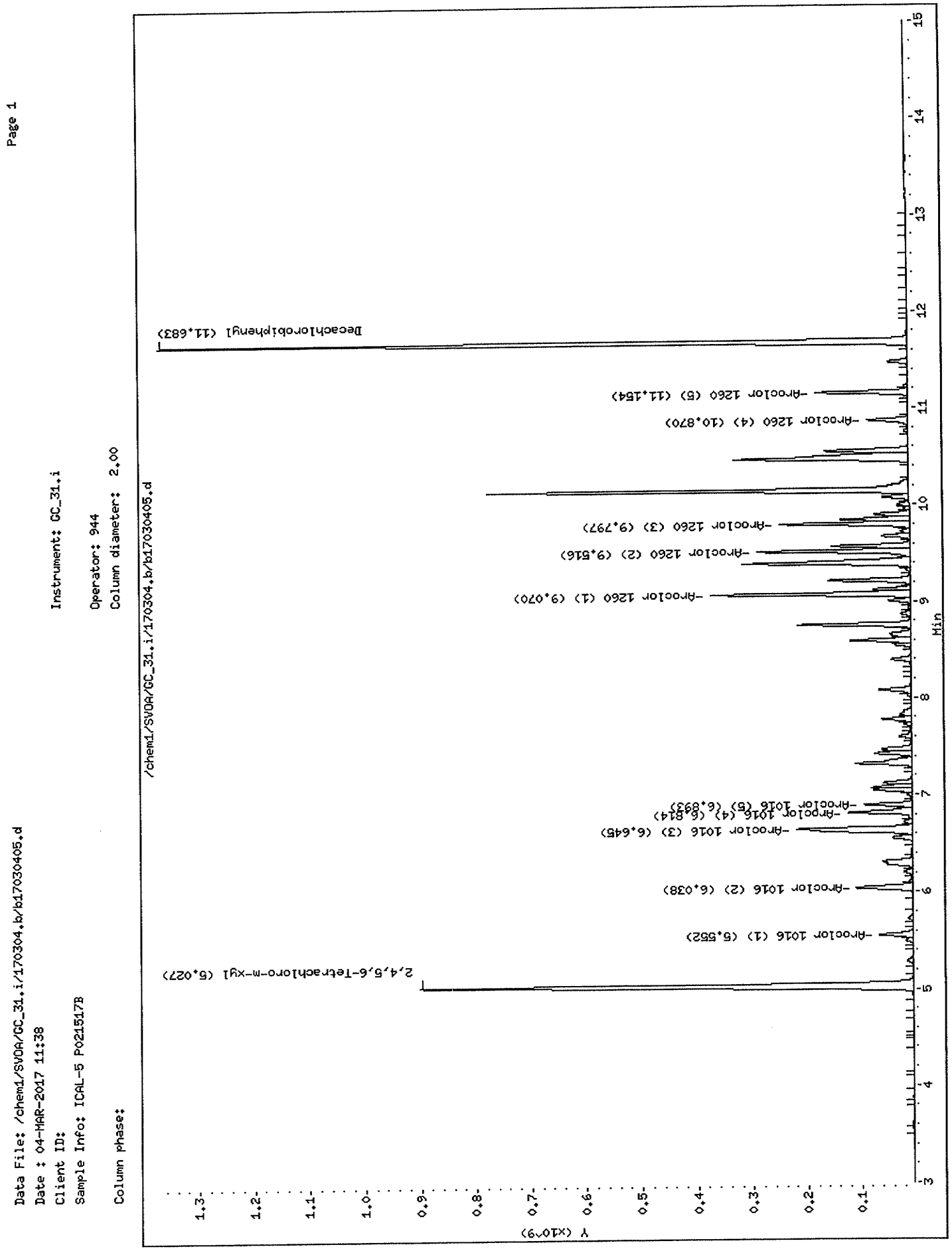

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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030406.d
Report Date: 06-Mar-2017 13:37

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170304.b/b17030406.d
Lab Smp Id:
Inj Date : 04-MAR-2017 11:57
Operator : 944 Inst ID: GC_31.i
Smp Info : ICV 500 P021517H
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Meth Date : 06-Mar-2017 13:37 uj3k Quant Type: ESTD
Cal Date : 04-MAR-2017 11:38 Cal File: b17030405.d
Als bottle: 6 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

		Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1	2,4,5,6-Tetrachloro-m-xylene	5.026	5.026	0.000	11372127443	100.000	94.2
M	2	Aroclor-1016				9848220144	500.000	560
	3	Aroclor 1016 (1)	5.552	5.552	0.000	1042852338	500.000	598
	4	Aroclor 1016 (2)	6.038	6.038	0.000	1753416511	500.000	548
	5	Aroclor 1016 (3)	6.645	6.645	0.000	4163622706	500.000	559
	6	Aroclor 1016 (4)	6.814	6.814	0.000	1772296009	500.000	555
	7	Aroclor 1016 (5)	6.892	6.892	0.000	1116032580	500.000	561
M	8	Aroclor-1260				14503686059	500.000	563
	9	Aroclor 1260 (1)	9.070	9.070	0.000	5013566253	500.000	590
	10	Aroclor 1260 (2)	9.516	9.516	0.000	3515064713	500.000	547
	11	Aroclor 1260 (3)	9.797	9.797	0.000	2952238813	500.000	546
	12	Aroclor 1260 (4)	10.871	10.871	0.000	986240429	500.000	543
	13	Aroclor 1260 (5)	11.156	11.156	0.000	2036575851	500.000	562
$	56	Decachlorobiphenyl	11.683	11.683	0.000	13463718491	100.000	95.4

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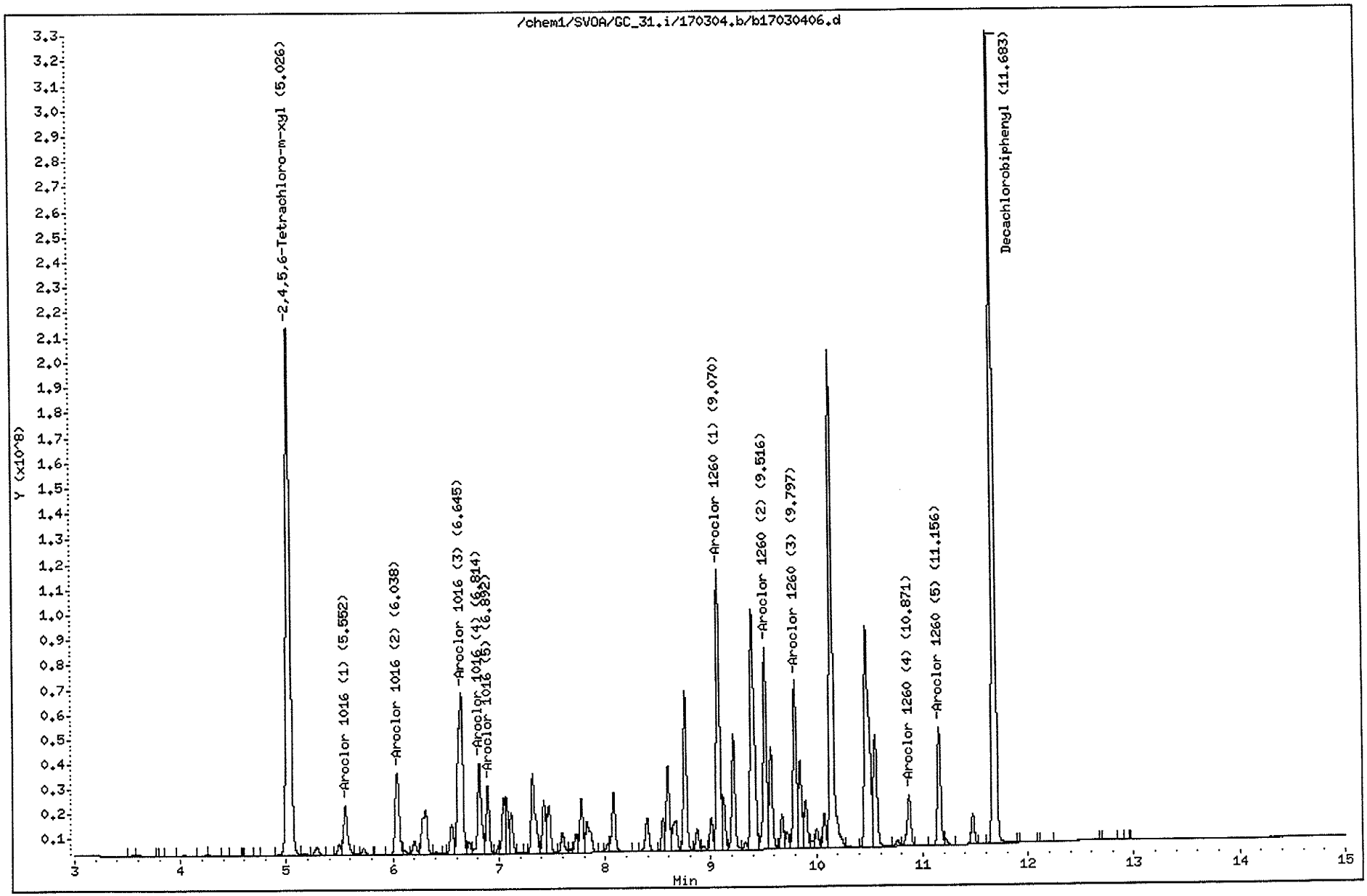
Data File: /chem1/SVOA/GC_31.i/170304.b/b17030406.d
Date : 04-MAR-2017 11:57
Client ID:
Sample Info: ICV 500 P021517H

Column phase:

Instrument: GC_31.i

Operator: 944
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030407.d

Report Date: 06-Mar-2017 13:59

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170304.b/b17030407.d
Lab Smp Id:
Inj Date : 04-MAR-2017 12:16
Operator : 944 Inst ID: GC_31.i
Smp Info : 1221/54 P120616M
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Meth Date : 06-Mar-2017 13:59 uj3k Quant Type: ESTD
Cal Date : 20-FEB-2017 17:55 Cal File: b17022011.d
Als bottle: 7 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1221_1254.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
M	14 Aroclor-1221				2984757077	500.000	500
	15 Aroclor 1221 (1)	4.230	4.230	0.000	430443011	500.000	500
	16 Aroclor 1221 (2)	5.283	5.283	0.000	584537488	500.000	500
	17 Aroclor 1221 (3)	5.494	5.494	0.000	357560063	500.000	500
	18 Aroclor 1221 (4)	5.551	5.551	0.000	1404598261	500.000	500
	19 Aroclor 1221 (5)	6.207	6.207	0.000	207618254	500.000	500
M	38 Aroclor-1254				14485654714	500.000	500
	39 Aroclor 1254 (1)	7.774	7.774	0.000	1771372509	500.000	500
	40 Aroclor 1254 (2)	8.080	8.080	0.000	3581040483	500.000	500
	41 Arcolor 1254 (3)	8.546	8.546	0.000	3879229685	500.000	500
	42 Aroclor 1254 (4)	8.866	8.866	0.000	2955100925	500.000	500
	43 Aroclor 1254 (5)	9.187	9.187	0.000	2298911112	500.000	500

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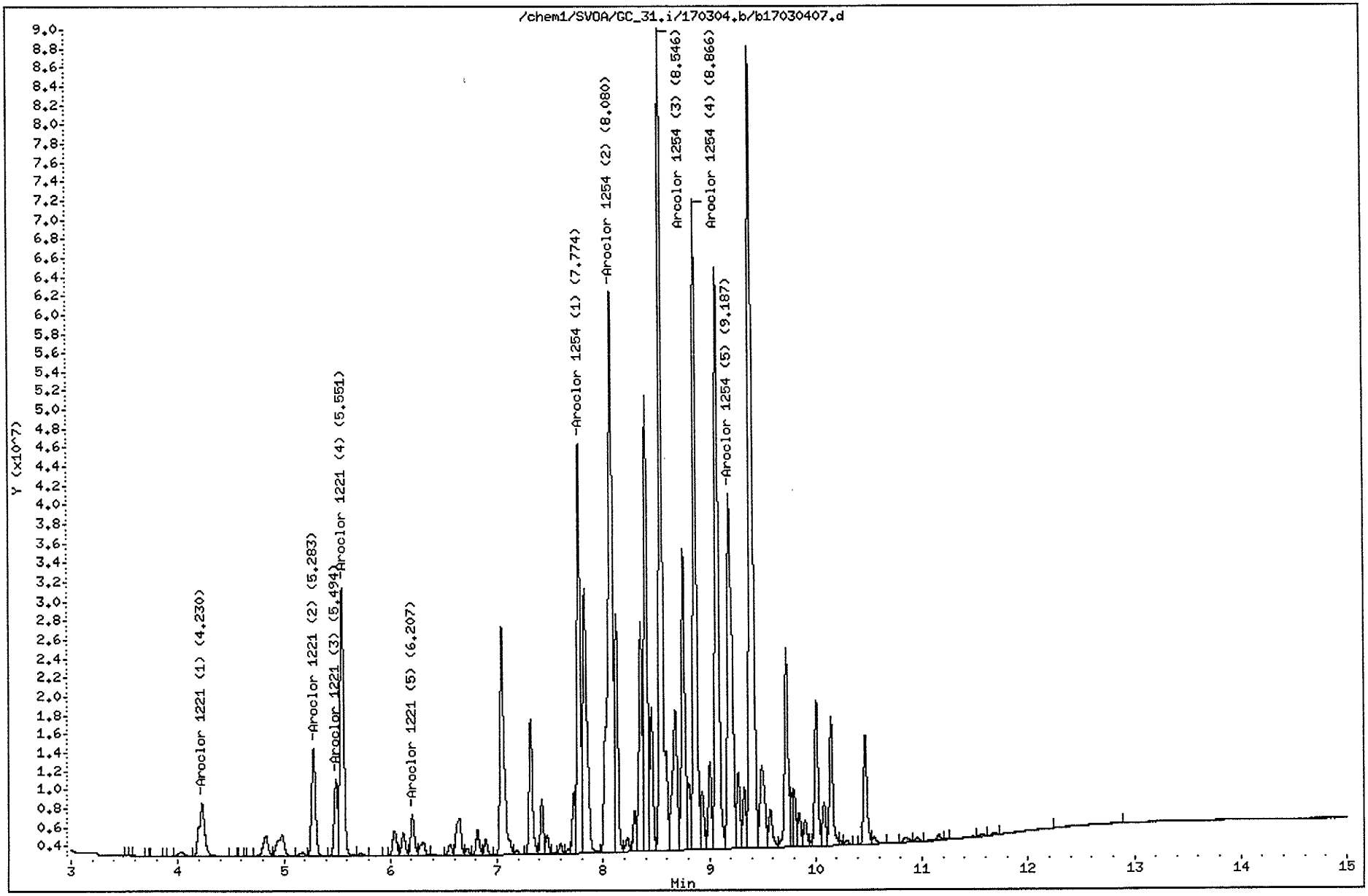
Data File: /chem1/SVOA/GC_31.i/170304.b/b17030407.d
Date : 04-MAR-2017 12:16
Client ID:
Sample Info: 1221/54 P120616M

Column phase:

Instrument: GC_31.i

Operator: 944
Column diameter: 2.00



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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030408.d
Report Date: 06-Mar-2017 13:59

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170304.b/b17030408.d
Lab Smp Id:
Inj Date : 04-MAR-2017 12:35
Operator : 944 Inst ID: GC_31.i
Smp Info : 1232/62 P120616N
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Meth Date : 06-Mar-2017 13:59 uj3k Quant Type: ESTD
Cal Date : 20-FEB-2017 17:55 Cal File: b17022011.d
Als bottle: 8 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1232_1262.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 20 Aroclor-1232				4807625868	500.000	500
21 Aroclor 1232 (1)	5.553	5.553	0.000	962839226	500.000	500
22 Aroclor 1232 (2)	6.039	6.039	0.000	788178867	500.000	500
23 Aroclor 1232 (3)	6.645	6.645	0.000	1795354238	500.000	500
24 Aroclor 1232 (4)	6.815	6.815	0.000	770028933	500.000	500
25 Aroclor 1232 (5)	6.893	6.893	0.000	491224604	500.000	500
M 44 Aroclor-1262				16008896196	500.000	500
45 Aroclor 1262 (1)	9.070	9.070	0.000	3170072761	500.000	500
46 Aroclor 1262 (2)	9.517	9.517	0.000	4868184050	500.000	500
47 Aroclor 1262 (3)	9.798	9.798	0.000	3589244055	500.000	500
48 Aroclor 1262 (4)	10.872	10.872	0.000	1316182204	500.000	500
49 Aroclor 1262 (5)	11.156	11.156	0.000	3065213126	500.000	500

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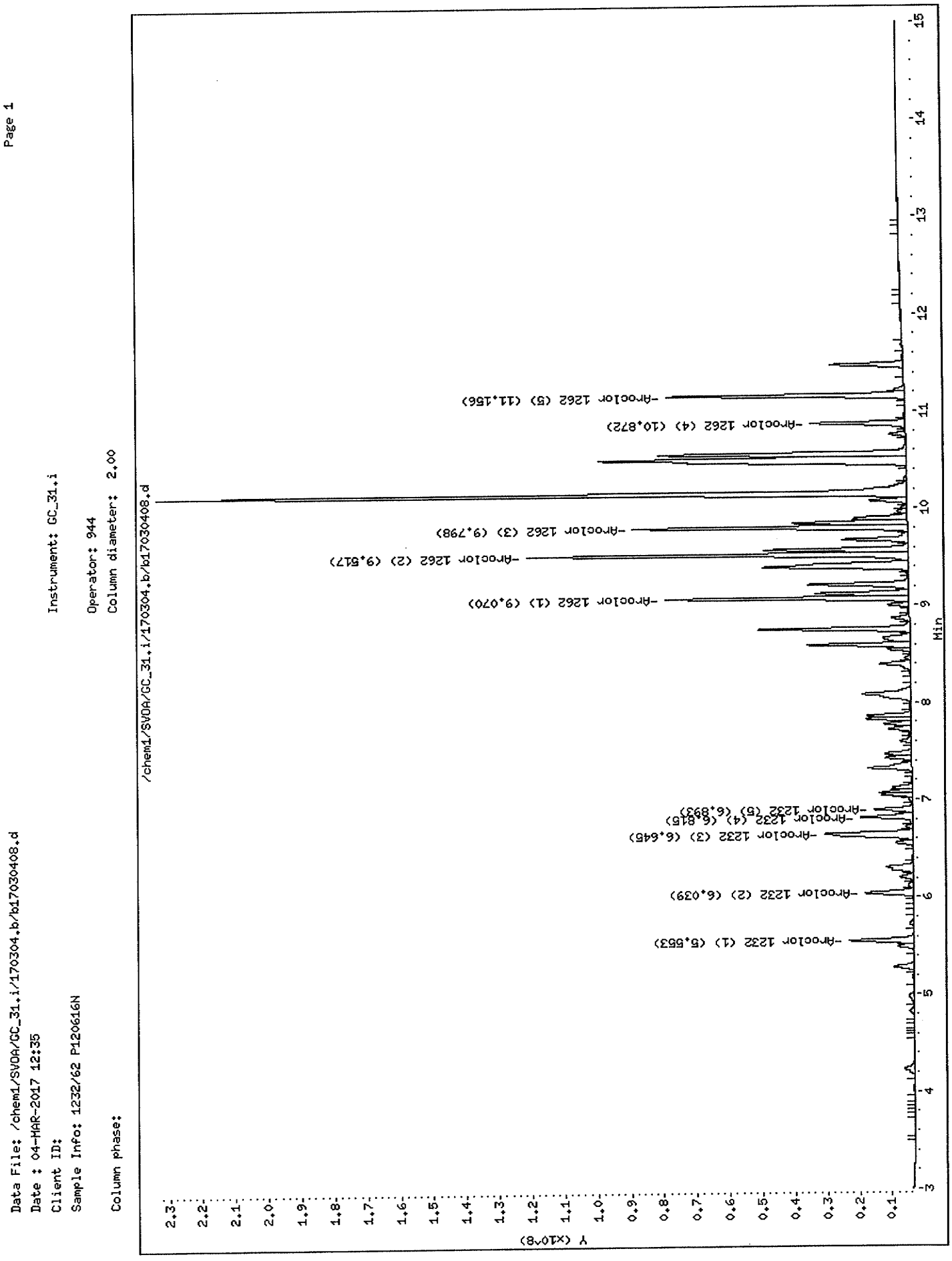

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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030409.d
Report Date: 06-Mar-2017 13:59

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170304.b/b17030409.d
Lab Smp Id:
Inj Date : 04-MAR-2017 12:54
Operator : 944 Inst ID: GC_31.i
Smp Info : 1248/68 P120616O
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Meth Date : 06-Mar-2017 13:59 uj3k Quant Type: ESTD
Cal Date : 20-FEB-2017 17:55 Cal File: b17022011.d
Als bottle: 9 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1248_1268.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 32 Aroclor-1248				6588259910	500.000	500
33 Aroclor 1248 (1)	6.643	6.643	0.000	1983342730	500.000	500
34 Arcolor 1248 (2)	7.070	7.070	0.000	872588556	500.000	500
35 Aroclor 1248 (3)	7.117	7.117	0.000	686007111	500.000	500
36 Aroclor 1248 (4)	7.318	7.318	0.000	1969334220	500.000	500
37 Aroclor 1248 (5)	7.422	7.422	0.000	1076987293	500.000	500
M 50 Aroclor-1268				57492389586	500.000	500
51 Aroclor 1268 (1)	10.500	10.500	0.000	10821644014	500.000	500
52 Aroclor 1268 (2)	10.544	10.544	0.000	9453598711	500.000	500
53 Aroclor 1268 (3)	10.761	10.761	0.000	8239694104	500.000	500
54 Aroclor 1268 (4)	11.157	11.157	0.000	3354119469	500.000	500
55 Aroclor 1268 (5)	11.473	11.473	0.000	25623333289	500.000	500

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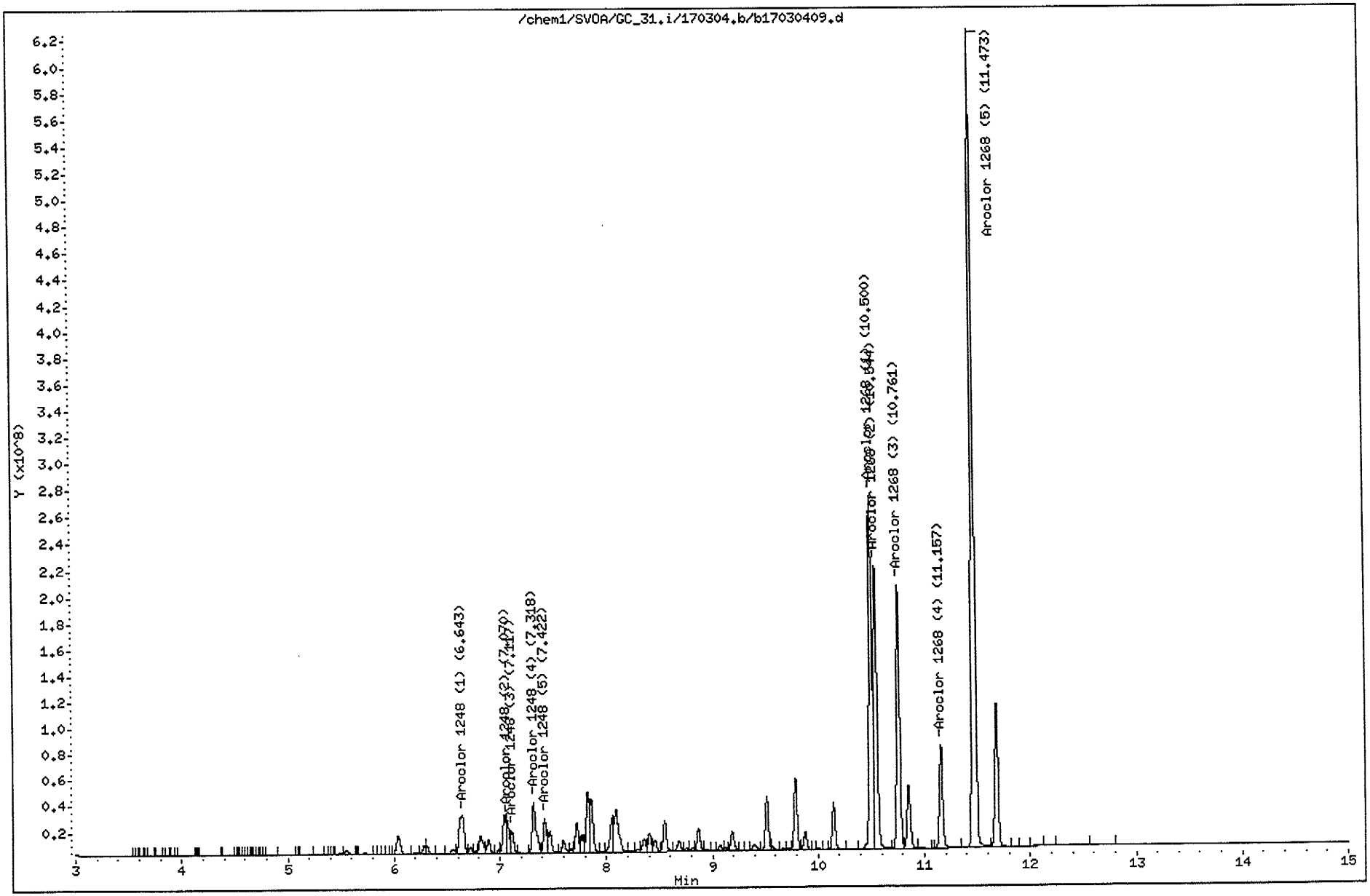
Data File: /chem1/SVOA/GC_31.i/170304.b/b17030409.d
Date : 04-MAR-2017 12:54
Client ID:
Sample Info: 1248/68 P1206160

Instrument: GC_31.i

Operator: 944
Column diameter: 2.00

Column phase:



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Data File: /chem1/SVOA/GC_31.i/170304.b/b17030410.d
Report Date: 06-Mar-2017 13:59

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170304.b/b17030410.d
Lab Smp Id:
Inj Date : 04-MAR-2017 13:13
Operator : 944 Inst ID: GC_31.i
Smp Info : 1242 P120616P
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170304.b/b8082-n2.m
Meth Date : 06-Mar-2017 13:59 uj3k Quant Type: ESTD
Cal Date : 04-MAR-2017 13:13 Cal File: b17030410.d
Als bottle: 10 Calibration Sample, Level: 3
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1242.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
M 26 Aroclor-1242				7029961718	500.000	500
27 Aroclor 1242 (1)	5.553	5.553	0.000	689971385	500.000	500
28 Aroclor 1242 (2)	6.039	6.039	0.000	1291836345	500.000	500
29 Aroclor 1242 (3)	6.646	6.646	0.000	2973708982	500.000	500
30 Aroclor 1242 (4)	6.815	6.815	0.000	1277895142	500.000	500
31 Aroclor 1242 (5)	6.893	6.893	0.000	796549864	500.000	500

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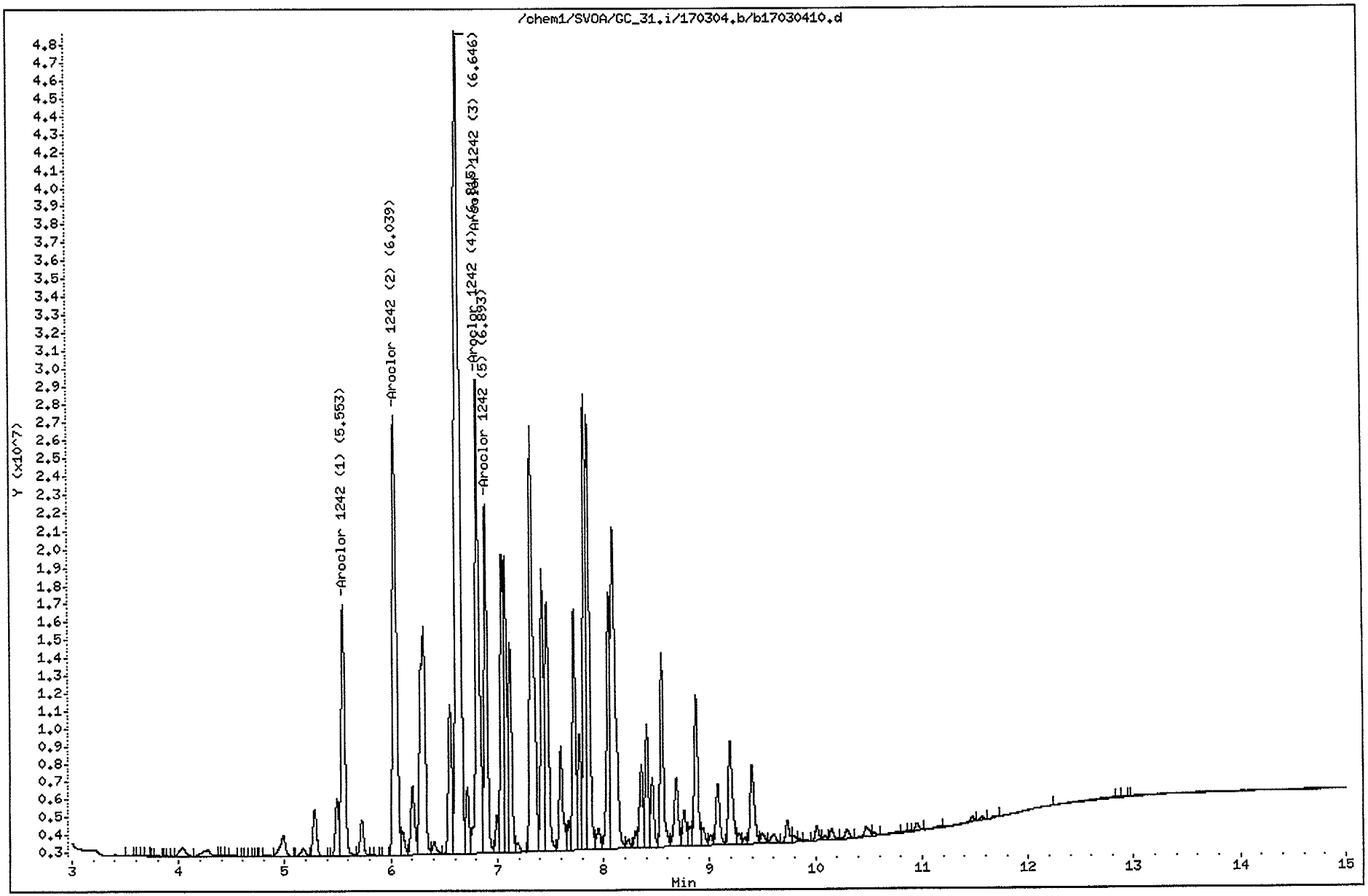
Data File: /chem1/SVOA/GC_31.i/170304.b/b17030410.d
Date : 04-MAR-2017 13:13
Client ID:
Sample Info: 1242 P120616P

Instrument: GC_31.i

Operator: 944
Column diameter: 2.00

Column phase:



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EPA METHOD 8082
PCB

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-0336**
INSTRUMENT: GC 31
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-06 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-07 17:27
REVIEWED BY: m
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_31/170307/b1703172617031726

 # 3 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-13S**

LCS/MB BATCH: 170306L05
MS/MSD BATCH: 170306S05
UNITS: ug/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.10 g
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	50	
Aroclor-1221	0.000	1.00	ND	50	
Aroclor-1232	0.000	1.00	ND	50	
Aroclor-1242	0.000	1.00	ND	50	
Aroclor-1248	0.000	1.00	ND	50	
Aroclor-1254	0.000	1.00	ND	50	
Aroclor-1260	0.000	1.00	ND	50	
Aroclor-1262	0.000	1.00	ND	50	
Aroclor-1268	0.000	1.00	ND	50	

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17031726.d
Report Date: 07-Mar-2017 18:48

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170307.b/b17031726.d
Lab Smp Id:
Inj Date : 07-MAR-2017 17:27
Operator : 944 Inst ID: GC_31.i
Smp Info : 17-03-0336-3
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m
Meth Date : 07-Mar-2017 15:59 src3 Quant Type: ESTD
Cal Date : 04-MAR-2017 13:13 Cal File: b17030410.d
Als bottle: 26
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.035	5.027	0.008	7612299704	63.0684	63.1
M	2 Aroclor-1016	Compound Not Detected.					
	3 Aroclor 1016 (1)	Compound Not Detected.					
	4 Aroclor 1016 (2)	Compound Not Detected.					
	5 Aroclor 1016 (3)	Compound Not Detected.					
	6 Aroclor 1016 (4)	Compound Not Detected.					
	7 Aroclor 1016 (5)	Compound Not Detected.					
M	8 Aroclor-1260	Compound Not Detected.					
	9 Aroclor 1260 (1)	Compound Not Detected.					
	10 Aroclor 1260 (2)	Compound Not Detected.					
	11 Aroclor 1260 (3)	Compound Not Detected.					
	12 Aroclor 1260 (4)	Compound Not Detected.					
	13 Aroclor 1260 (5)	Compound Not Detected.					
M	14 Aroclor-1221	Compound Not Detected.					
	15 Aroclor 1221 (1)	Compound Not Detected.					

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17031726.d
Report Date: 07-Mar-2017 18:48

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
	16 Aroclor 1221 (2)	Compound Not Detected.					
	17 Aroclor 1221 (3)	Compound Not Detected.					
	18 Aroclor 1221 (4)	Compound Not Detected.					
	19 Aroclor 1221 (5)	Compound Not Detected.					
M	20 Aroclor-1232	Compound Not Detected.					
	21 Aroclor 1232 (1)	Compound Not Detected.					
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	11.683	11.682	0.001	10758522502	76.2618	76.3

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17031726.d

Page 1

Date : 07-MAR-2017 17:27

Client ID:

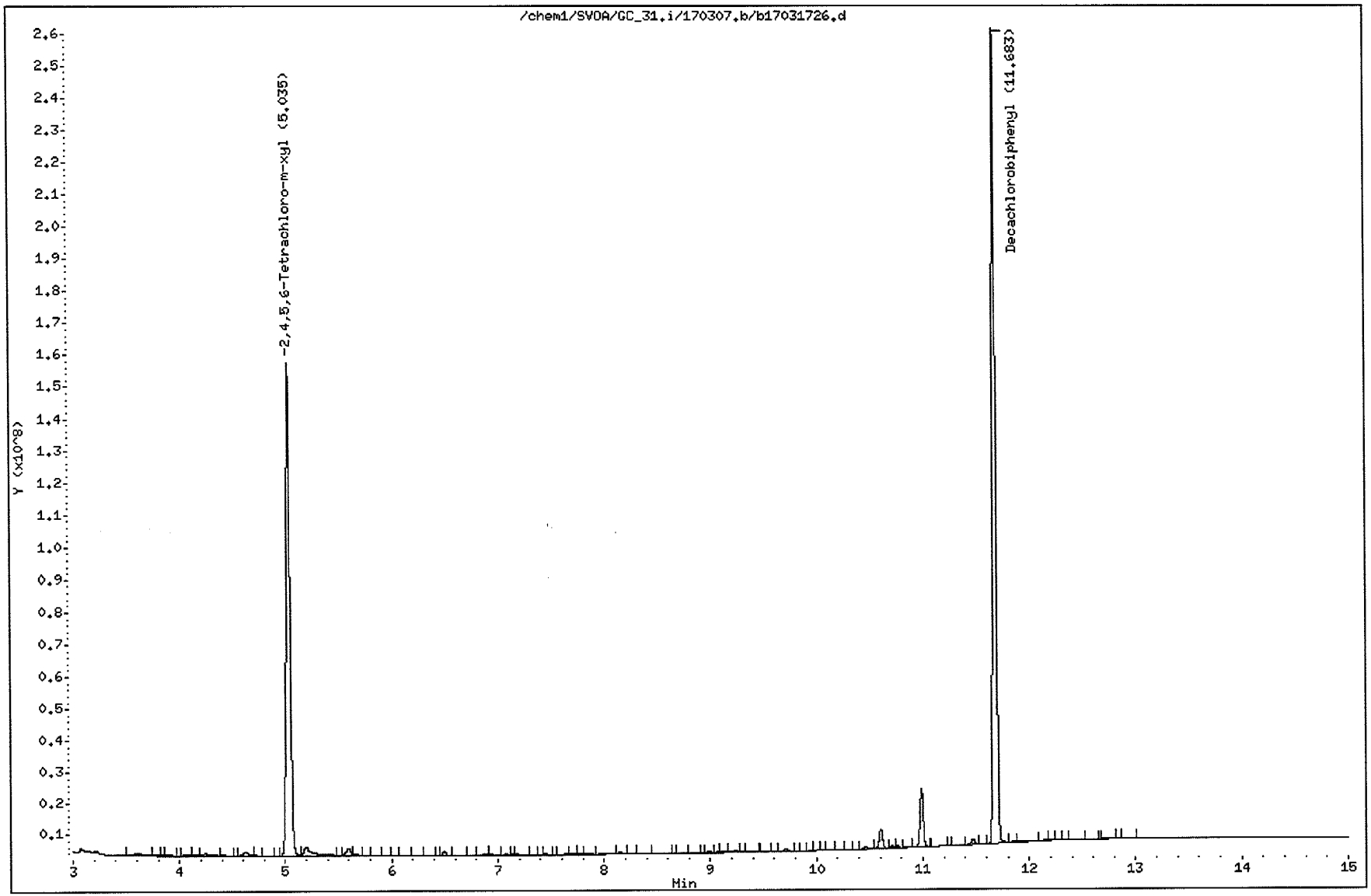
Instrument: GC_31.i

Sample Info: 17-03-0336-3

Operator: 944

Column phase:

Column diameter: 2.00



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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **17-03-0336**
INSTRUMENT: GC 31
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-06 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-07 17:44
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_31/170307/b1703172717031727

 # 4 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-25S**

LCS/MB BATCH: 170306L05
MS/MSD BATCH: 170306S05
UNITS: ug/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 20.00 g / ACTUAL: 20.10 g
FINAL VOLUME / WEIGHT: DEFAULT: 10.00 ml / ACTUAL: 10.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT: Results were evaluated to the MDL (DL), concentrations >= to the MDL (DL) but < RL (LOQ), if found, are qualified with a "J" flag.

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	50	
Aroclor-1221	0.000	1.00	ND	50	
Aroclor-1232	0.000	1.00	ND	50	
Aroclor-1242	0.000	1.00	ND	50	
Aroclor-1248	0.000	1.00	ND	50	
Aroclor-1254	0.000	1.00	ND	50	
Aroclor-1260	0.000	1.00	ND	50	
Aroclor-1262	0.000	1.00	ND	50	
Aroclor-1268	0.000	1.00	ND	50	

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17031727.d
Report Date: 07-Mar-2017 18:48

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170307.b/b17031727.d
Lab Smp Id:
Inj Date : 07-MAR-2017 17:44
Operator : 944 Inst ID: GC_31.i
Smp Info : 17-03-0336-4
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m
Meth Date : 07-Mar-2017 15:59 src3 Quant Type: ESTD
Cal Date : 04-MAR-2017 13:13 Cal File: b17030410.d
Als bottle: 27
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

			RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
$	1	2,4,5,6-Tetrachloro-m-xylene	5.034	5.027	0.007	7849849219	65.0365	65.0
M	2	Aroclor-1016	Compound Not Detected.					
	3	Aroclor 1016 (1)	Compound Not Detected.					
	4	Aroclor 1016 (2)	Compound Not Detected.					
	5	Aroclor 1016 (3)	Compound Not Detected.					
	6	Aroclor 1016 (4)	Compound Not Detected.					
	7	Aroclor 1016 (5)	Compound Not Detected.					
M	8	Aroclor-1260	Compound Not Detected.					
	9	Aroclor 1260 (1)	Compound Not Detected.					
	10	Aroclor 1260 (2)	Compound Not Detected.					
	11	Aroclor 1260 (3)	Compound Not Detected.					
	12	Aroclor 1260 (4)	Compound Not Detected.					
	13	Aroclor 1260 (5)	Compound Not Detected.					
M	14	Aroclor-1221	Compound Not Detected.					
	15	Aroclor 1221 (1)	Compound Not Detected.					

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17031727.d
Report Date: 07-Mar-2017 18:48

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
	16 Aroclor 1221 (2)	Compound Not Detected.					
	17 Aroclor 1221 (3)	Compound Not Detected.					
	18 Aroclor 1221 (4)	Compound Not Detected.					
	19 Aroclor 1221 (5)	Compound Not Detected.					
M	20 Aroclor-1232	Compound Not Detected.					
	21 Aroclor 1232 (1)	Compound Not Detected.					
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	11.682	11.682	0.000	10755973596	76.2438	76.2

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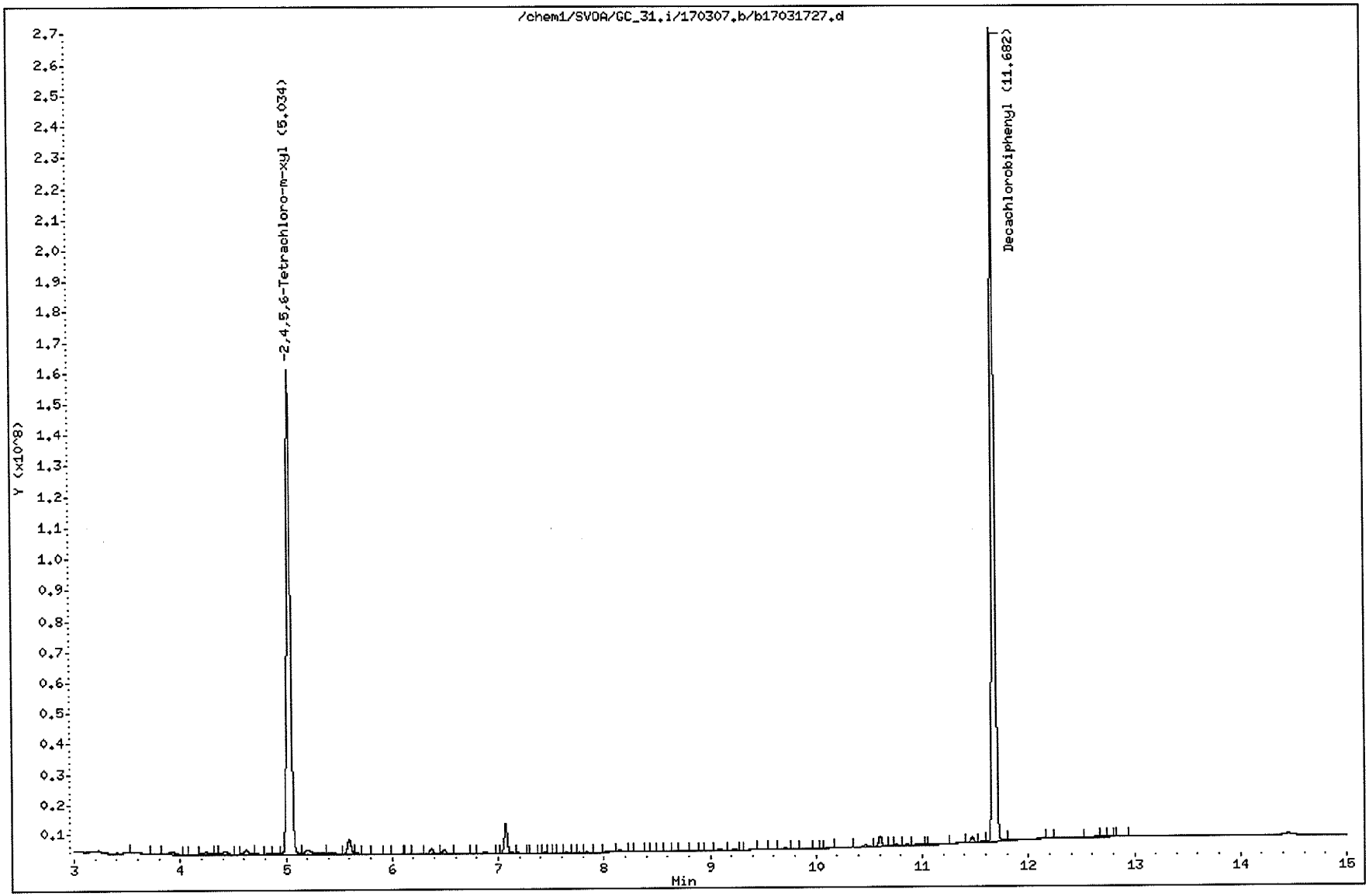
Data File: /chem1/SVOA/GC_31.i/170307.b/b17031727.d
Date : 07-MAR-2017 17:44
Client ID:
Sample Info: 17-03-0336-4

Instrument: GC_31.i

Operator: 944
Column diameter: 2.00

Column phase:



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EPA METHOD 8082
PCB

Quality Control

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

MB SAMPLE ID: **099-12-535-4077**
MB BATCH ID: 170306L05
INSTRUMENT: GC 31
EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-06 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-07 09:57
REVIEWED BY:
D/T REVIEWED:
MATRIX: Soil

DATA FILE: /chem1/SVOA/GC_31/170307/b1703070217030702

CLIENT WORK ORDER: **17-03-0336**

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
3		D-DU2-S-SG-05-13S	2017-03-07 17:27	/chem1/SVOA/GC_31/170307/b1703172617031726
4		D-DU2-S-SG-05-25S	2017-03-07 17:44	/chem1/SVOA/GC_31/170307/b1703172717031727

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RAW DATA SHEET
FOR METHOD: EPA 8082

WORK ORDER: **099-12-535**
INSTRUMENT: GC 31
EXTRACTION : EPA 3545
D/T EXTRACTED: 2017-03-06 00:00

ANALYZED BY: 944
D/T ANALYZED: 2017-03-07 09:57
REVIEWED BY:
D/T REVIEWED:

DATA FILE: /chem1/SVOA/GC_31/170307/b1703070217030702

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH: 170306L05
MS/MSD BATCH:
UNITS: ug/kg

SAMPLE VOLUME / WEIGHT: DEFAULT: 1.00 / ACTUAL: 1.00
FINAL VOLUME / WEIGHT: DEFAULT: 1.00 ml / ACTUAL: 1.00 ml
ADJUSTMENT RATIO TO PF: 1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Aroclor-1016	0.000	1.00	ND	50	
Aroclor-1221	0.000	1.00	ND	50	
Aroclor-1232	0.000	1.00	ND	50	
Aroclor-1242	0.000	1.00	ND	50	
Aroclor-1248	0.000	1.00	ND	50	
Aroclor-1254	0.000	1.00	ND	50	
Aroclor-1260	0.000	1.00	ND	50	
Aroclor-1262	0.000	1.00	ND	50	
Aroclor-1268	0.000	1.00	ND	50	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

LCS SAMPLE ID:	**099-12-535- 4077**	EXTRACTION :	EPA 3545	ANALYZED BY:	944
LCS/MB BATCH ID:	170306L05	D/T EXTRACTED:	2017-03-06 00:00	D/T ANALYZED:	2017-03-07 10:16
INSTRUMENT:	GC 31			REVIEWED BY:	
				D/T REVIEWED:	

DATA FILE: /chem1/SVOA/GC_31/170307/b1703070317030703

COMPOUND NAME	CONC ADDED	CONC REC	%RECOVERY	%REC CONTROL LIMIT	STATUS	QUALIFIERS
Aroclor-1016	100.0	88.50	88	50-135	PASS	
Aroclor-1260	100.0	89.00	89	50-135	PASS	

MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

SPIKED SAMPLE ID: **17-03-0341-1**
MS/MSD BATCH: 170306S05
INSTRUMENTS:
SAMPLE: GC 31
MS: GC 31
MSD: GC 31

EXTRACTION: EPA 3545
D/T EXTRACTED:
SAMPLE: 2017-03-06 00:00
MS: 2017-03-06 00:00
MSD: 2017-03-06 00:00

ANALYZED BY: 944
D/T ANALYZED:
SAMPLE: 2017-03-07 11:09
MS: 2017-03-07 10:34
MSD: 2017-03-07 10:53
REVIEWED BY: 27
D/T REVIEWED: 2017-03-07 14:34

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Aroclor-1016	ND	200.0	100.0	67.00	67	76.50	76	50-135	13	0-20	PASS	
Aroclor-1260	ND	200.0	100.0	81.50	82	93.00	93	50-135	13	0-20	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	17030704	/chem1/SVOA/GC_31/170307/b17030704
MSD	17030705	/chem1/SVOA/GC_31/170307/b17030705

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SURROGATE RECOVERIES
FOR METHOD: EPA 8082

WORK ORDER: 17-03-0336
BATCH ID:
LCS/MB: 170306L05
MS: 170306S05
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

3 CLIENT SAMPLE NUMBER : D-DU2-S-SG-05-13S

INSTRUMENT: GC 31
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: /chem1/SVOA/GC_31/170307/b1703172617031726

ANALYZED BY: 944
D/T ANALYZED 2017-03-07 17:27

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	76	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	63	25-145	PASS	

4 CLIENT SAMPLE NUMBER : D-DU2-S-SG-05-25S

INSTRUMENT: GC 31
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: /chem1/SVOA/GC_31/170307/b1703172717031727

ANALYZED BY: 944
D/T ANALYZED 2017-03-07 17:44

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	76	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	65	25-145	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC 31
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: /chem1/SVOA/GC_31/170307/b1703070217030702

ANALYZED BY: 944
D/T ANALYZED 2017-03-07 09:57

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	76	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	67	25-145	PASS	

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC 31
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: /chem1/SVOA/GC_31/170307/b1703070317030703

ANALYZED BY: 944
D/T ANALYZED 2017-03-07 10:16

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	76	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	72	25-145	PASS	

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SURROGATE RECOVERIES FOR METHOD: EPA 8082

WORK ORDER: 17-03-0336
BATCH ID:
LCS/MB:
MS: **170306S05**
EXTRACTION : EPA 3545

REVIEWED BY: 27
D/T REVIEWED: 2017-03-07 14:34

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC 31
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: /chem1/SVOA/GC_31/170307/b1703070417030704

ANALYZED BY: 944
D/T ANALYZED 2017-03-07 10:34

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	70	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	52	25-145	PASS	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

INSTRUMENT: GC 31
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: /chem1/SVOA/GC_31/170307/b1703070517030705

ANALYZED BY: 944
D/T ANALYZED 2017-03-07 10:53

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
Decachlorobiphenyl	84	24-168	PASS	
2,4,5,6-Tetrachloro-m-Xylene	59	25-145	PASS	

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17030702.d
Report Date: 07-Mar-2017 10:21

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170307.b/b17030702.d
Lab Smp Id:
Inj Date : 07-MAR-2017 09:57
Operator : 944 Inst ID: GC_31.i
Smp Info : MB 170306L05
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m
Meth Date : 07-Mar-2017 10:11 src3 Quant Type: ESTD
Cal Date : 04-MAR-2017 13:13 Cal File: b17030410.d
Als bottle: 2 QC Sample: BLANK
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

			RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
$	1	2,4,5,6-Tetrachloro-m-xylene	5.033	5.026	0.007	8097038922	67.0845	67.1
M	2	Aroclor-1016	Compound Not Detected.					
	3	Aroclor 1016 (1)	Compound Not Detected.					
	4	Aroclor 1016 (2)	Compound Not Detected.					
	5	Aroclor 1016 (3)	Compound Not Detected.					
	6	Aroclor 1016 (4)	Compound Not Detected.					
	7	Aroclor 1016 (5)	Compound Not Detected.					
M	8	Aroclor-1260	Compound Not Detected.					
	9	Aroclor 1260 (1)	Compound Not Detected.					
	10	Aroclor 1260 (2)	Compound Not Detected.					
	11	Aroclor 1260 (3)	Compound Not Detected.					
	12	Aroclor 1260 (4)	Compound Not Detected.					
	13	Aroclor 1260 (5)	Compound Not Detected.					
M	14	Aroclor-1221	Compound Not Detected.					
	15	Aroclor 1221 (1)	Compound Not Detected.					

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17030702.d
Report Date: 07-Mar-2017 10:21

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
	16 Aroclor 1221 (2)	Compound Not Detected.					
	17 Aroclor 1221 (3)	Compound Not Detected.					
	18 Aroclor 1221 (4)	Compound Not Detected.					
	19 Aroclor 1221 (5)	Compound Not Detected.					
M	20 Aroclor-1232	Compound Not Detected.					
	21 Aroclor 1232 (1)	Compound Not Detected.					
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	11.684	11.682	0.002	10687107036	75.7556	75.8

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17030702.d

Page 1

Date : 07-MAR-2017 09:57

Client ID:

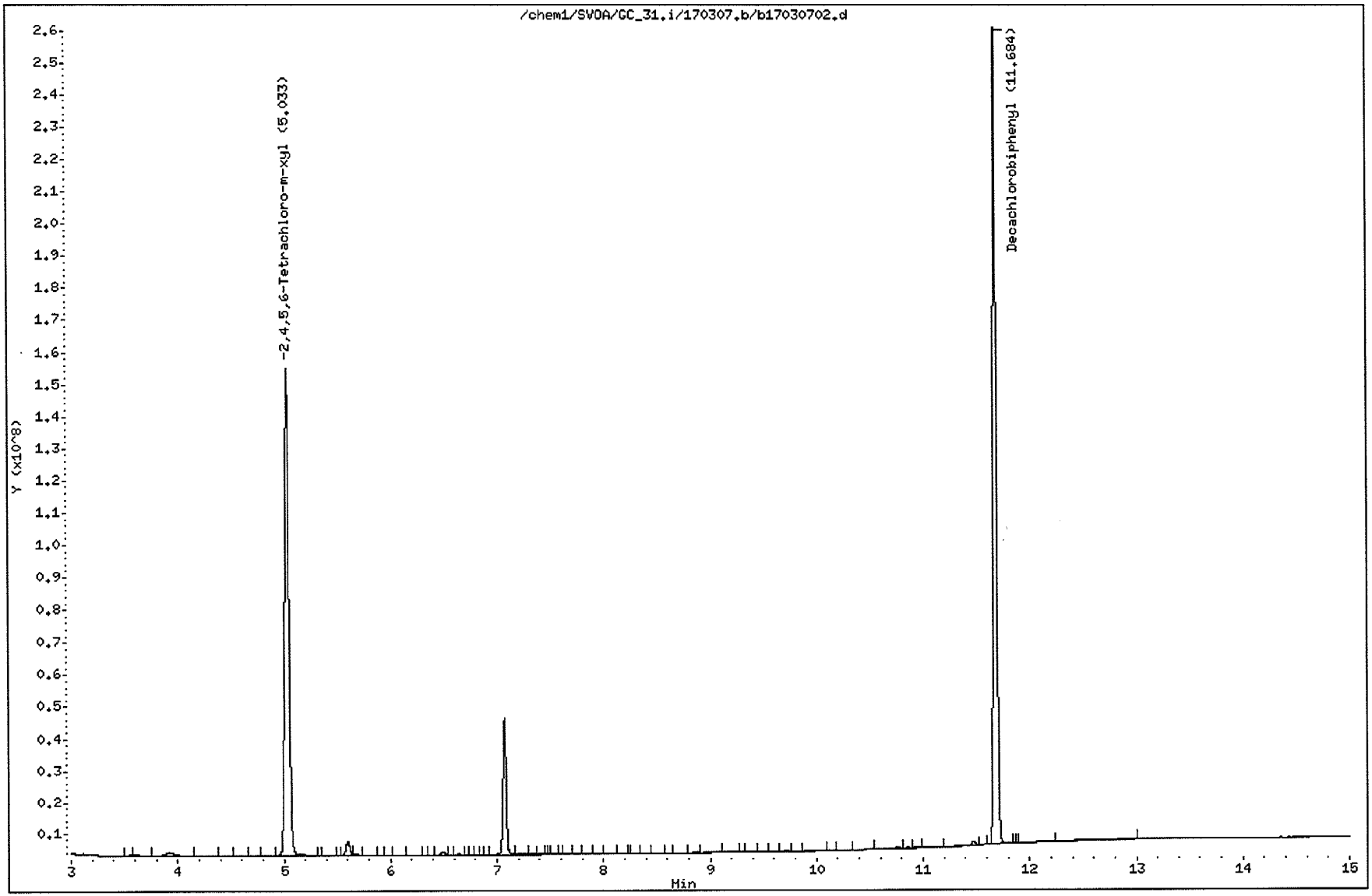
Instrument: GC_31.i

Sample Info: MB 170306L05

Operator: 944

Column phase:

Column diameter: 2.00



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Data File: /chem1/SVOA/GC_31.i/170307.b/b17030703.d Page 1
Report Date: 07-Mar-2017 10:38

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170307.b/b17030703.d
Lab Smp Id:
Inj Date : 07-MAR-2017 10:16
Operator : 944 Inst ID: GC_31.i
Smp Info : LCS 170306L05
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m
Meth Date : 07-Mar-2017 10:11 src3 Quant Type: ESTD
Cal Date : 04-MAR-2017 13:13 Cal File: b17030410.d
Als bottle: 3 QC Sample: LCS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.028	5.026	0.002	8756468481	72.5479	72.5
M	2 Aroclor-1016				3116987187	177.336	177
	3 Aroclor 1016 (1)	5.556	5.553	0.003	310730387	178.064	178
	4 Aroclor 1016 (2)	6.039	6.039	0.000	576848798	180.229	180
	5 Aroclor 1016 (3)	6.648	6.646	0.002	1309386824	175.736	176
	6 Aroclor 1016 (4)	6.816	6.815	0.001	570562798	178.716	179
	7 Aroclor 1016 (5)	6.895	6.893	0.002	349458380	175.818	176
M	8 Aroclor-1260				4588506317	178.128	178
	9 Aroclor 1260 (1)	9.070	9.071	-0.001	1597063496	188.100	188
	10 Aroclor 1260 (2)	9.517	9.517	0.000	1108206877	172.472	172
	11 Aroclor 1260 (3)	9.797	9.798	-0.001	940793281	174.142	174
	12 Aroclor 1260 (4)	10.869	10.870	-0.001	309046741	170.303	170
	13 Aroclor 1260 (5)	11.154	11.155	-0.001	633395922	174.657	175
$	56 Decachlorobiphenyl	11.681	11.682	-0.001	10782602083	76.4325	76.4

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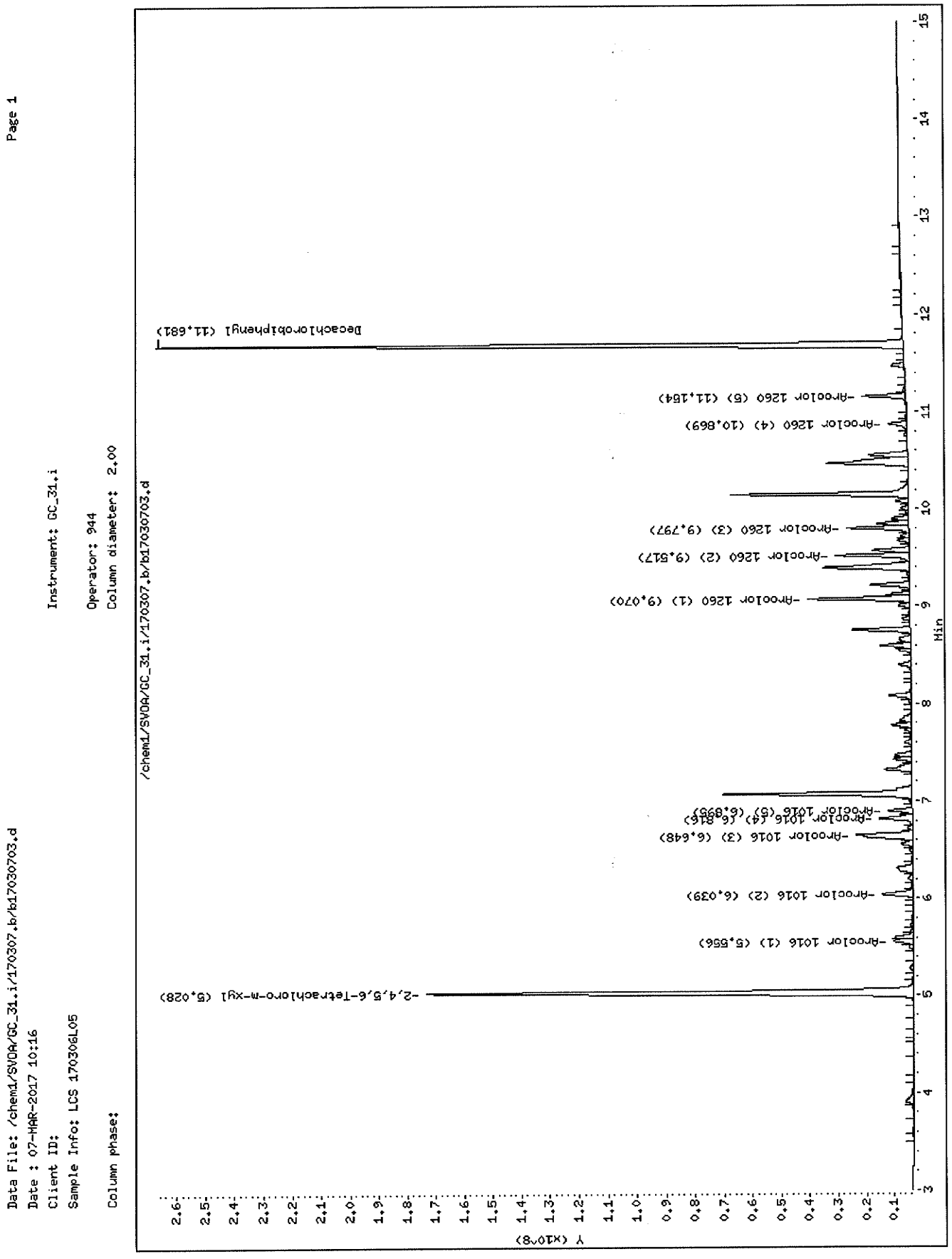

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17030704.d Page 1
Report Date: 07-Mar-2017 11:04

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170307.b/b17030704.d
Lab Smp Id:
Inj Date : 07-MAR-2017 10:34
Operator : 944 Inst ID: GC_31.i
Smp Info : MS 17-03-0341-1
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m
Meth Date : 07-Mar-2017 10:11 src3 Quant Type: ESTD
Cal Date : 04-MAR-2017 13:13 Cal File: b17030410.d
Als bottle: 4 QC Sample: MS
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.032	5.026	0.006	6263723005	51.8954	51.9
M	2 Aroclor-1016				2364131829	134.503	134
	3 Aroclor 1016 (1)	5.561	5.553	0.008	220412092	126.307	126
	4 Aroclor 1016 (2)	6.044	6.039	0.005	434244414	135.674	136
	5 Aroclor 1016 (3)	6.649	6.646	0.003	991898999	133.125	133
	6 Aroclor 1016 (4)	6.818	6.815	0.003	439747744	137.741	138
	7 Aroclor 1016 (5)	6.896	6.893	0.003	277828580	139.780	140
M	8 Aroclor-1260				4192670095	162.761	163
	9 Aroclor 1260 (1)	9.071	9.071	0.000	1427182588	168.092	168
	10 Aroclor 1260 (2)	9.517	9.517	0.000	1010016322	157.190	157
	11 Aroclor 1260 (3)	9.799	9.798	0.001	874518581	161.874	162
	12 Aroclor 1260 (4)	10.870	10.870	0.000	292191181	161.015	161
	13 Aroclor 1260 (5)	11.155	11.155	0.000	588761423	162.349	162
$	56 Decachlorobiphenyl	11.683	11.682	0.001	9917684398	70.3016	70.3

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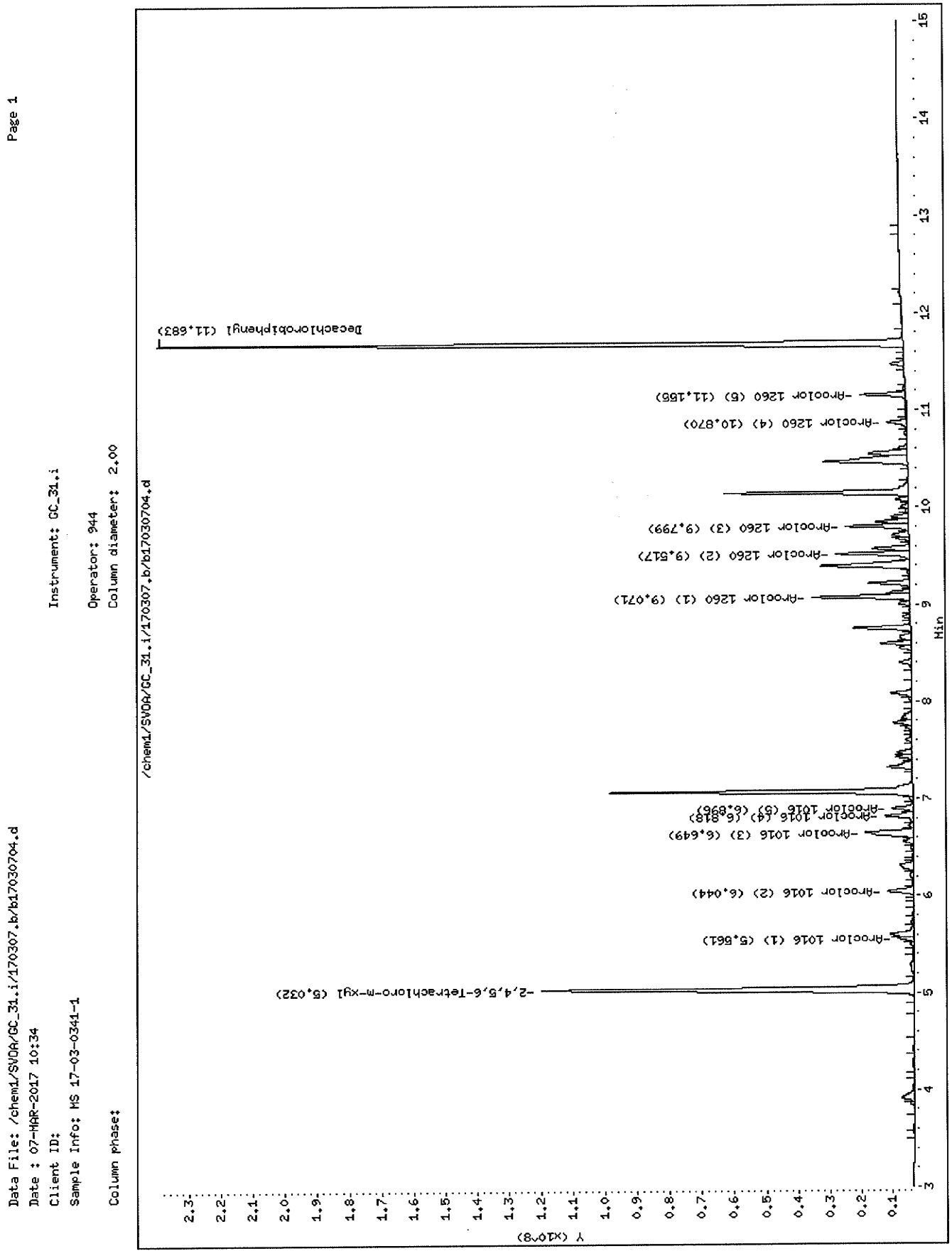

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17030705.d Page 1
Report Date: 07-Mar-2017 11:17

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170307.b/b17030705.d
Lab Smp Id:
Inj Date : 07-MAR-2017 10:53
Operator : 944 Inst ID: GC_31.i
Smp Info : MSD 17-03-0341-1
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m
Meth Date : 07-Mar-2017 10:11 src3 Quant Type: ESTD
Cal Date : 04-MAR-2017 13:13 Cal File: b17030410.d
Als bottle: 5 QC Sample: MSD
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * CpndVariable

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (ug/Kg)
$ 1	2,4,5,6-Tetrachloro-m-xylene	5.027	5.026	0.001	7121409789	59.0014	59.0
M 2	Aroclor-1016				2684586414	152.735	153
3	Aroclor 1016 (1)	5.555	5.553	0.002	253164806	145.076	145
4	Aroclor 1016 (2)	6.038	6.039	-0.001	489163465	152.833	153
5	Aroclor 1016 (3)	6.646	6.646	0.000	1131946854	151.921	152
6	Aroclor 1016 (4)	6.815	6.815	0.000	498624949	156.183	156
7	Aroclor 1016 (5)	6.894	6.893	0.001	311686340	156.815	157
M 8	Aroclor-1260				4796409802	186.199	186
9	Aroclor 1260 (1)	9.070	9.071	-0.001	1623821794	191.252	191
10	Aroclor 1260 (2)	9.516	9.517	-0.001	1155987513	179.908	180
11	Aroclor 1260 (3)	9.797	9.798	-0.001	991229890	183.477	183
12	Aroclor 1260 (4)	10.868	10.870	-0.002	335806288	185.049	185
13	Aroclor 1260 (5)	11.154	11.155	-0.001	689564317	190.145	190
$ 56	Decachlorobiphenyl	11.682	11.682	0.000	11784765068	83.5364	83.5

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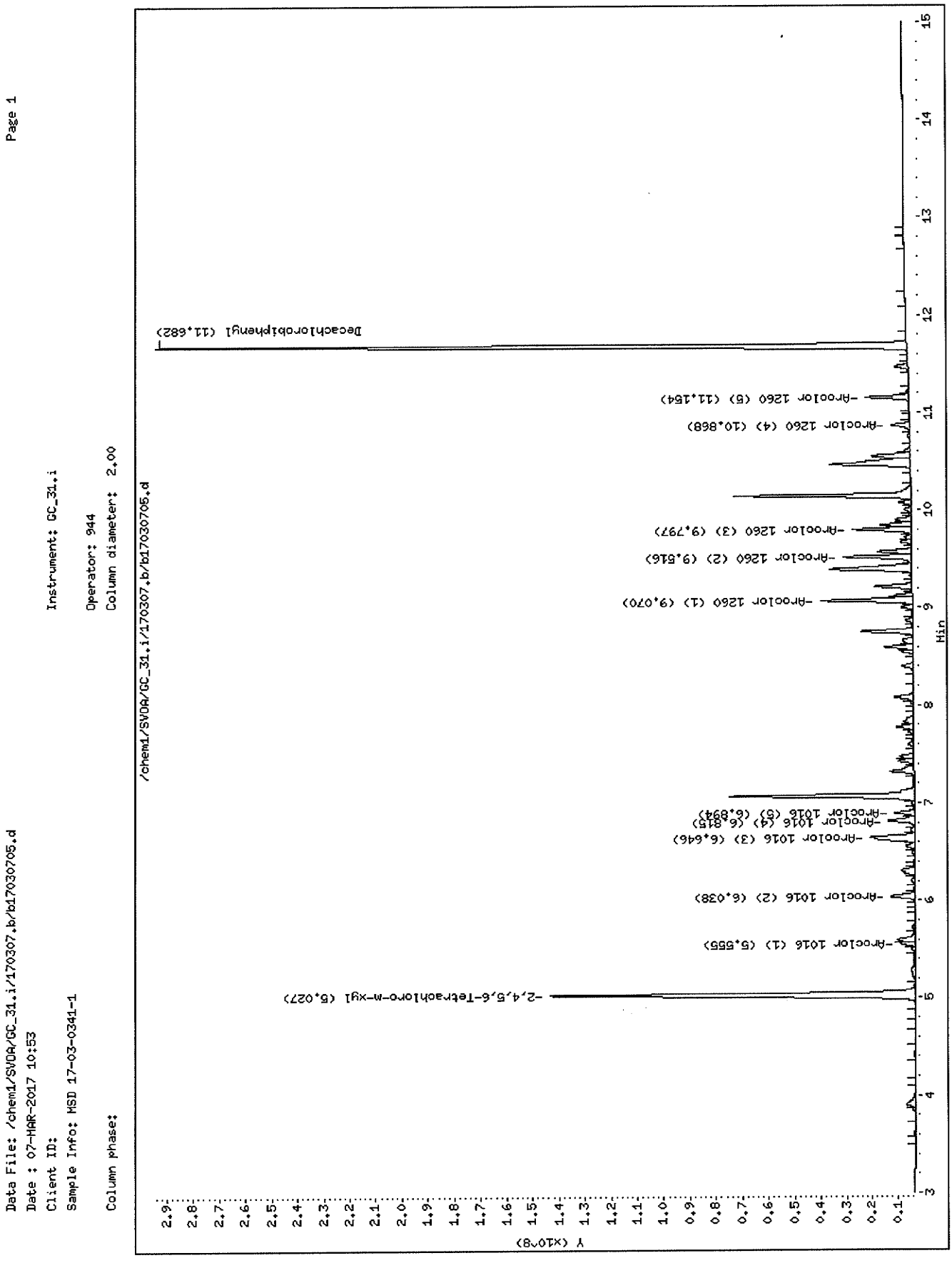

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17030706.d Page 1
Report Date: 07-Mar-2017 13:38

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170307.b/b17030706.d
Lab Smp Id:
Inj Date : 07-MAR-2017 11:09
Operator : 944 Inst ID: GC_31.i
Smp Info : 17-03-0341-1
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m
Meth Date : 07-Mar-2017 10:11 src3 Quant Type: ESTD
Cal Date : 04-MAR-2017 13:13 Cal File: b17030410.d
Als bottle: 6
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: all.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

						CONCENTRATIONS	
						ON-COLUMN	FINAL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(uG)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.045	5.026	0.019	7429275744	61.5521	61.6
M	2 Aroclor-1016	Compound Not Detected.					
	3 Aroclor 1016 (1)	Compound Not Detected.					
	4 Aroclor 1016 (2)	Compound Not Detected.					
	5 Aroclor 1016 (3)	Compound Not Detected.					
	6 Aroclor 1016 (4)	Compound Not Detected.					
	7 Aroclor 1016 (5)	Compound Not Detected.					
M	8 Aroclor-1260	Compound Not Detected.					
	9 Aroclor 1260 (1)	Compound Not Detected.					
	10 Aroclor 1260 (2)	Compound Not Detected.					
	11 Aroclor 1260 (3)	Compound Not Detected.					
	12 Aroclor 1260 (4)	Compound Not Detected.					
	13 Aroclor 1260 (5)	Compound Not Detected.					
M	14 Aroclor-1221	Compound Not Detected.					
	15 Aroclor 1221 (1)	Compound Not Detected.					

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17030706.d
Report Date: 07-Mar-2017 13:38

	Compounds	RT	EXP RT	DLT RT	RESPONSE	CONCENTRATIONS ON-COLUMN (ppb)	CONCENTRATIONS FINAL (uG)
	16 Aroclor 1221 (2)	Compound Not Detected.					
	17 Aroclor 1221 (3)	Compound Not Detected.					
	18 Aroclor 1221 (4)	Compound Not Detected.					
	19 Aroclor 1221 (5)	Compound Not Detected.					
M	20 Aroclor-1232	Compound Not Detected.					
	21 Aroclor 1232 (1)	Compound Not Detected.					
	22 Aroclor 1232 (2)	Compound Not Detected.					
	23 Aroclor 1232 (3)	Compound Not Detected.					
	24 Aroclor 1232 (4)	Compound Not Detected.					
	25 Aroclor 1232 (5)	Compound Not Detected.					
M	26 Aroclor-1242	Compound Not Detected.					
	27 Aroclor 1242 (1)	Compound Not Detected.					
	28 Aroclor 1242 (2)	Compound Not Detected.					
	29 Aroclor 1242 (3)	Compound Not Detected.					
	30 Aroclor 1242 (4)	Compound Not Detected.					
	31 Aroclor 1242 (5)	Compound Not Detected.					
M	32 Aroclor-1248	Compound Not Detected.					
	33 Aroclor 1248 (1)	Compound Not Detected.					
	34 Arcolor 1248 (2)	Compound Not Detected.					
	35 Aroclor 1248 (3)	Compound Not Detected.					
	36 Aroclor 1248 (4)	Compound Not Detected.					
	37 Aroclor 1248 (5)	Compound Not Detected.					
M	38 Aroclor-1254	Compound Not Detected.					
	39 Aroclor 1254 (1)	Compound Not Detected.					
	40 Aroclor 1254 (2)	Compound Not Detected.					
	41 Arcolor 1254 (3)	Compound Not Detected.					
	42 Aroclor 1254 (4)	Compound Not Detected.					
	43 Aroclor 1254 (5)	Compound Not Detected.					
M	44 Aroclor-1262	Compound Not Detected.					
	45 Aroclor 1262 (1)	Compound Not Detected.					
	46 Aroclor 1262 (2)	Compound Not Detected.					
	47 Aroclor 1262 (3)	Compound Not Detected.					
	48 Aroclor 1262 (4)	Compound Not Detected.					
	49 Aroclor 1262 (5)	Compound Not Detected.					
M	50 Aroclor-1268	Compound Not Detected.					
	51 Aroclor 1268 (1)	Compound Not Detected.					
	52 Aroclor 1268 (2)	Compound Not Detected.					
	53 Aroclor 1268 (3)	Compound Not Detected.					
	54 Aroclor 1268 (4)	Compound Not Detected.					
	55 Aroclor 1268 (5)	Compound Not Detected.					
$	56 Decachlorobiphenyl	11.681	11.682	-0.001	10279527792	72.8665	72.9

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17030706.d

Date : 07-MAR-2017 11:09

Client ID:

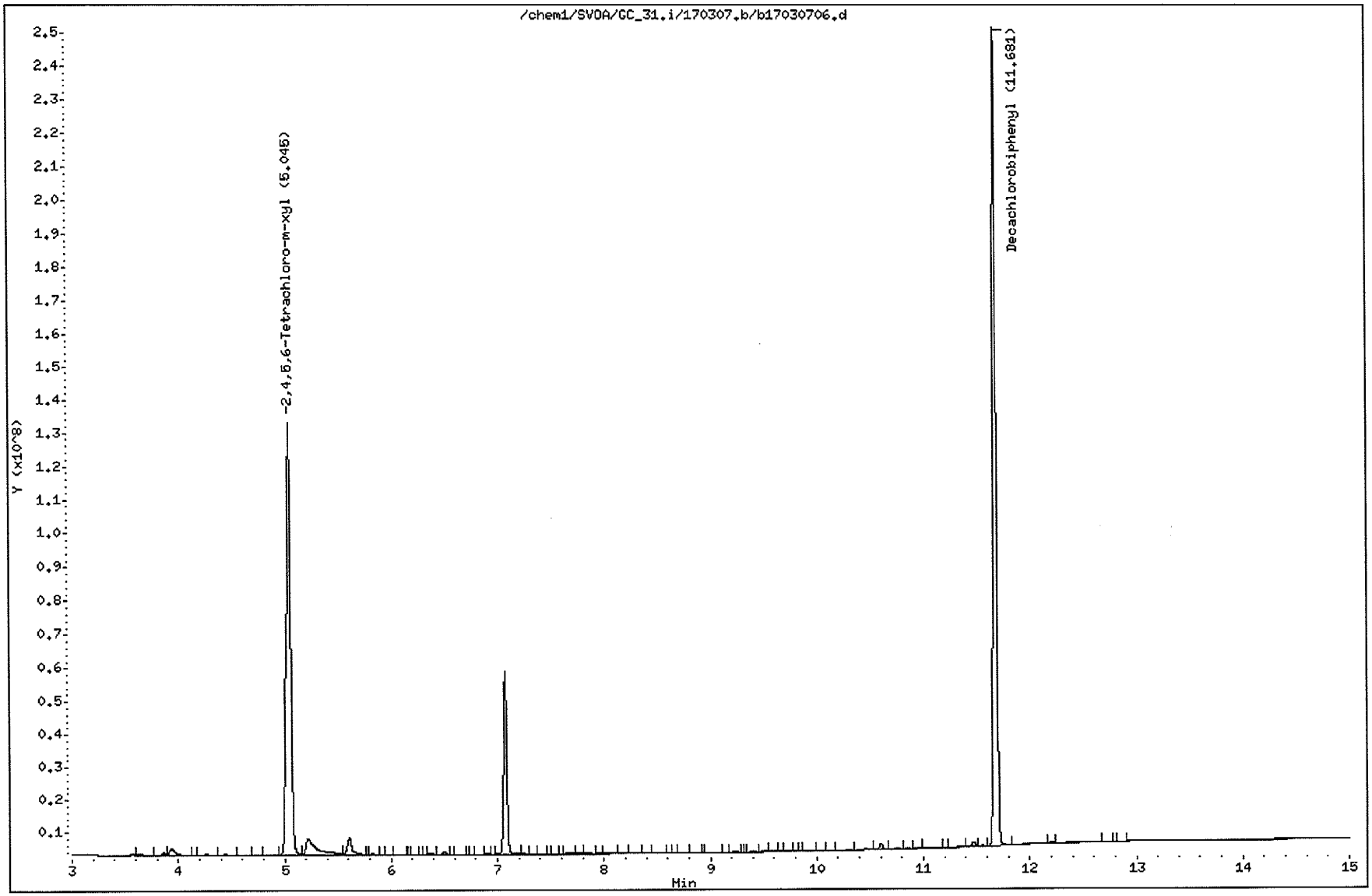
Sample Info: 17-03-0341-1

Column phase:

Instrument: GC_31.i

Operator: 944

Column diameter: 2.00



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EPA METHOD 8082
PCB

Continuing Calibration

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9395-5154**
BATCH ID:
INITIAL: 170304I001
CCV: 170307A008
INSTRUMENT: GC 31

DATA FILE: /chem1/SVOA/GC_31/170307/b1703070117030701

ANALYZED BY: 944
D/T ANALYZED:
INITIAL: 2017-03-04 10:22
CCV: 2017-03-07 09:39
REVIEWED BY: 27
D/T REVIEWED: 2017-03-07 17:53

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	17576749.207	16904676.708			4	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	25759605.728	25292849.338			2	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_31.i/170307.b/b17030701.d
Report Date: 03/07/2017 10:11

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_31.i
Sample Name: PCB CCV P021517I
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m

Injection Date and Time: 07-MAR-2017 09:39
Initial Calibration Date(s): 20-FEB-2017 04-MAR-2017
Initial Calibration Time(s): 15:04 13:13

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Aroclor-1016	17576749.207	16904676.707	0.01	4	15	Averaged
Aroclor 1016 (1)	1745051.275	1675839.188	0.01	4	15	Averaged
Aroclor 1016 (2)	3200644.184	3079321.832	0.01	4	15	Averaged
Aroclor 1016 (3)	7450869.197	7193427.403	0.01	3	15	Averaged
Aroclor 1016 (4)	3192573.193	3053682.232	0.01	4	15	Averaged
Aroclor 1016 (5)	1987611.359	1902406.052	0.01	4	15	Averaged
Aroclor 1260 (4)	1814685.680	1741482.696	0.01	4	15	Averaged
Aroclor-1260	25759605.727	25292849.338	0.01	2	15	Averaged
Aroclor 1260 (5)	3626519.827	3505314.912	0.01	3	15	Averaged
Aroclor 1260 (1)	8490491.306	8378971.554	0.01	1	15	Averaged
Aroclor 1260 (2)	6425445.977	6351761.439	0.01	1	15	Averaged
Aroclor 1260 (3)	5402462.938	5315318.737	0.01	2	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	120699078.000	117753911.847	0.01	2	15	Averaged
Decachlorobiphenyl	141073480.845	136968407.583	0.01	3	15	Averaged

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17030701.d
Report Date: 07-Mar-2017 10:11

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170307.b/b17030701.d
Lab Smp Id:
Inj Date : 07-MAR-2017 09:39
Operator : 944 Inst ID: GC_31.i
Smp Info : PCB CCV P021517I
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m
Meth Date : 07-Mar-2017 10:11 src3 Quant Type: ESTD
Cal Date : 04-MAR-2017 13:13 Cal File: b17030410.d
Als bottle: 1 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

						AMOUNTS	
						CAL-AMT	ON-COL
	Compounds	RT	EXP RT	DLT RT	RESPONSE	(ppb)	(ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.026	5.026	0.000	11775391185	100.000	97.6
M	2 Aroclor-1016				8452338354	500.000	481
	3 Aroclor 1016 (1)	5.553	5.553	0.000	837919594	500.000	480
	4 Aroclor 1016 (2)	6.039	6.039	0.000	1539660916	500.000	481
	5 Aroclor 1016 (3)	6.646	6.646	0.000	3596713702	500.000	483
	6 Aroclor 1016 (4)	6.815	6.815	0.000	1526841116	500.000	478
	7 Aroclor 1016 (5)	6.893	6.893	0.000	951203026	500.000	478
M	8 Aroclor-1260				12646424669	500.000	491
	9 Aroclor 1260 (1)	9.071	9.071	0.000	4189485777	500.000	493
	10 Aroclor 1260 (2)	9.517	9.517	0.000	3175880719	500.000	494
	11 Aroclor 1260 (3)	9.798	9.798	0.000	2657659368	500.000	492
	12 Aroclor 1260 (4)	10.870	10.870	0.000	870741348	500.000	480
	13 Aroclor 1260 (5)	11.155	11.155	0.000	1752657456	500.000	483
$	56 Decachlorobiphenyl	11.682	11.682	0.000	13696840758	100.000	97.1

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17030701.d

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Date : 07-MAR-2017 09:39

Client ID:

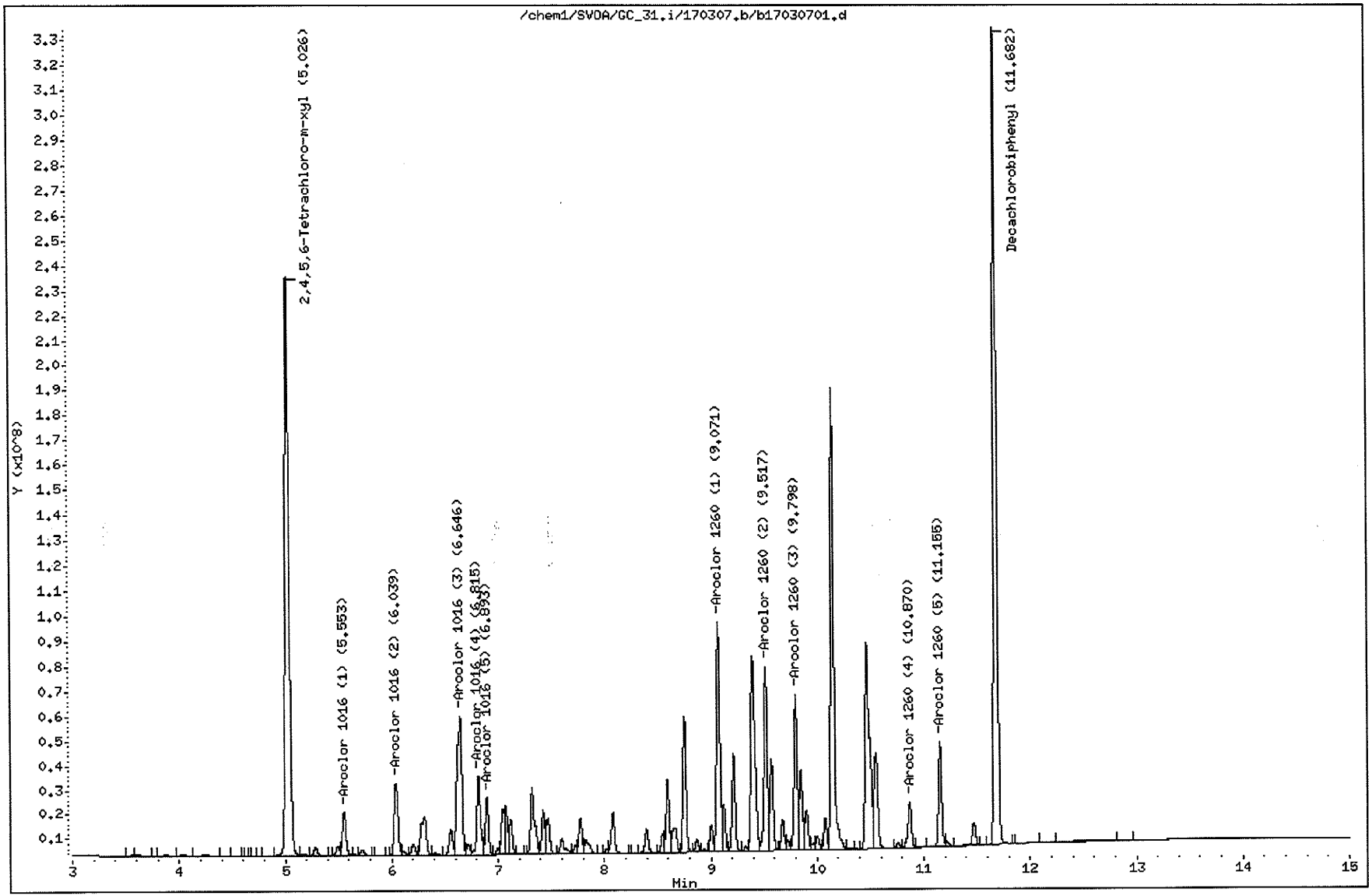
Instrument: GC_31.i

Sample Info: PCB CCV P021517I

Operator: 944

Column phase:

Column diameter: 2.00



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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8082

BATCH ID: **170307A009**
INSTRUMENT: GC 31

ANALYZED BY: 944

WORK ORDER: **099-12-532**
MATRIX: Water

REVIEWED BY: 27
D/T REVIEWED: 2017-03-07 17:54

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
9397	Daily Calibration	2017-03-07 15:36	/chem1/SVOA/GC_31/170307/b1703172017031720

WORK ORDER: **17-03-0336**
MATRIX: Soil

REVIEWED BY:
D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
3	D-DU2-S-SG-05-13S	2017-03-07 17:27	/chem1/SVOA/GC_31/170307/b1703172617031726
4	D-DU2-S-SG-05-25S	2017-03-07 17:44	/chem1/SVOA/GC_31/170307/b1703172717031727

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9397-5154**
BATCH ID:
INITIAL: 170304I001
CCV: 170307A009
INSTRUMENT: GC 31

DATA FILE: /chem1/SVOA/GC_31/170307/b1703172017031720

ANALYZED BY: 944
D/T ANALYZED:
INITIAL: 2017-03-04 10:22
CCV: 2017-03-07 15:36
REVIEWED BY: 27
D/T REVIEWED: 2017-03-07 17:54

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	17576749.207	16811974.256			4	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	25759605.728	24900951.424			3	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_31.i/170307.b/b17031720.d
Report Date: 03/07/2017 15:59

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_31.i
Sample Name: PCB CCV P021517I
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m

Injection Date and Time: 07-MAR-2017 15:36
Initial Calibration Date(s): 20-FEB-2017 04-MAR-2017
Initial Calibration Time(s): 15:04 13:13

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Aroclor-1016	17576749.207	16811974.255	0.01	4	15	Averaged
Aroclor 1016 (1)	1745051.275	1651449.952	0.01	5	15	Averaged
Aroclor 1016 (2)	3200644.184	3051927.658	0.01	5	15	Averaged
Aroclor 1016 (3)	7450869.197	7168739.011	0.01	4	15	Averaged
Aroclor 1016 (4)	3192573.193	3043356.996	0.01	5	15	Averaged
Aroclor 1016 (5)	1987611.359	1896500.638	0.01	5	15	Averaged
Aroclor 1260 (4)	1814685.680	1778357.362	0.01	2	15	Averaged
Aroclor-1260	25759605.727	24900951.425	0.01	3	15	Averaged
Aroclor 1260 (5)	3626519.827	3506698.410	0.01	3	15	Averaged
Aroclor 1260 (1)	8490491.306	8199346.788	0.01	3	15	Averaged
Aroclor 1260 (2)	6425445.977	6238263.553	0.01	3	15	Averaged
Aroclor 1260 (3)	5402462.938	5178285.312	0.01	4	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	120699078.000	117135110.060	0.01	3	15	Averaged
Decachlorobiphenyl	141073480.845	133777284.402	0.01	5	15	Averaged

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Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170307.b/b17031720.d
Lab Smp Id:
Inj Date : 07-MAR-2017 15:36
Operator : 944 Inst ID: GC_31.i
Smp Info : PCB CCV P021517I
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m
Meth Date : 07-Mar-2017 15:59 src3 Quant Type: ESTD
Cal Date : 04-MAR-2017 13:13 Cal File: b17030410.d
Als bottle: 20 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.027	5.027	0.000	11713511006	100.000	97.0
M	2 Aroclor-1016				8405987128	500.000	478
	3 Aroclor 1016 (1)	5.553	5.553	0.000	825724976	500.000	473
	4 Aroclor 1016 (2)	6.039	6.039	0.000	1525963829	500.000	477
	5 Aroclor 1016 (3)	6.645	6.645	0.000	3584369506	500.000	481
	6 Aroclor 1016 (4)	6.814	6.814	0.000	1521678498	500.000	477
	7 Aroclor 1016 (5)	6.893	6.893	0.000	948250319	500.000	477
M	8 Aroclor-1260				12450475712	500.000	483
	9 Aroclor 1260 (1)	9.069	9.069	0.000	4099673394	500.000	483
	10 Aroclor 1260 (2)	9.515	9.515	0.000	3119131776	500.000	485
	11 Aroclor 1260 (3)	9.796	9.796	0.000	2589142656	500.000	479
	12 Aroclor 1260 (4)	10.868	10.868	0.000	889178681	500.000	490
	13 Aroclor 1260 (5)	11.154	11.154	0.000	1753349205	500.000	483
$	56 Decachlorobiphenyl	11.682	11.682	0.000	13377728440	100.000	94.8

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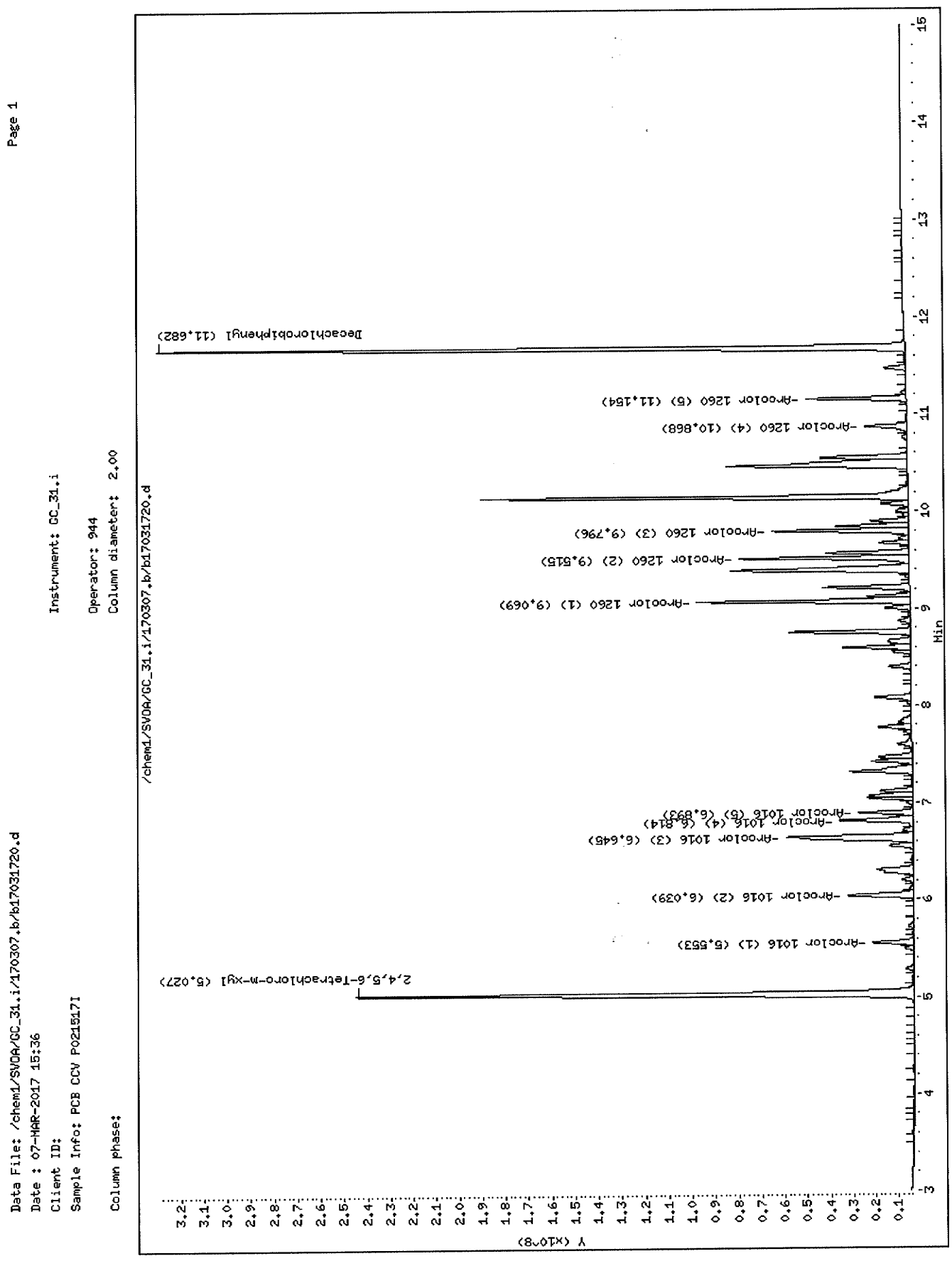

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8082

CCV WORK ORDER: **099-12-532-9398-5154**
BATCH ID:
INITIAL: 170304I001
CCV: 170307A010
INSTRUMENT: GC 31

DATA FILE: /chem1/SVOA/GC_31/170307/b1703173717031737

ANALYZED BY: 944
D/T ANALYZED:
INITIAL: 2017-03-04 10:22
CCV: 2017-03-07 20:54
REVIEWED BY:
D/T REVIEWED:

COMPOUND NAME	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Aroclor-1016	C	Avg Resp	0.00	17576749.207	17345161.102			1	0-15	PASS
Aroclor-1260	C	Avg Resp	0.00	25759605.728	26061978.462			-1	0-15	PASS

MIN RF: Method Specified Minimum Response Factor

Data File: /chem1/SVOA/GC_31.i/170307.b/b17031737.d
Report Date: 03/08/2017 10:13

Eurofins CalScience
Calibration Verification Report

Instrument ID: GC_31.i
Sample Name: PCB CCV P021517I
Sublist used: p1016_1260.sub
Method used: /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m

Injection Date and Time: 07-MAR-2017 20:54
Initial Calibration Date(s): 20-FEB-2017 04-MAR-2017
Initial Calibration Time(s): 15:04 13:13

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Aroclor-1016	17576749.207	17345161.102	0.01	1	15	Averaged
Aroclor 1016 (1)	1745051.275	1705042.840	0.01	2	15	Averaged
Aroclor 1016 (2)	3200644.184	3147323.080	0.01	2	15	Averaged
Aroclor 1016 (3)	7450869.197	7395278.408	0.01	1	15	Averaged
Aroclor 1016 (4)	3192573.193	3141050.750	0.01	2	15	Averaged
Aroclor 1016 (5)	1987611.359	1956466.024	0.01	2	15	Averaged
Aroclor 1260 (4)	1814685.680	1817209.270	0.01	0	15	Averaged
Aroclor-1260	25759605.727	26061978.462	0.01	-1	15	Averaged
Aroclor 1260 (5)	3626519.827	3681627.284	0.01	-2	15	Averaged
Aroclor 1260 (1)	8490491.306	8582484.882	0.01	-1	15	Averaged
Aroclor 1260 (2)	6425445.977	6516833.760	0.01	-1	15	Averaged
Aroclor 1260 (3)	5402462.938	5463823.266	0.01	-1	15	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
2,4,5,6-Tetrachloro-m-xylene	120699078.000	120581466.699	0.01	0	15	Averaged
Decachlorobiphenyl	141073480.845	141420644.235	0.01	0	15	Averaged

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Data File: /chem1/SVOA/GC_31.i/170307.b/b17031737.d
Report Date: 08-Mar-2017 09:20

Eurofins Calscience

EPA8082/A PCB analysis

Data file : /chem1/SVOA/GC_31.i/170307.b/b17031737.d
Lab Smp Id:
Inj Date : 07-MAR-2017 20:54
Operator : 944 Inst ID: GC_31.i
Smp Info : PCB CCV P021517I
Misc Info :
Comment : Rtx-CLPesticide II
Method : /chem1/SVOA/GC_31.i/170307.b/b8082-n2.m
Meth Date : 08-Mar-2017 09:20 src3 Quant Type: ESTD
Cal Date : 04-MAR-2017 13:13 Cal File: b17030410.d
Als bottle: 37 Continuing Calibration Sample
Dil Factor: 1.00000
Integrator: HP Genie Compound Sublist: p1016_1260.sub
Target Version: 3.50
Processing Host: US26TAR4

Concentration Formula: Amt * DF * *vf/vi * CpndVariable

Name	Value	Description
DF	1.00000	Dilution Factor
vf	1.00000	Final extract volume(mL)
vi	1.00000	Initial sample volume(L)

Cpnd Variable Local Compound Variable

	Compounds	RT	EXP RT	DLT RT	RESPONSE	AMOUNTS CAL-AMT (ppb)	AMOUNTS ON-COL (ppb)
$	1 2,4,5,6-Tetrachloro-m-xylene	5.027	5.027	0.000	12058146670	100.000	99.9
M	2 Aroclor-1016				8672580551	500.000	493
	3 Aroclor 1016 (1)	5.554	5.554	0.000	852521420	500.000	488
	4 Aroclor 1016 (2)	6.041	6.041	0.000	1573661540	500.000	492
	5 Aroclor 1016 (3)	6.647	6.647	0.000	3697639204	500.000	496
	6 Aroclor 1016 (4)	6.815	6.815	0.000	1570525375	500.000	492
	7 Aroclor 1016 (5)	6.894	6.894	0.000	978233012	500.000	492
M	8 Aroclor-1260				13030989231	500.000	506
	9 Aroclor 1260 (1)	9.070	9.070	0.000	4291242441	500.000	505
	10 Aroclor 1260 (2)	9.517	9.517	0.000	3258416880	500.000	507
	11 Aroclor 1260 (3)	9.798	9.798	0.000	2731911633	500.000	506
	12 Aroclor 1260 (4)	10.871	10.871	0.000	908604635	500.000	501
	13 Aroclor 1260 (5)	11.155	11.155	0.000	1840813642	500.000	508
$	56 Decachlorobiphenyl	11.683	11.683	0.000	14142064423	100.000	100

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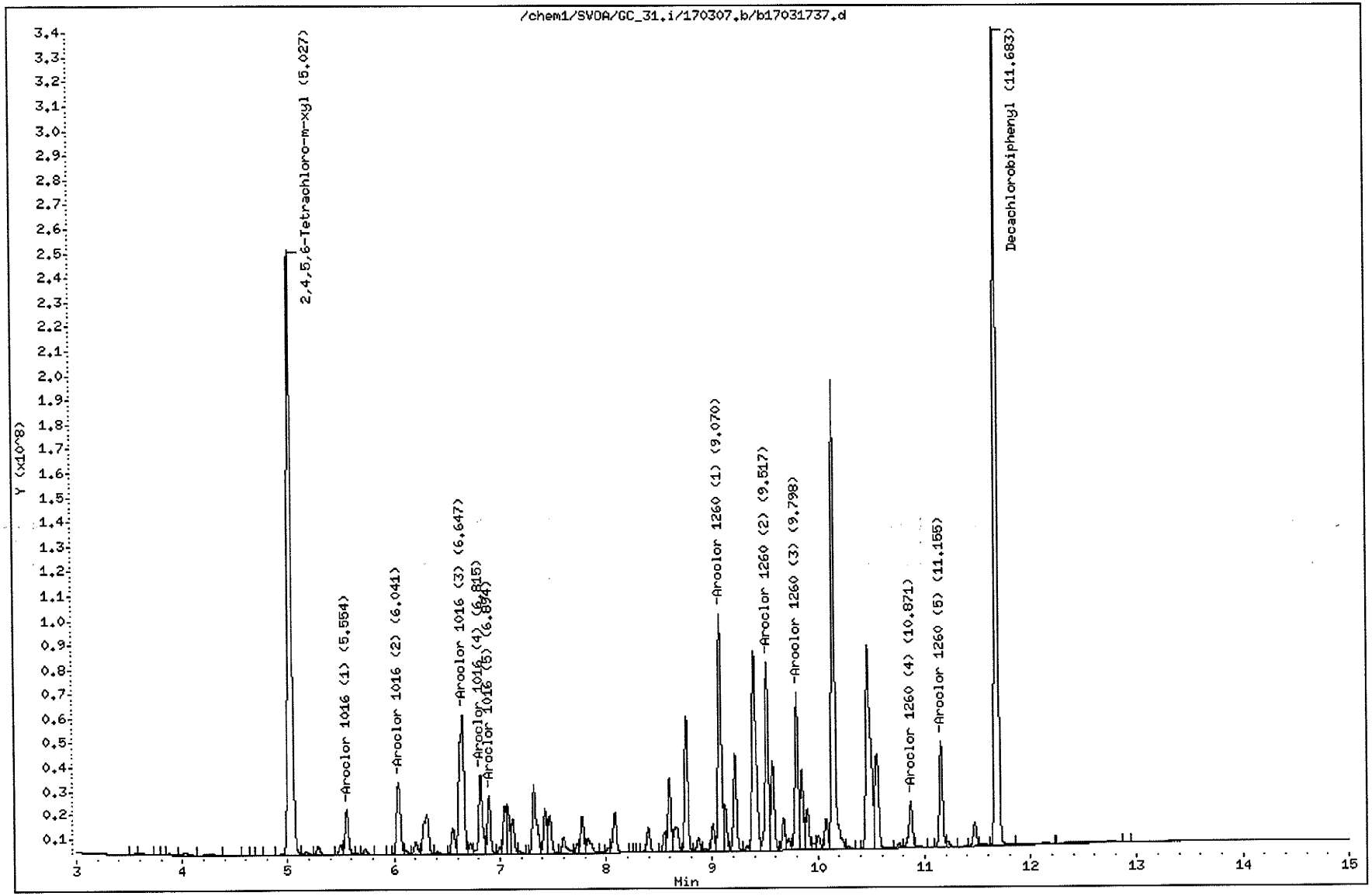
Data File: /chem1/SVOA/GC_31.i/170307.b/b17031737.d
Date : 07-MAR-2017 20:54
Client ID:
Sample Info: PCB CCV P021517I

Instrument: GC_31.i
Operator: 944
Column diameter: 2.00

Column phase:



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EPA METHOD 8082
PCB

Run Logs

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Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 100	IB S007-42-09	8082-N2	1	Sample		17030400
2	Vial 1	ICAL-1 P021517F	8082-N2	1	Sample		17030401
3	Vial 2	ICAL-2 P021517E	8082-N2	1	Sample		17030402
4	Vial 3	ICAL-3 P021517D	8082-N2	1	Sample	A025	17030403
5	Vial 4	ICAL-4 P021517C	8082-N2	1	Sample		17030404
6	Vial 5	ICAL-5 P021517B	8082-N2	1	Sample		17030405
7	Vial 6	ICV 500 P021517H	8082-N2	1	Sample		17030406
8	Vial 7	1221/54 P120616M	8082-N2	1	Sample		17030407
9	Vial 8	1232/62 P120616N	8082-N2	1	Sample		17030408
10	Vial 9	1248/68 P120616O	8082-N2	1	Sample		17030409
11	Vial 10	1242 P120616P	8082-N2	1	Sample		17030410
12	Vial 11	17-03-0171-1 100	8082-N2	1	Sample		17030411
13	Vial 12	PCB CCV P021517I	8082-N2	1	Sample		17030412

Sequence Table (Back Injector):

No entries - empty table!

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Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 100	IB S007-42-09	8082-N2	1	Sample		17030700
2	Vial 1	PCB CCV P021517I	8082-N2	1	Sample	A008	17030701
3	Vial 2	MB 170306L05	8082-N2	1	Sample		17030702
4	Vial 3	LCS 170306L05	8082-N2	1	Sample		17030703
5	Vial 4	MS 17-03-0341-1	8082-N2	1	Sample		17030704
6	Vial 5	MSD 17-03-0341-1	8082-N2	1	Sample		17030705
7	Vial 6	17-03-0341-1	8082-N2	1	Sample		17030706
8	Vial 7	17-03-0341-2	8082-N2	1	Sample		17030707
9	Vial 8	17-03-0391-1	8082-N2	1	Sample		17030708
10	Vial 9	17-03-0391-2	8082-N2	1	Sample		17030709
11	Vial 10	17-03-0391-3	8082-N2	1	Sample		17030710
12	Vial 11	17-03-0391-4	8082-N2	1	Sample		17030711
13	Vial 12	17-03-0391-5	8082-N2	1	Sample		17030712
14	Vial 13	17-03-0391-6	8082-N2	1	Sample		17030713
15	Vial 14	17-02-2480-5	8082-N2	1	Sample		17030714
16	Vial 15	MB 170302L02	8082-N2	1	Sample		17031715
17	Vial 16	LCS 170302L02	8082-N2	1	Sample		17031716
18	Vial 17	LCSD 170302L02	8082-N2	1	Sample		17031717
19	Vial 18	17-02-2482-2	8082-N2	1	Sample		17031718
20	Vial 19	17-02-2482-3	8082-N2	1	Sample	A009	17031719
21	Vial 20	PCB CCV P021517I	8082-N2	1	Sample		17031720
22	Vial 21	MB 170302L05	8082-N2	1	Sample		17031721
23	Vial 22	TO-4 MDL-V 50PPB	8082-N2	1	Sample		17031722
24	Vial 23	17-02-0013-5	8082-N2	1	Sample		17031723
25	Vial 24	LCS 170302L05	8082-N2	1	Sample		17031724
26	Vial 25	LCSD 170302L05	8082-N2	1	Sample		17031725
27	Vial 26	17-03-0336-3	8082-N2	1	Sample		17031726
28	Vial 27	17-03-0336-4	8082-N2	1	Sample		17031727
29	Vial 28	17-03-0335-3	8082-N2	1	Sample		17031728
30	Vial 29	17-03-0335-4	8082-N2	1	Sample		17031729
31	Vial 30	17-03-0335-7	8082-N2	1	Sample		17031730
32	Vial 31	17-03-0335-8	8082-N2	1	Sample		17031731
33	Vial 32	17-03-0335-11	8082-N2	1	Sample		17031732
34	Vial 33	17-03-0335-12	8082-N2	1	Sample		17031733
35	Vial 34	17-03-0335-15	8082-N2	1	Sample		17031734
36	Vial 35	17-03-0335-16	8082-N2	1	Sample		17031735
37	Vial 36	S07-57-14/15/16	8082-N2	1	Sample		17031736
38	Vial 37	PCB CCV P021517I	8082-N2	1	Sample	A010	17031737

Sequence Table (Back Injector):

No entries - empty table!

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EPA METHOD 8082
PCB

Preparation Logs

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Analysis Method (EPA Method): ☐ 608 ☐ 8081 ☑ 8082 ☐ 8141 ☐ 8310 ☐ TO-13 ☐ TO-4
☐ 8270 (☐ Soil ☐ Soil SIM SUPER ☐ PAH ☐ SIM PAH ☐ SIM Pest ☐ SIM PCB cong. ☐ SIM FL)

Extraction Method (EPA Method): ☐ 3510 ☐ 3520 ☐ 3540 ☐ 3541 ☑ 3545 ☐ 3550 ☐ 3580

Analyst ID#: Measuring Sample- 1104 Start Extraction- 6/0/787 Blow Down- 110/1084 Clean Up- 110/1084

Matrix: ☑ Soil ☐ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: 53 Filter ID#: 507-17-17 ASE ID#: 7 Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#:

Ext. Start Date/Time: 03/06/17 9:00 Ext. End Date/Time: 03/06/17 12:00

Sand or Wipe ID#: 507-19-19

Drying Agent: ☑ Na_2SO_4 ☑ Diatomaceous Earth

Drying Agent(s) ID#: 507-44-18 / 507-22-03

Surrogate Std ID# & Volume Added (mL): S101316A 0.5

Spike Std ID# & Volume Added (mL): S02031 7A 0.5

Spike Added to: ☑ LCS ☐ LCSD ☑ MS ☑ MSD

Extraction Solvent: ☐ $MeCl_2$ ☑ 1:1 Hexane-Acetone ☐ 1:1 $MeCl_2$-Acetone ☐ 9:1 Hexane-Diethyl-ether ☐ Acetonitrile

Extraction Solvent ID#: 507-44-07/507-44-08

Exchange Solvent (☑ Hexane ☐ Acetonitrile) ID#: 507-44-07

Clean Up Start Date & Time: 3-7-17 16:00 Clean Up End Date & Time: 3-7-17 16:45

Clean Up: ☐ 3620 Florisil ☐ 3630 SGC ☐ 3660 Sulfur ☑ 3665 Acid ☐ Other

Cartridge ID#:

Clean Up Reagent ID#: 507-52-12

Cartridge Conditioning Column Pre-Elution Reagent ID#:

MB/LCS/MS Batch #: 17030605

Cel ID#:	Sample W (g) / V (mL) Initial	Final	Clean Up Performed	Comments
MB	20.0	10	☑	
LCS	20.0	10	☑	
LCSD NA	—	—	☐	
MS 17-03-0341-1A	20.0	10	☑	
MSD -1A	20.0	10	☑	
-1A	20.0	10	☑	
-2A	20.0	10	☑	
17-02-2480-5B	20.1	10	☑	dirty sample
17-03-0335-3A	20.0	10	☑	
-4A	20.1	10	☑	
-7A	20.1	10	☑	
-8A	20.2	10	☑	
-11A	20.1	10	☑	
-12A	20.0	10	☑	
-15A	20.0	10	☑	
-16A	20.1	10	☑	
17-03-0336-3A	20.1	10	☑	
-4A	20.1	10	☑	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	
			☐	

Peer Reviewed by: JBS Peer Reviewed Date: 3-7-17 Revision Date: 10/20/16

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EPA METHOD 8270C
PAHSIM

RAW DATA

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EPA METHOD 8270C
PAHSIM

Initial Calibration

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

ICAL WORK ORDER: 099-06-009-4954-4741
ICAL BATCH ID: 1702271004
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-02-27 13:53
REVIEWED BY: 262
D/T REVIEWED: 2017-02-28 12:33

COMPOUND	COMP. TYPE	CALIB. MODEL	1	2	3	4	5	6	7	8	9	AVG. RF	MIN. RF	%RSD	%R SD CL	R or R^2	R or R^2 CL	STATUS
Naphthalene		Avg RF	1.161	1.034	1.156	1.162	1.105					1.124	0.00	5	0-15	4.921		PASS
2-Methylnaphthalene		Avg RF	0.715	0.692	0.768	0.778	0.735					0.737	0.00	5	0-15	4.871		PASS
1-Methylnaphthalene		Avg RF	0.720	0.649	0.713	0.743	0.702					0.706	0.00	5	0-15	4.964		PASS
Acenaphthylene		Avg RF	2.746	2.504	2.738	2.771	2.563					2.664	0.00	5	0-15	4.569		PASS
Acenaphthene	C	Avg RF	1.623	1.467	1.624	1.607	1.496					1.563	0.00	5	0-15	4.843		PASS
Fluorene		Avg RF	1.860	1.709	1.866	1.803	1.640					1.776	0.00	6	0-15	5.557		PASS
Phenanthrene		Avg RF	1.124	1.008	1.113	1.108	1.031					1.077	0.00	5	0-15	4.926		PASS
Anthracene		Avg RF	1.150	1.050	1.040	1.172	1.086					1.099	0.00	5	0-15	5.359		PASS
Fluoranthene	C	Avg RF	1.354	1.267	1.410	1.430	1.308					1.354	0.00	5	0-15	5.036		PASS
Pyrene		Avg RF	1.519	1.415	1.549	1.578	1.476					1.507	0.00	4	0-15	4.250		PASS
Benzo (a) Anthracene		Avg RF	1.425	1.200	1.321	1.356	1.303					1.321	0.00	6	0-15	6.204		PASS
Chrysene		Avg RF	1.307	1.168	1.292	1.295	1.221					1.257	0.00	5	0-15	4.775		PASS
Benzo (k) Fluoranthene		Avg RF	1.503	1.317	1.474	1.428	1.328					1.410	0.00	6	0-15	5.978		PASS
Benzo (b) Fluoranthene		Avg RF	1.197	1.138	1.356	1.314	1.301					1.261	0.00	7	0-15	7.179		PASS
Benzo (a) Pyrene	C	Avg RF	1.274	1.171	1.312	1.331	1.259					1.269	0.00	5	0-15	4.884		PASS
Indeno (1,2,3-c,d) Pyrene		Avg RF	1.321	1.186	1.396	1.373	1.344					1.324	0.00	6	0-15	6.206		PASS
Dibenz (a,h) Anthracene		Avg RF	0.978	0.932	1.086	1.050	0.989					1.007	0.00	6	0-15	6.054		PASS
Benzo (g,h,i) Perylene		Avg RF	1.187	1.018	1.169	1.173	1.111					1.132	0.00	6	0-15	6.192		PASS

Data Files:

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor
LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)

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INITIAL CALIBRATION QUALITY CONTROL SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

ICAL WORK ORDER: 099-06-009-4954-4741
ICAL BATCH ID: 170227I004
INSTRUMENT: GC/MS EEE

ANALYZED BY: 907
ICAL D/T ANALYZED: 2017-02-27 13:53
REVIEWED BY: 262
D/T REVIEWED: 2017-02-28 12:33

LEVEL #	D/T ANALYZED	DATA FILE
1	2017-02-27 13:53	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb011.d\27feb011.rr
2	2017-02-27 13:33	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb010.d\27feb010.rr
3	2017-02-27 13:12	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb009.d\27feb009.rr
4	2017-02-27 12:52	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb008.d\27feb008.rr
5	2017-02-27 12:32	Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb007.d\27feb007.rr

LR - E: Linear Regression (Equal Weight)
Avg RF: Average Response Factor
LR - IC: Linear Regression (Inverse Concentration Weight)
QR - E: Quadratic Regression (Equal Weight)
LR - ISC: Linear Regression (Inverse Square Concentration Weight)

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INITIAL CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

ICV WORK ORDER: **099-06-009-4954-4741**
INITIAL BATCH ID: 170227I004
INSTRUMENT: GC/MS EEE

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb012.d\27feb012.rr

ANALYZED BY: 907
D/T ANALYZED:
INITIAL: 2017-02-27 13:53
ICV: 2017-02-27 14:13
REVIEWED BY: 262
D/T REVIEWED: 2017-02-28 12:33

COMPOUND	COMP TYPE	CALIB MODEL	MIN RF	AVG RF	ICV RF	AMOUNT	ICV	ICV %D	ICV %D CL	STATUS
Naphthalene		Avg Resp	0.00	1.124	1.212			-8	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.737	0.876			-19	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.706	0.775			-10	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.664	2.879			-8	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.563	1.734			-11	0-20	PASS
Fluorene		Avg Resp	0.00	1.776	1.956			-10	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.077	1.234			-15	0-20	PASS
Anthracene		Avg Resp	0.00	1.099	1.215			-11	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.354	1.509			-11	0-20	PASS
Pyrene		Avg Resp	0.00	1.507	1.627			-8	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.321	1.385			-5	0-20	PASS
Chrysene		Avg Resp	0.00	1.257	1.317			-5	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.410	1.529			-8	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.261	1.360			-8	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.269	1.347			-6	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.324	1.436			-8	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.007	1.122			-11	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.132	1.264			-12	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

Report Date : 27-Feb-2017 16:18 Page 1

Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 27-FEB-2017 13:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m
Cal Date : 27-Feb-2017 15:02 ev7p
Curve Type : Average

Calibration File Names:
Level 1: /chem/SVOA/GCMS_EEE.i/170227.b/27feb011.d
Level 2: /chem/SVOA/GCMS_EEE.i/170227.b/27feb010.d
Level 3: /chem/SVOA/GCMS_EEE.i/170227.b/27feb009.d
Level 4: /chem/SVOA/GCMS_EEE.i/170227.b/27feb008.d
Level 5: /chem/SVOA/GCMS_EEE.i/170227.b/27feb007.d

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	5.000 Level 5	___ RRF	% RSD
4 Naphthalene	1.16060	1.03437	1.15585	1.16235	1.10472	1.12358	5
5 2-Methylnaphthalene	0.71460	0.69156	0.76755	0.77768	0.73512	0.73730	5
6 1-Methylnaphthalene	0.72009	0.64896	0.71287	0.74335	0.70230	0.70551	5
8 Biphenyl	2.51017	2.26941	2.42702	2.28126	2.07295	2.31216	7
9 2,6-Dimethylnaphthalene	1.70500	1.56246	1.69427	1.67041	1.51900	1.63023	5
10 Acenaphthylene	2.74568	2.50416	2.73776	2.77077	2.56295	2.66426	5
12 Acenaphthene	1.62275	1.46707	1.62435	1.60675	1.49606	1.56340	5
13 Dibenzofuran	2.43048	2.19728	2.44209	2.40665	2.23068	2.34144	5
14 1,6,7-Trimethylnaphthalene	1.62611	1.51675	1.65589	1.61472	1.45670	1.57403	5
15 Fluorene	1.86024	1.70856	1.86647	1.80300	1.64039	1.77573	6
16 Dibenzothiophene	5.20555	4.57190	5.11178	4.97228	4.52376	4.87705	6
18 Phenanthrene	1.12374	1.00818	1.11277	1.10821	1.03140	1.07686	5
19 Anthracene	1.14957	1.04991	1.04047	1.17190	1.08562	1.09950	5
20 1-Methylphenanthrene	1.11715	1.02723	1.16454	1.18394	1.11231	1.12103	5
21 Fluoranthene	1.35420	1.26743	1.41012	1.43046	1.30803	1.35405	5
22 Pyrene	1.51861	1.41454	1.54925	1.57756	1.47595	1.50718	4
24 Benzo (a) Anthracene	1.42489	1.20046	1.32145	1.35601	1.30300	1.32116	6
26 Chrysene	1.30735	1.16809	1.29175	1.29509	1.22088	1.25663	5
27 Benzo (b) Fluoranthene	1.19695	1.13765	1.35637	1.31351	1.30123	1.26114	7
28 Benzo (k) Fluoranthene	1.50287	1.31717	1.47447	1.42831	1.32819	1.41020	6
29 Benzo (e) pyrene	1.62836	1.47499	1.67952	1.63693	1.53270	1.59050	5
30 Benzo (a) Pyrene	1.27370	1.17100	1.31200	1.33066	1.25914	1.26930	5

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 27-FEB-2017 13:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m
Cal Date : 27-Feb-2017 15:02 ev7p
Curve Type : Average

Compound	0.10000 Level 1	0.50000 Level 2	1.000 Level 3	2.000 Level 4	5.000 Level 5	___ RRF	% RSD
32 Perylene	1.64806	1.47245	1.60780	1.58707	1.50527	1.56413	5
33 Indeno (1,2,3-c,d) Pyrene	1.32067	1.18629	1.39631	1.37297	1.34409	1.32407	6
34 Dibenz (a,h) Anthracene	0.97767	0.93206	1.08578	1.04985	0.98851	1.00678	6
35 Benzo (g,h,i) Perylene	1.18741	1.01772	1.16911	1.17286	1.11053	1.13153	6
$ 2 Nitrobenzene-d5	0.32072	0.32937	0.37763	0.36445	0.37358	0.35315	7
$ 7 2-Fluorobiphenyl	2.08313	1.78793	1.90483	1.76644	1.55098	1.81866	11
$ 23 p-Terphenyl-d14	0.78316	0.73887	0.81919	0.83063	0.79133	0.79264	5

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Eurofins Calscience

INITIAL CALIBRATION DATA

Start Cal Date : 03-JAN-2017 11:59
End Cal Date : 27-FEB-2017 13:53
Quant Method : ISTD
Origin : Disabled
Target Version : 3.50
Integrator : HP RTE
Method file : /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m
Cal Date : 27-Feb-2017 15:02 ev7p
Curve Type : Average

Average %RSD Results.
Calculated Average %RSD = 5.65492
Maximun Average %RSD = 15.00000
* Passed Average %RSD Test.

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Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb012.d
Report Date: 02/27/2017 15:07

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_EEE.i
Sample Name: ICV S010317I 1PPM
Sublist used: all.sub
Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m

Injection Date and Time: 27-FEB-2017 14:13
Initial Calibration Date(s): 03-JAN-2017 27-FEB-2017
Initial Calibration Time(s): 11:59 13:53

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Naphthalene	1.124	1.212	0.00	-8	20	Averaged
2-Methylnaphthalene	0.737	0.876	0.00	-19	20	Averaged
1-Methylnaphthalene	0.706	0.775	0.00	-10	20	Averaged
Acenaphthylene	2.664	2.879	0.00	-8	20	Averaged
Acenaphthene	1.563	1.734	0.00	-11	20	Averaged
Fluorene	1.776	1.956	0.00	-10	20	Averaged
Phenanthrene	1.077	1.234	0.00	-15	20	Averaged
Anthracene	1.099	1.215	0.00	-11	20	Averaged
Fluoranthene	1.354	1.509	0.00	-11	20	Averaged
Pyrene	1.507	1.627	0.00	-8	20	Averaged
Benzo (a) Anthracene	1.321	1.385	0.00	-5	20	Averaged
Chrysene	1.257	1.317	0.00	-5	20	Averaged
Benzo (b) Fluoranthene	1.261	1.360	0.00	-8	20	Averaged
Benzo (k) Fluoranthene	1.410	1.529	0.00	-8	20	Averaged
Benzo (a) Pyrene	1.269	1.347	0.00	-6	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.324	1.436	0.00	-8	20	Averaged
Dibenz (a,h) Anthracene	1.007	1.122	0.00	-11	20	Averaged
Benzo (g,h,i) Perylene	1.132	1.264	0.00	-12	20	Averaged
Biphenyl	2.312	2.141	0.00	7	20	Averaged
2,6-Dimethylnaphthalene	1.630	1.510	0.00	7	20	Averaged
1,6,7-Trimethylnaphthalene	1.574	1.412	0.00	10	20	Averaged
Dibenzothiophene	4.877	4.552	0.00	7	20	Averaged
1-Methylphenanthrene	1.121	1.011	0.00	10	20	Averaged
Benzo (e) pyrene	1.590	1.450	0.00	9	20	Averaged
Perylene	1.564	1.396	0.00	11	20	Averaged
Dibenzofuran	2.341	2.597	0.00	-11	20	Averaged
Surrogate Standards	**ICAL RRF or Amount**	**ICV RRF**	**Min. RRF**	**%D / %Drift**	**Max%D /Drift**	**Curve Type**
Nitrobenzene-d5	0.353	0.402	0.00	-14	20	Averaged
2-Fluorobiphenyl	1.819	2.130	0.00	-17	20	Averaged
p-Terphenyl-d14	0.793	0.930	0.00	-17	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb011.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-5 S010317H 0.1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.418	152	206085	5.000	0.00
3)*Naphthalene-d8	(2)	4.659	136	565141	5.000	0.00
11)*Acenaphthene-d10	(3)	6.544	164	253489	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	874980	5.000	0.00
31)*Perylene-d12	(6)	12.835	264	733530	5.000	0.00
25)*Chrysene-d12	(5)	11.065	240	809920	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.978	82	3625	0.091	-0.01
SpikedAmount 0.100	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.839	172	10561	0.115	0.00
SpikedAmount 0.100	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.941	244	12686	0.099	0.00
SpikedAmount 0.100	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.680	128	13118	0.103	99
5) 2-Methylnaphthalene	(2)	5.411	142	8077	0.097	99
6) 1-Methylnaphthalene	(2)	5.523	142	8139	0.102	98
10) Acenaphthylene	(3)	6.377	152	13920	0.103	97
12) Acenaphthene	(3)	6.580	153	8227	0.104	98
15) Fluorene	(3)	7.132	166	9431	0.105	100
18) Phenanthrene	(4)	8.166	178	19665	0.104	98
19) Anthracene	(4)	8.219	178	20117	0.105	97
21) Fluoranthene	(4)	9.479	202	23698	0.100	98
22) Pyrene	(5)	9.719	202	24599	0.101	99
24) Benzo (a) Anthracene	(5)	11.049	228	23081	0.108	97
26) Chrysene	(5)	11.092	228	21177	0.104	99
27) Benzo (b) Fluoranthene	(6)	12.378	252	17560	0.095	72
28) Benzo (k) Fluoranthene	(6)	12.404	252	22048	0.107	89
30) Benzo (a) Pyrene	(6)	12.770	252	18686	0.100	93
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.088	276	19375	0.100	84
34) Dibenz (a,h) Anthracene	(6)	14.113	278	14343	0.097	100
35) Benzo (g,h,i) Perylene	(6)	14.363	276	17420	0.105	96
8) Biphenyl	(3)	5.928	154	12726	0.109	99
9) 2,6-Dimethylnaphthalene	(3)	6.087	156	8644	0.105	98
14) 1,6,7-Trimethylnaphthalene	(3)	7.009	170	8244	0.103	97
16) Dibenzothiophene	(3)	8.032	184	26391	0.107	99

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb011.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:53 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-5 S010317H 0.1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.858	192	18096	0.100	100
29) Benzo (e) pyrene	(6)	12.707	252	23889	0.102	98
32) Perylene	(6)	12.865	252	24178	0.105	99
13) Dibenzofuran	(3)	6.758	168	12322	0.104	99

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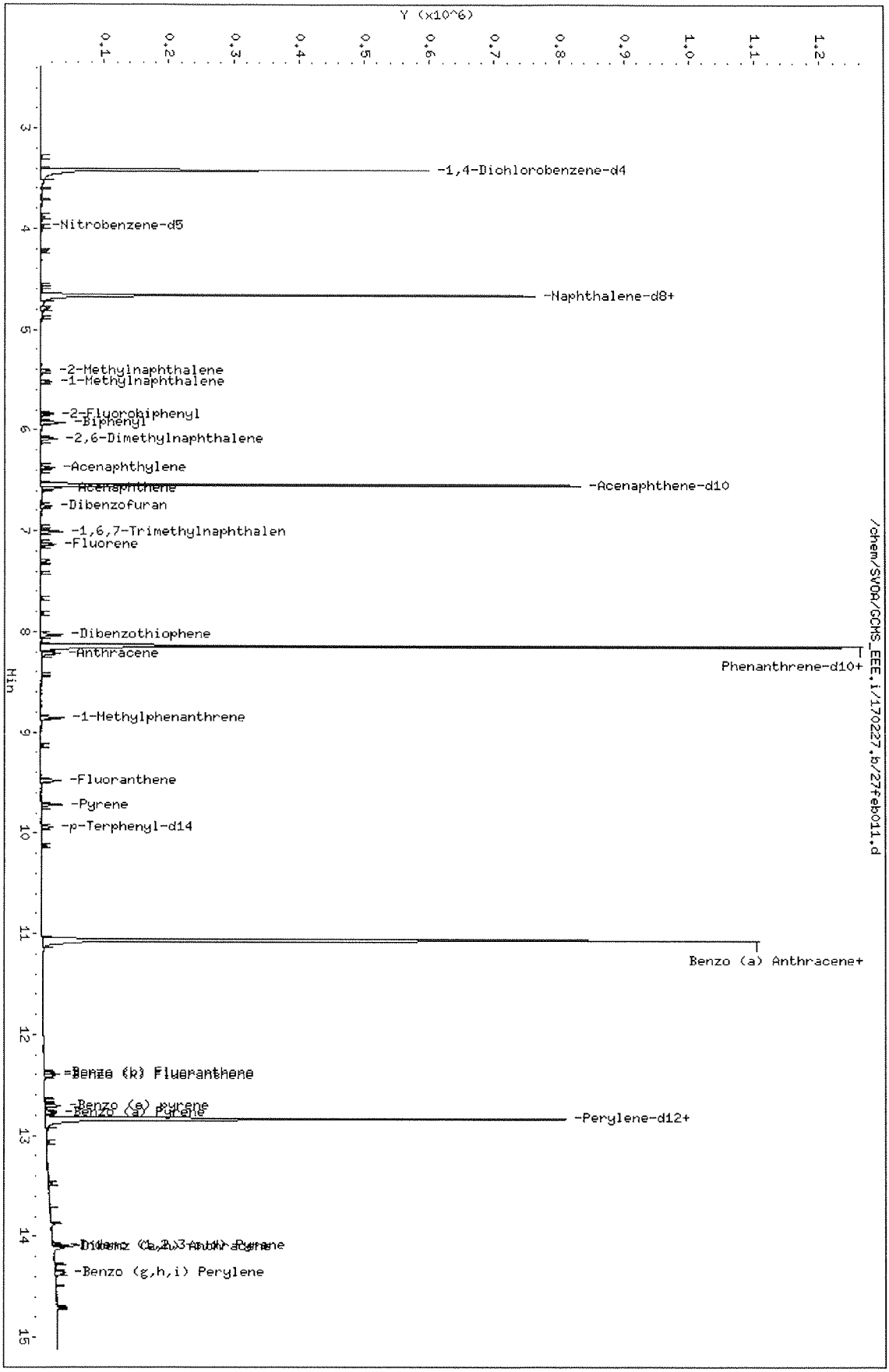

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb011.d
Date : 27-FEB-2017 13:53
Client ID:
Sample Info: ICAL-5 S010317H 0.1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb010.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.418	152	216707	5.000	0.00
3)*Naphthalene-d8	(2)	4.660	136	589450	5.000	0.00
11)*Acenaphthene-d10	(3)	6.546	164	263853	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	900989	5.000	0.00
31)*Perylene-d12	(6)	12.838	264	773030	5.000	0.00
25)*Chrysene-d12	(5)	11.065	240	848326	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.972	82	19415	0.485	0.00
SpikedAmount 0.500	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.837	172	47175	0.492	0.00
SpikedAmount 0.500	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.940	244	62680	0.466	0.00
SpikedAmount 0.500	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.679	128	60971	0.460	99
5) 2-Methylnaphthalene	(2)	5.410	142	40764	0.469	98
6) 1-Methylnaphthalene	(2)	5.523	142	38253	0.460	100
10) Acenaphthylene	(3)	6.377	152	66073	0.470	99
12) Acenaphthene	(3)	6.580	153	38709	0.469	100
15) Fluorene	(3)	7.131	166	45081	0.481	100
18) Phenanthrene	(4)	8.168	178	90836	0.468	99
19) Anthracene	(4)	8.218	178	94596	0.477	100
21) Fluoranthene	(4)	9.479	202	114194	0.468	99
22) Pyrene	(5)	9.718	202	119999	0.469	100
24) Benzo (a) Anthracene	(5)	11.049	228	101838	0.454	99
26) Chrysene	(5)	11.093	228	99092	0.465	99
27) Benzo (b) Fluoranthene	(6)	12.376	252	87944	0.451	99
28) Benzo (k) Fluoranthene	(6)	12.406	252	101821	0.467	98
30) Benzo (a) Pyrene	(6)	12.767	252	90522	0.461	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.083	276	91704	0.448	98
34) Dibenz (a,h) Anthracene	(6)	14.111	278	72051	0.464	98
35) Benzo (g,h,i) Perylene	(6)	14.361	276	78673	0.453	99
8) Biphenyl	(3)	5.925	154	59879	0.491	99
9) 2,6-Dimethylnaphthalene	(3)	6.087	156	41226	0.484	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.009	170	40020	0.482	100
16) Dibenzothiophene	(3)	8.033	184	120631	0.469	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb010.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:33 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-4 S010317G 0.5PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.859	192	87143	0.458	99
29) Benzo (e) pyrene	(6)	12.706	252	114021	0.464	100
32) Perylene	(6)	12.868	252	113825	0.471	99
13) Dibenzofuran	(3)	6.755	168	57976	0.469	99

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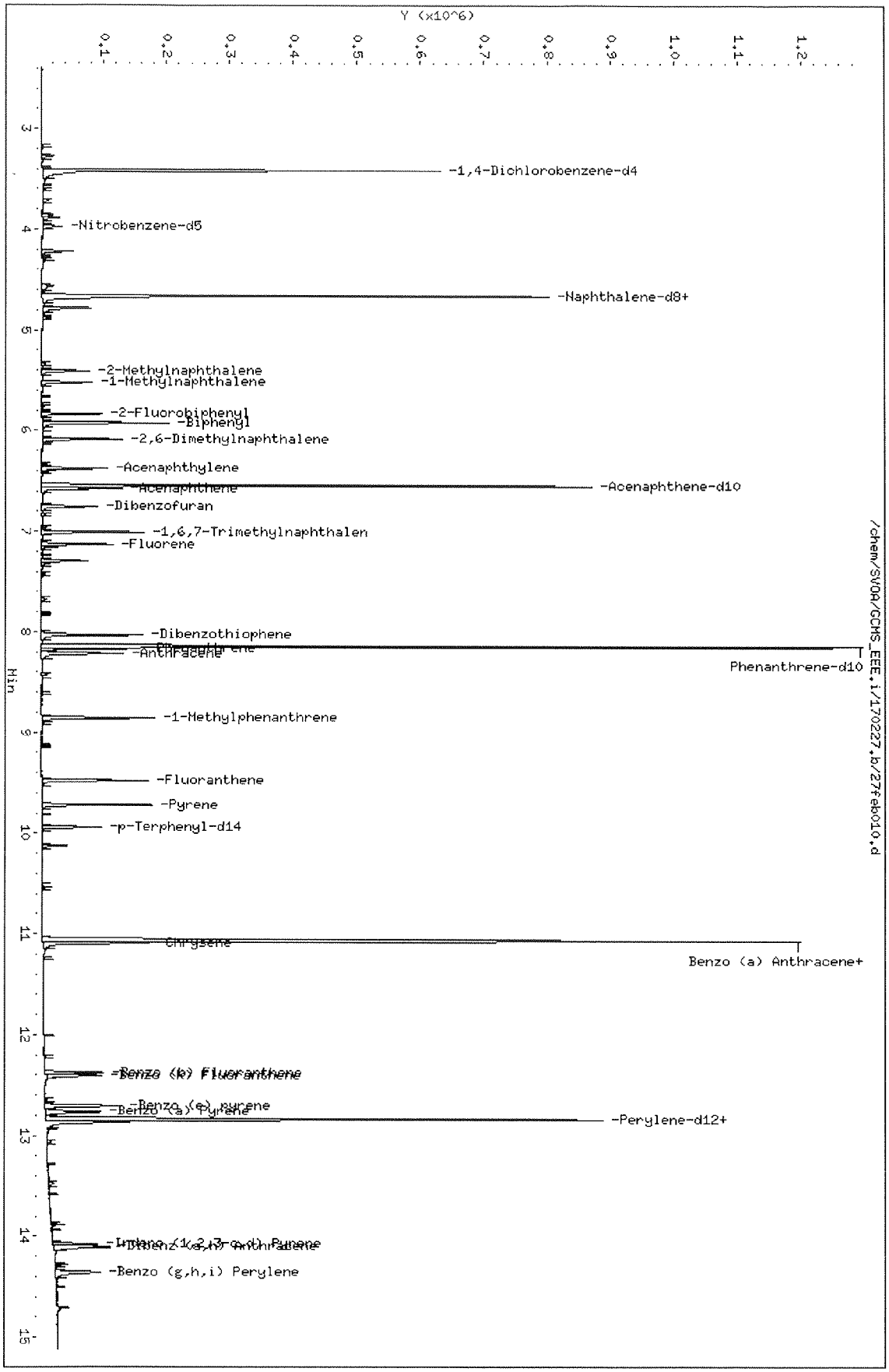

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb010.d
Date : 27-FEB-2017 13:33
Client ID:
Sample Info: ICAL-4 S0103170 0.5PPM

Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb009.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:12 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.419	152	230068	5.000	0.00
3)*Naphthalene-d8	(2)	4.660	136	612745	5.000	0.00
11)*Acenaphthene-d10	(3)	6.545	164	273032	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	925068	5.000	0.00
31)*Perylene-d12	(6)	12.838	264	785261	5.000	0.00
25)*Chrysene-d12	(5)	11.067	240	878502	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.972	82	46278	1.147	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.837	172	104016	1.047	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.939	244	143932	1.035	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.680	128	141648	1.027	100
5) 2-Methylnaphthalene	(2)	5.408	142	94063	1.040	100
6) 1-Methylnaphthalene	(2)	5.521	142	87362	1.010	100
10) Acenaphthylene	(3)	6.377	152	149499	1.027	100
12) Acenaphthene	(3)	6.578	153	88700	1.039	100
15) Fluorene	(3)	7.129	166	101921	1.051	100
18) Phenanthrene	(4)	8.166	178	205878	1.033	100
19) Anthracene	(4)	8.218	178	192501	0.946	100
21) Fluoranthene	(4)	9.477	202	260892	1.041	100
22) Pyrene	(5)	9.718	202	272203	1.029	100
24) Benzo (a) Anthracene	(5)	11.049	228	232180	1.001	100
26) Chrysene	(5)	11.095	228	226961	1.028	100
27) Benzo (b) Fluoranthene	(6)	12.375	252	213021	1.075	100
28) Benzo (k) Fluoranthene	(6)	12.404	252	231568	1.050	100
30) Benzo (a) Pyrene	(6)	12.769	252	206052	1.033	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.083	276	219293	1.054	100
34) Dibenz (a,h) Anthracene	(6)	14.109	278	170524	1.081	100
35) Benzo (g,h,i) Perylene	(6)	14.361	276	183611	1.039	100
8) Biphenyl	(3)	5.925	154	132531	1.055	100
9) 2,6-Dimethylnaphthalene	(3)	6.087	156	92518	1.049	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.009	170	90422	1.052	100
16) Dibenzothiophene	(3)	8.032	184	279136	1.048	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb009.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 13:12 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-3 S010317F 1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.857	192	204610	1.039	100
29) Benzo (e) pyrene	(6)	12.706	252	263772	1.056	100
32) Perylene	(6)	12.868	252	252508	1.028	100
13) Dibenzofuran	(3)	6.755	168	133354	1.043	100

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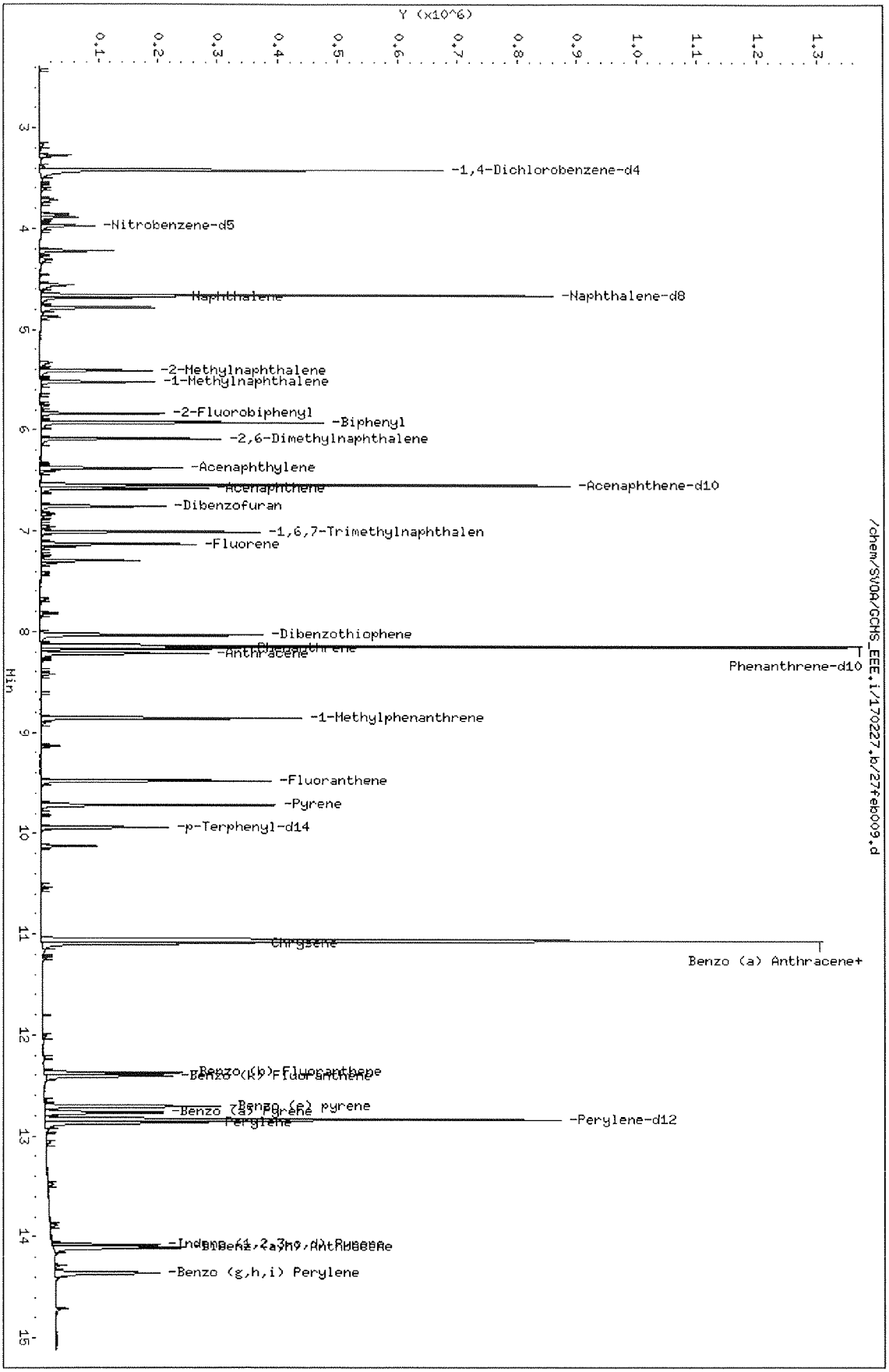

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb009.d
Date : 27-FEB-2017 13:12
Client ID:
Sample Info: ICAL-3 S010317F 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb008.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.418	152	215700	5.000	0.00
3)*Naphthalene-d8	(2)	4.660	136	561704	5.000	0.00
11)*Acenaphthene-d10	(3)	6.545	164	260827	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	876334	5.000	0.00
31)*Perylene-d12	(6)	12.840	264	754495	5.000	0.00
25)*Chrysene-d12	(5)	11.067	240	821276	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.970	82	81885	2.255	0.00
SpikedAmount 2.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.837	172	184294	1.941	0.00
SpikedAmount 2.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.939	244	272870	2.096	0.00
SpikedAmount 2.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.680	128	261158	2.066	99
5) 2-Methylnaphthalene	(2)	5.409	142	174731	2.107	100
6) 1-Methylnaphthalene	(2)	5.521	142	167016	2.106	99
10) Acenaphthylene	(3)	6.377	152	289077	2.079	100
12) Acenaphthene	(3)	6.579	153	167634	2.056	100
15) Fluorene	(3)	7.130	166	188108	2.030	100
18) Phenanthrene	(4)	8.168	178	388466	2.058	100
19) Anthracene	(4)	8.216	178	410792	2.124	99
21) Fluoranthene	(4)	9.477	202	501423	2.111	99
22) Pyrene	(5)	9.717	202	518246	2.095	100
24) Benzo (a) Anthracene	(5)	11.048	228	445464	2.055	100
26) Chrysene	(5)	11.095	228	425452	2.061	100
27) Benzo (b) Fluoranthene	(6)	12.376	252	396414	2.082	100
28) Benzo (k) Fluoranthene	(6)	12.404	252	431062	2.026	99
30) Benzo (a) Pyrene	(6)	12.767	252	401592	2.101	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.081	276	414360	2.073	96
34) Dibenz (a,h) Anthracene	(6)	14.108	278	316844	2.091	98
35) Benzo (g,h,i) Perylene	(6)	14.359	276	353968	2.086	100
8) Biphenyl	(3)	5.926	154	238006	1.983	99
9) 2,6-Dimethylnaphthalene	(3)	6.086	156	174275	2.067	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.010	170	168465	2.051	100
16) Dibenzothiophene	(3)	8.030	184	518762	2.038	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb008.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 12:52 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-2 S010317E 2PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.857	192	388935	2.112	99
29) Benzo (e) pyrene	(6)	12.707	252	494023	2.058	100
32) Perylene	(6)	12.869	252	478974	2.032	99
13) Dibenzofuran	(3)	6.755	168	251088	2.054	99

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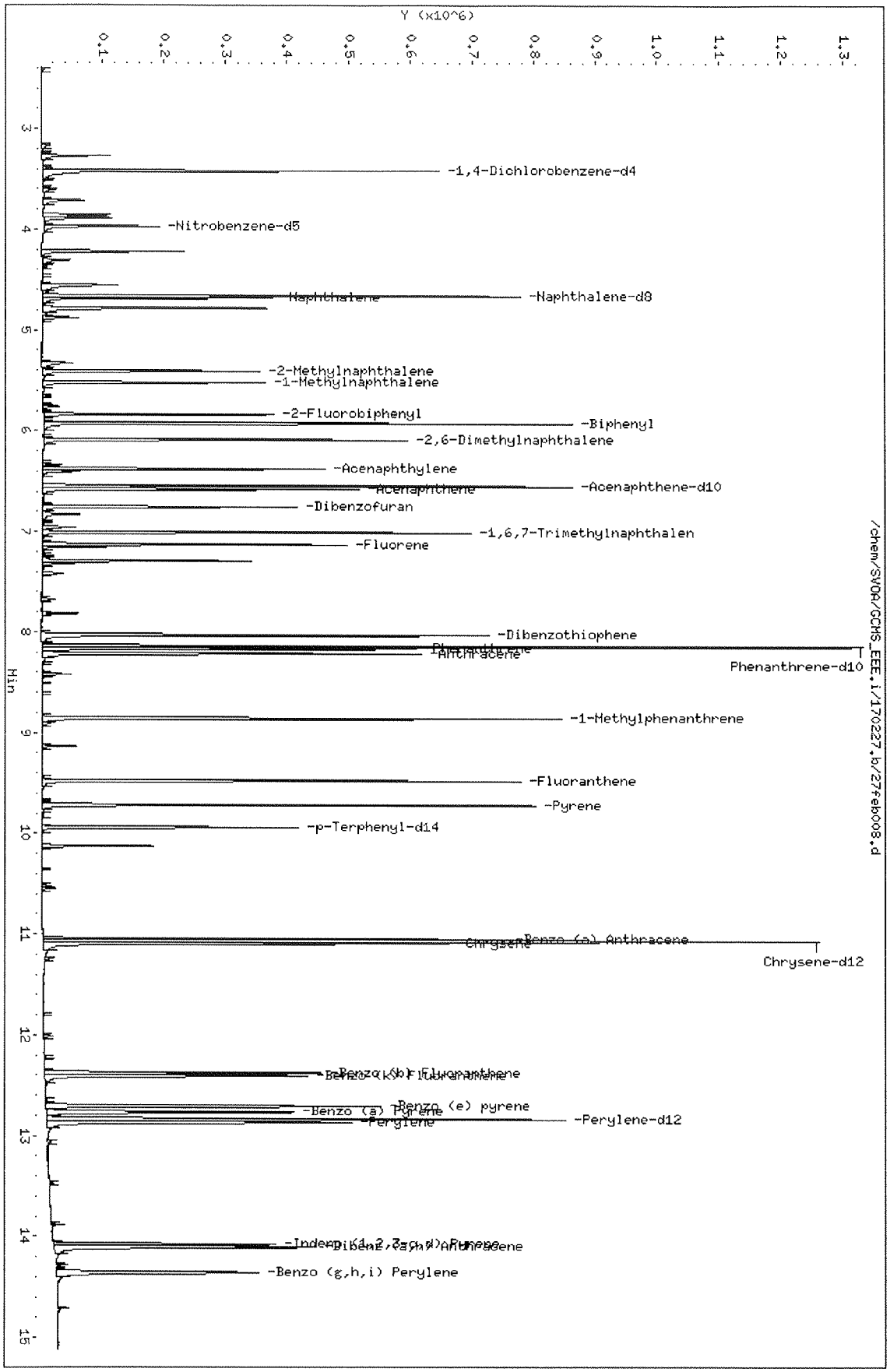

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb008.d
Date : 27-FEB-2017 12:52
Client ID:
Sample Info: ICAL-2 S0103I7E 2PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb007.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 12:32 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.418	152	203304	5.000	0.00
3)*Naphthalene-d8	(2)	4.661	136	512055	5.000	0.00
11)*Acenaphthene-d10	(3)	6.547	164	246018	5.000	0.00
17)*Phenanthrene-d10	(4)	8.146	188	825922	5.000	0.00
31)*Perylene-d12	(6)	12.841	264	717617	5.000	0.00
25)*Chrysene-d12	(5)	11.068	240	757875	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.970	82	191291	5.715	0.00
SpikedAmount 5.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.838	172	381570	4.260	0.00
SpikedAmount 5.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.941	244	599733	4.992	0.00
SpikedAmount 5.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.681	128	565679	4.909	99
5) 2-Methylnaphthalene	(2)	5.409	142	376424	4.980	98
6) 1-Methylnaphthalene	(2)	5.523	142	359617	4.976	99
10) Acenaphthylene	(3)	6.378	152	630533	4.806	99
12) Acenaphthene	(3)	6.581	153	368058	4.784	100
15) Fluorene	(3)	7.130	166	403566	4.613	99
18) Phenanthrene	(4)	8.169	178	851856	4.787	99
19) Anthracene	(4)	8.217	178	896640	4.919	99
21) Fluoranthene	(4)	9.479	202	1080334	4.831	100
22) Pyrene	(5)	9.717	202	1118587	4.899	99
24) Benzo (a) Anthracene	(5)	11.050	228	987510	4.935	100
26) Chrysene	(5)	11.096	228	925277	4.856	99
27) Benzo (b) Fluoranthene	(6)	12.379	252	933784	5.158	99
28) Benzo (k) Fluoranthene	(6)	12.409	252	953133	4.686	100
30) Benzo (a) Pyrene	(6)	12.772	252	903580	4.971	99
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.084	276	964541	5.075	77
34) Dibenz (a,h) Anthracene	(6)	14.113	278	709374	4.923	99
35) Benzo (g,h,i) Perylene	(6)	14.366	276	796935	4.938	100
8) Biphenyl	(3)	5.926	154	509983	4.495	100
9) 2,6-Dimethylnaphthalene	(3)	6.088	156	373702	4.699	98
14) 1,6,7-Trimethylnaphthalene	(3)	7.011	170	358375	4.632	100
16) Dibenzothiophene	(3)	8.032	184	1112926	4.634	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb007.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 12:32 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:01
Date, time and analyst ID of latest file update: 27-Feb-2017 15:01 ev7p

Sample Name: ICAL-1 S010317D 5PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.860	192	842995	4.959	99
29) Benzo (e) pyrene	(6)	12.712	252	1099892	4.817	100
32) Perylene	(6)	12.874	252	1080207	4.816	100
13) Dibenzofuran	(3)	6.755	168	548787	4.760	99

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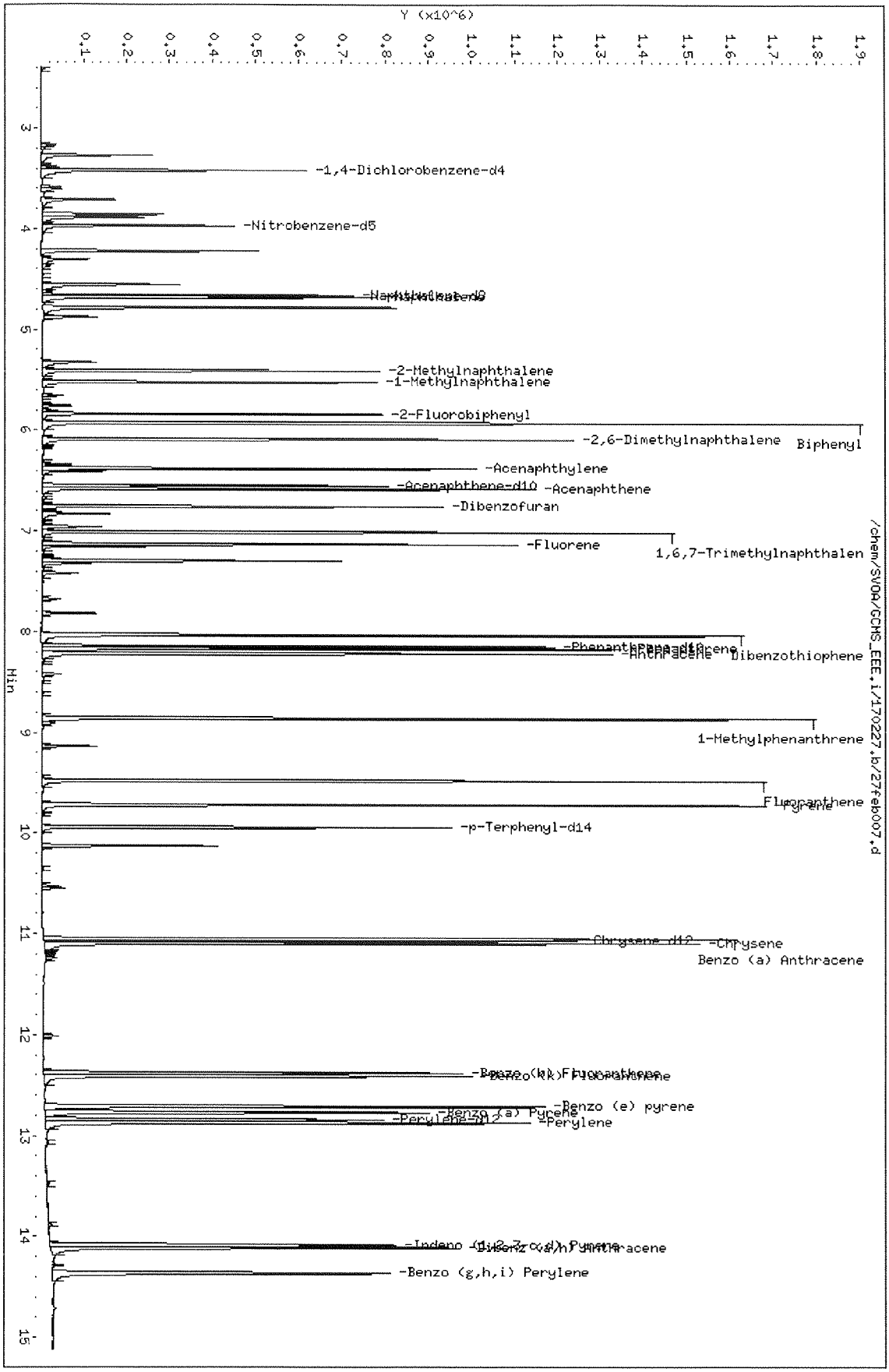

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb007.d
Date : 27-FEB-2017 12:32
Client ID:
Sample Info: ICAL-1 S0103317D 5PPM
Column phase: J&W DB-5MS
Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb012.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:02
Date, time and analyst ID of latest file update: 27-Feb-2017 15:02 ev7p

Sample Name: ICV S010317I 1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.422	152	189620	5.000	0.00
3)*Naphthalene-d8	(2)	4.657	136	508161	5.000	0.00
11)*Acenaphthene-d10	(3)	6.545	164	231974	5.000	0.00
17)*Phenanthrene-d10	(4)	8.143	188	785443	5.000	0.00
31)*Perylene-d12	(6)	12.838	264	689322	5.000	0.00
25)*Chrysene-d12	(5)	11.067	240	751334	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.969	82	40842	1.138	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.836	172	98833	1.171	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.939	244	139680	1.173	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.679	128	123130	1.078	100
5) 2-Methylnaphthalene	(2)	5.408	142	89012	1.188	100
6) 1-Methylnaphthalene	(2)	5.521	142	78793	1.099	100
10) Acenaphthylene	(3)	6.377	152	133592	1.081	100
12) Acenaphthene	(3)	6.578	153	80456	1.109	100
15) Fluorene	(3)	7.129	166	90737	1.101	100
18) Phenanthrene	(4)	8.168	178	193855	1.146	100
19) Anthracene	(4)	8.216	178	190932	1.105	100
21) Fluoranthene	(4)	9.477	202	236998	1.114	100
22) Pyrene	(5)	9.716	202	244518	1.080	100
24) Benzo (a) Anthracene	(5)	11.048	228	208186	1.049	100
26) Chrysene	(5)	11.093	228	197958	1.048	100
27) Benzo (b) Fluoranthene	(6)	12.374	252	187486	1.078	100
28) Benzo (k) Fluoranthene	(6)	12.404	252	210797	1.084	100
30) Benzo (a) Pyrene	(6)	12.768	252	185684	1.061	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.080	276	198035	1.085	100
34) Dibenz (a,h) Anthracene	(6)	14.108	278	154658	1.114	100
35) Benzo (g,h,i) Perylene	(6)	14.359	276	174291	1.117	100
8) Biphenyl	(3)	5.925	154	99316	0.926	100
9) 2,6-Dimethylnaphthalene	(3)	6.085	156	70047	0.926	100
14) 1,6,7-Trimethylnaphthalene	(3)	7.009	170	65487	0.897	100
16) Dibenzothiophene	(3)	8.032	184	211188	0.933	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb012.d Instrument ID: GCMS_EEE.i
Injection date and time: 27-FEB-2017 14:13 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170227.b/simpah-extra.m Sublist used: all
Calibration date and time: 27-FEB-2017 15:02
Date, time and analyst ID of latest file update: 27-Feb-2017 15:02 ev7p

Sample Name: ICV S010317I 1PPM Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.857	192	151961	0.902	100
29) Benzo (e) pyrene	(6)	12.704	252	199865	0.911	100
32) Perylene	(6)	12.868	252	192454	0.892	100
13) Dibenzofuran	(3)	6.755	168	120503	1.109	100

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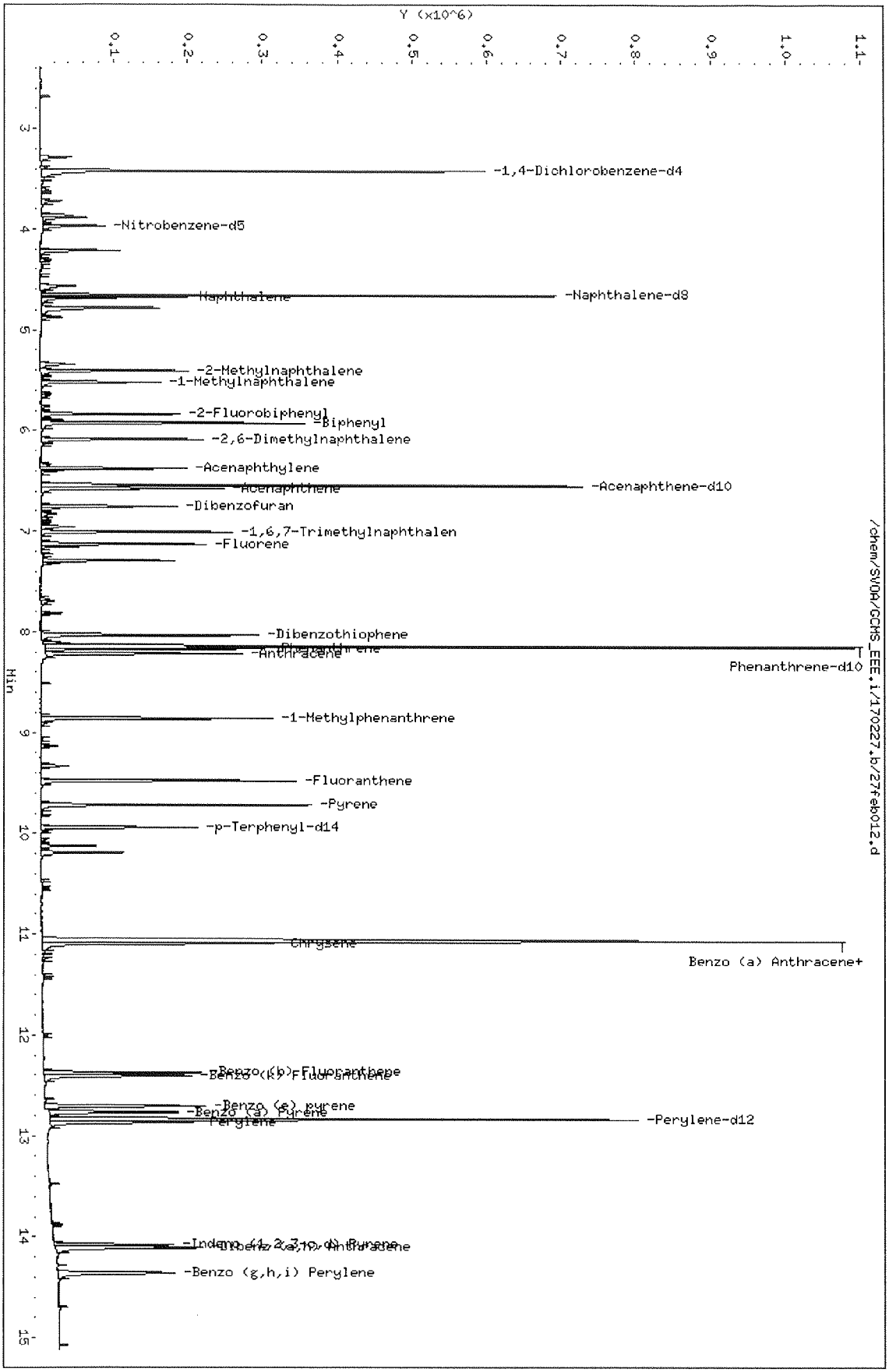

Data File: /chem/SVOA/GCMS_EEE.i/170227.b/27feb012.d
Date : 27-FEB-2017 14:13
Client ID:
Sample Info: ICV S0103171 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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EPA METHOD 8270C
PAHSIM

Sample Data

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER:	**17-03-0336**	ANALYZED BY:	907
INSTRUMENT:	GC/MS EEE	D/T ANALYZED:	2017-03-07 17:19
EXTRACTION :	EPA 3545	REVIEWED BY:	
D/T EXTRACTED:	2017-03-06 00:00	D/T REVIEWED:	

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar019.d\07mar019.rr

 # 3 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-13S**

LCS/MB BATCH:	170306L10	SAMPLE VOLUME / WEIGHT:	DEFAULT: 20.00 g / ACTUAL: 20.00 g
MS/MSD BATCH:	170306S10	FINAL VOLUME / WEIGHT:	DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Naphthalene	0.000	1.00	ND	0.010	
2-Methylnaphthalene	0.000	1.00	ND	0.010	
1-Methylnaphthalene	0.000	1.00	ND	0.010	
Acenaphthylene	0.000	1.00	ND	0.010	
Acenaphthene	0.000	1.00	ND	0.010	
Fluorene	0.000	1.00	ND	0.010	
Phenanthrene	0.000	1.00	ND	0.010	
Anthracene	0.000	1.00	ND	0.010	
Fluoranthene	0.000	1.00	ND	0.010	
Pyrene	0.000	1.00	ND	0.010	
Benzo (a) Anthracene	0.000	1.00	ND	0.010	
Chrysene	0.000	1.00	ND	0.010	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (a) Pyrene	0.000	1.00	ND	0.010	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.010	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.010	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.010	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar019.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 17:19 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 17:46 ev7p

Sample Name: 17-03-0336-3 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.367	152	241424	5.000	0.00
3)*Naphthalene-d8	(2)	4.602	136	696873	5.000	0.00
11)*Acenaphthene-d10	(3)	6.486	164	352679	5.000	0.00
17)*Phenanthrene-d10	(4)	8.084	188	1135288	5.000	0.00
31)*Perylene-d12	(6)	12.757	264	998871	5.000	0.01
25)*Chrysene-d12	(5)	11.002	240	1094838	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.921	82	43907	0.892	0.00
SpikedAmount 1.000	Recovery = 89.207					
7)$2-Fluorobiphenyl	(3)	5.782	172	111115	0.866	0.00
SpikedAmount 1.000	Recovery = 86.619					
23)$p-Terphenyl-d14	(5)	9.880	244	201079	1.159	0.00
SpikedAmount 1.000	Recovery = 115.855					
Target Compounds						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar019.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 17:19 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 17:46 ev7p

Sample Name: 17-03-0336-3 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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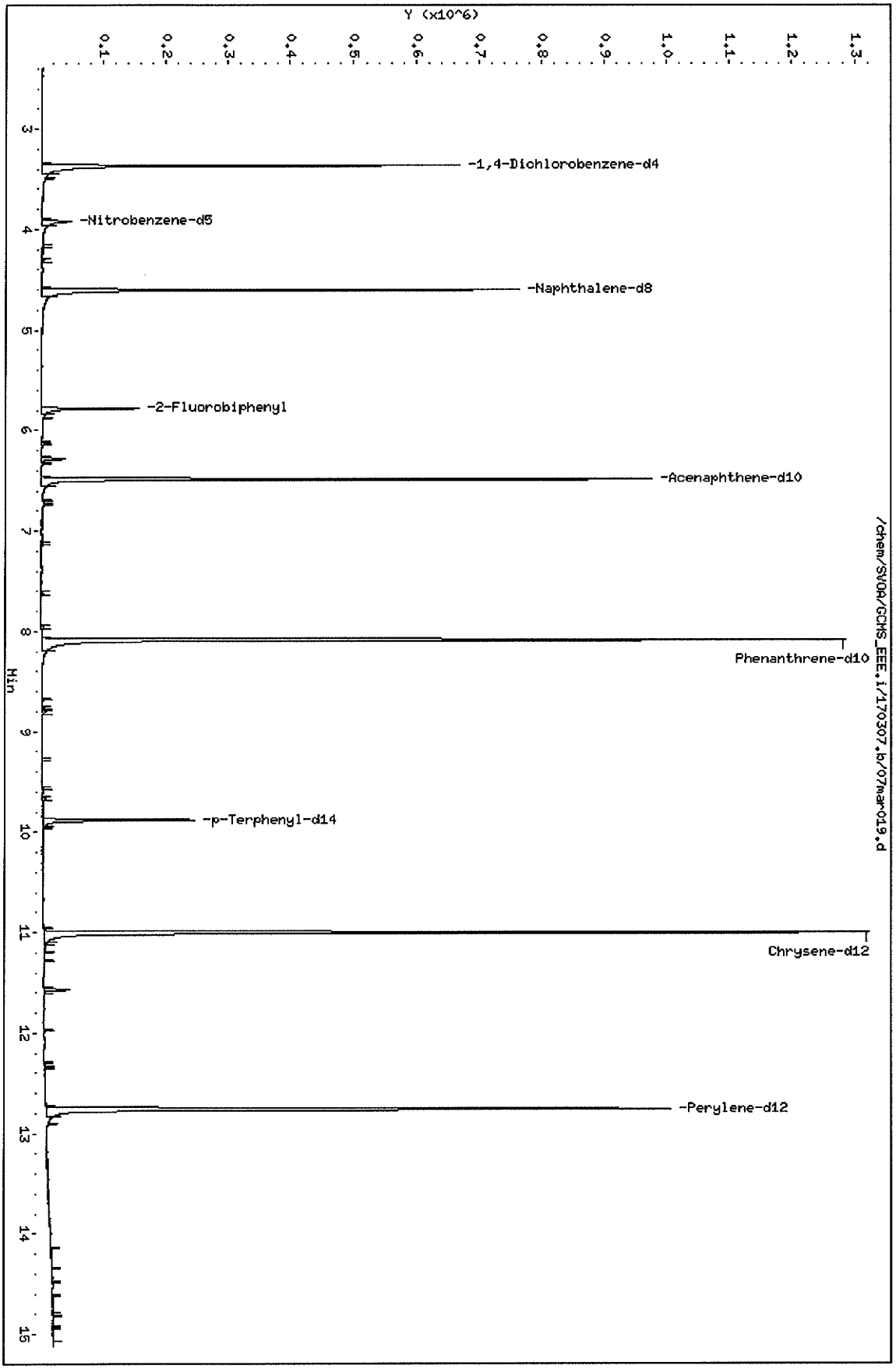

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER:	**17-03-0336**	ANALYZED BY:	907
INSTRUMENT:	GC/MS EEE	D/T ANALYZED:	2017-03-07 17:39
EXTRACTION :	EPA 3545	REVIEWED BY:	
D/T EXTRACTED:	2017-03-06 00:00	D/T REVIEWED:	

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar020.d\07mar020.rr

 # 4 **CLIENT SAMPLE NUMBER: D-DU2-S-SG-05-25S**

LCS/MB BATCH:	170306L10	SAMPLE VOLUME / WEIGHT:	DEFAULT: 20.00 g / ACTUAL: 20.10 g
MS/MSD BATCH:	170306S10	FINAL VOLUME / WEIGHT:	DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Naphthalene	0.0190	1.00	ND	0.010	
2-Methylnaphthalene	0.000	1.00	ND	0.010	
1-Methylnaphthalene	0.000	1.00	ND	0.010	
Acenaphthylene	0.000	1.00	ND	0.010	
Acenaphthene	0.000	1.00	ND	0.010	
Fluorene	0.000	1.00	ND	0.010	
Phenanthrene	0.0101	1.00	ND	0.010	
Anthracene	0.000	1.00	ND	0.010	
Fluoranthene	0.000	1.00	ND	0.010	
Pyrene	0.000	1.00	ND	0.010	
Benzo (a) Anthracene	0.000	1.00	ND	0.010	
Chrysene	0.000	1.00	ND	0.010	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (a) Pyrene	0.000	1.00	ND	0.010	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.010	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.010	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.010	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar020.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 17:39 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 18:01 ev7p

Sample Name: 17-03-0336-4 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.367	152	262092	5.000	0.00
3)*Naphthalene-d8	(2)	4.601	136	713156	5.000	0.00
11)*Acenaphthene-d10	(3)	6.486	164	355089	5.000	0.00
17)*Phenanthrene-d10	(4)	8.083	188	1172033	5.000	0.00
31)*Perylene-d12	(6)	12.757	264	1029967	5.000	0.01
25)*Chrysene-d12	(5)	11.000	240	1149502	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.918	82	49766	0.988	0.00
SpikedAmount 1.000	Recovery = 98.801					
7)$2-Fluorobiphenyl	(3)	5.780	172	105272	0.815	0.00
SpikedAmount 1.000	Recovery = 81.507					
23)$p-Terphenyl-d14	(5)	9.880	244	172171	0.945	0.00
SpikedAmount 1.000	Recovery = 94.481					
Target Compounds						QValue
4) Naphthalene	(2)	4.622	128	3050	0.019	80
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	8.108	178	2561	0.010	96
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar020.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 17:39 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 18:01 ev7p

Sample Name: 17-03-0336-4 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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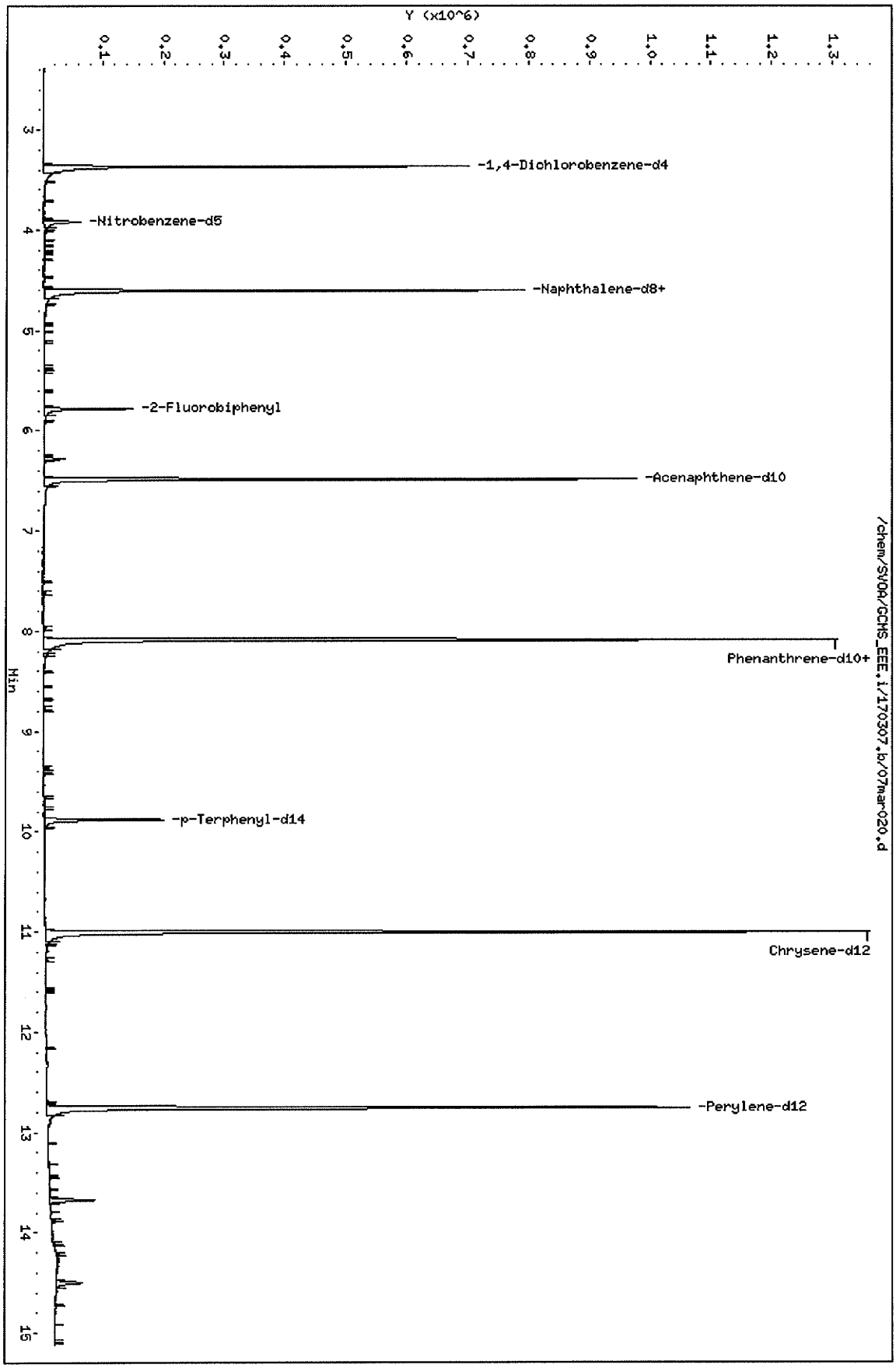

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EPA METHOD 8270C
PAHSIM

Quality Control

Method Blank
LCS/LCSD
MS/MSD

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METHOD BLANK ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

MB SAMPLE ID:	**099-14-035-377**	ANALYZED BY:	907
MB BATCH ID:	170306L10	D/T ANALYZED:	2017-03-07 10:49
INSTRUMENT:	GC/MS EEE	REVIEWED BY:	262
EXTRACTION:	EPA 3545	D/T REVIEWED:	2017-03-07 15:10
D/T EXTRACTED:	2017-03-06 00:00	MATRIX:	Soil

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar003.d\07mar003.rr

CLIENT WORK ORDER: 17-03-0336

S#	RUN TYPE	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
3		D-DU2-S-SG-05-13S	2017-03-07 17:19	Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar019.d\07mar019.rr
4		D-DU2-S-SG-05-25S	2017-03-07 17:39	Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar020.d\07mar020.rr

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RAW DATA SHEET
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER:	**099-14-035**	ANALYZED BY:	907
INSTRUMENT:	GC/MS EEE	D/T ANALYZED:	2017-03-07 10:49
EXTRACTION :	EPA 3545	REVIEWED BY:	262
D/T EXTRACTED:	2017-03-06 00:00	D/T REVIEWED:	2017-03-07 15:10

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar003.d\07mar003.rr

 # MB **CLIENT SAMPLE NUMBER: Method Blank**

LCS/MB BATCH:	170306L10	SAMPLE VOLUME / WEIGHT:	DEFAULT: 20.00 g / ACTUAL: 20.00 g
MS/MSD BATCH:		FINAL VOLUME / WEIGHT:	DEFAULT: 2.00 ml / ACTUAL: 2.00 ml
UNITS:	mg/kg	ADJUSTMENT RATIO TO PF:	1.00

COMMENT:

COMPOUND	ON COL CONC	DF	CONC	RL	QUAL
Naphthalene	0.000	1.00	ND	0.010	
2-Methylnaphthalene	0.000	1.00	ND	0.010	
1-Methylnaphthalene	0.000	1.00	ND	0.010	
Acenaphthylene	0.000	1.00	ND	0.010	
Acenaphthene	0.000	1.00	ND	0.010	
Fluorene	0.000	1.00	ND	0.010	
Phenanthrene	0.000	1.00	ND	0.010	
Anthracene	0.000	1.00	ND	0.010	
Fluoranthene	0.000	1.00	ND	0.010	
Pyrene	0.000	1.00	ND	0.010	
Benzo (a) Anthracene	0.000	1.00	ND	0.010	
Chrysene	0.000	1.00	ND	0.010	
Benzo (k) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (b) Fluoranthene	0.000	1.00	ND	0.010	
Benzo (a) Pyrene	0.000	1.00	ND	0.010	
Indeno (1,2,3-c,d) Pyrene	0.000	1.00	ND	0.010	
Dibenz (a,h) Anthracene	0.000	1.00	ND	0.010	
Benzo (g,h,i) Perylene	0.000	1.00	ND	0.010	

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LCS QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

LCS SAMPLE ID: **099-14-035-377**
LCS/MB BATCH ID: 170306L10
INSTRUMENT: GC/MS EEE

EXTRACTION: EPA 3545
D/T EXTRACTED: 2017-03-06 00:00

ANALYZED BY: 907
D/T ANALYZED: 2017-03-07 11:09
REVIEWED BY: 262
D/T REVIEWED: 2017-03-07 15:10

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar004.d\07mar004.rr

COMPOUND	CONC	CONC REC	%REC	%REC CL	ME CL	STATUS	QUALIFIERS
Naphthalene	0.1000	0.09332	93	51-129	38-142	PASS	
2-Methylnaphthalene	0.1000	0.1080	108	50-127	37-140	PASS	
1-Methylnaphthalene	0.1000	0.1019	102	54-132	41-145	PASS	
Acenaphthylene	0.1000	0.08533	85	50-123	38-135	PASS	
Acenaphthene	0.1000	0.08642	86	53-125	41-137	PASS	
Fluorene	0.1000	0.08738	87	55-127	43-139	PASS	
Phenanthrene	0.1000	0.09564	96	50-122	38-134	PASS	
Anthracene	0.1000	0.09771	98	50-132	36-146	PASS	
Fluoranthene	0.1000	0.09986	100	55-127	43-139	PASS	
Pyrene	0.1000	0.09302	93	50-134	36-148	PASS	
Benzo (a) Anthracene	0.1000	0.09672	97	50-133	36-147	PASS	
Chrysene	0.1000	0.09393	94	51-129	38-142	PASS	
Benzo (k) Fluoranthene	0.1000	0.1008	101	49-150	32-167	PASS	
Benzo (b) Fluoranthene	0.1000	0.1044	104	50-142	35-157	PASS	
Benzo (a) Pyrene	0.1000	0.1030	103	50-134	36-148	PASS	
Indeno (1,2,3-c,d) Pyrene	0.1000	0.1078	108	50-148	34-164	PASS	
Dibenz (a,h) Anthracene	0.1000	0.1095	110	50-133	36-147	PASS	
Benzo (g,h,i) Perylene	0.1000	0.1129	113	50-130	37-143	PASS	

Total number of LCS compounds: 18
Total number of ME compounds: 0
Total number of ME compounds allowed: 1
LCS ME CL validation result: Pass

Compounds listed in bold are required to be reported.

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MATRIX SPIKE / MATRIX SPIKE DUPLICATE QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

SPIKED SAMPLE ID: 17-03-0335-3
MS/MSD BATCH: 170306S10
INSTRUMENTS:
SAMPLE: GC/MS EEE
MS: GC/MS EEE
MSD: GC/MS EEE

EXTRACTION: EPA 3545
D/T EXTRACTED:
SAMPLE: 2017-03-06 00:00
MS: 2017-03-06 00:00
MSD: 2017-03-06 00:00

ANALYZED BY: 907
D/T ANALYZED:
SAMPLE: 2017-03-07 14:17
MS: 2017-03-07 13:37
MSD: 2017-03-07 13:56
REVIEWED BY: 262
D/T REVIEWED: 2017-03-07 15:10

COMMENT:

COMPOUND NAME	SAMPLE	INITIAL	FINAL	MS CONC	% MS.REC	MSD CONC	% MSD.REC	% REC CL	RPD	RPD CL	STATUS	QUALIFIERS
Naphthalene	ND	1.000	0.1000	0.07824	78	0.07935	79	20-150	1	0-33	PASS	
2-Methylnaphthalene	ND	1.000	0.1000	0.08935	89	0.09361	94	29-137	5	0-31	PASS	
1-Methylnaphthalene	ND	1.000	0.1000	0.07897	79	0.08532	85	34-136	8	0-29	PASS	
Acenaphthylene	ND	1.000	0.1000	0.07172	72	0.07478	75	29-131	4	0-32	PASS	
Acenaphthene	ND	1.000	0.1000	0.07304	73	0.07507	75	29-137	3	0-28	PASS	
Fluorene	ND	1.000	0.1000	0.07346	73	0.07788	78	36-132	6	0-27	PASS	
Phenanthrene	ND	1.000	0.1000	0.08062	81	0.08486	85	20-144	5	0-27	PASS	
Anthracene	ND	1.000	0.1000	0.08123	81	0.08461	85	26-134	4	0-27	PASS	
Fluoranthene	ND	1.000	0.1000	0.08556	86	0.08960	90	20-151	5	0-26	PASS	
Pyrene	ND	1.000	0.1000	0.08020	80	0.08337	83	20-150	4	0-32	PASS	
Benzo (a) Anthracene	ND	1.000	0.1000	0.08354	84	0.08669	87	24-150	4	0-24	PASS	
Chrysene	ND	1.000	0.1000	0.08213	82	0.08458	85	25-145	3	0-28	PASS	
Benzo (k) Fluoranthene	ND	1.000	0.1000	0.08425	84	0.08750	88	28-148	4	0-26	PASS	
Benzo (b) Fluoranthene	ND	1.000	0.1000	0.08427	84	0.09110	91	21-153	8	0-26	PASS	
Benzo (a) Pyrene	ND	1.000	0.1000	0.08726	87	0.09022	90	29-149	3	0-22	PASS	
Indeno (1,2,3-c,d) Pyrene	ND	1.000	0.1000	0.09109	91	0.09352	94	20-154	3	0-25	PASS	
Dibenz (a,h) Anthracene	ND	1.000	0.1000	0.09278	93	0.09727	97	20-132	5	0-26	PASS	
Benzo (g,h,i) Perylene	ND	1.000	0.1000	0.09490	95	0.09644	96	20-148	2	0-27	PASS	

Data Files:

TYPE	DATA FILE	DATA FILE PATH
MS	07mar008.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar008.d\
MSD	07mar009.rr	Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar009.d\

SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0336
BATCH ID:
LCS/MB: 170306L10
MS: 170306S10
EXTRACTION : EPA 3545

REVIEWED BY:
D/T REVIEWED:

3 CLIENT SAMPLE NUMBER : D-DU2-S-SG-05-13S

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar019.d\07mar019.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-07 17:19

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	87	13-127	PASS	
Nitrobenzene-d5	89	17-137	PASS	
p-Terphenyl-d14	116	4-160	PASS	

4 CLIENT SAMPLE NUMBER : D-DU2-S-SG-05-25S

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar020.d\07mar020.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-07 17:39

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	94	4-160	PASS	
Nitrobenzene-d5	99	17-137	PASS	
2-Fluorobiphenyl	82	13-127	PASS	

MB CLIENT SAMPLE NUMBER : Method Blank

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar003.d\07mar003.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-07 10:49

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	81	13-127	PASS	
Nitrobenzene-d5	88	17-137	PASS	
p-Terphenyl-d14	96	4-160	PASS	

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SURROGATE RECOVERIES
FOR METHOD: EPA 8270C SIM PAHs

WORK ORDER: 17-03-0336
BATCH ID:
LCS/MB: 170306L10
MS:
EXTRACTION : EPA 3545

REVIEWED BY: 262
D/T REVIEWED: 2017-03-07 15:10

LCS CLIENT SAMPLE NUMBER : Lab Control Sample

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar004.d\07mar004.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-07 11:09

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	97	4-160	PASS	
Nitrobenzene-d5	92	17-137	PASS	
2-Fluorobiphenyl	84	13-127	PASS	

MS CLIENT SAMPLE NUMBER : Matrix Spike

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar008.d\07mar008.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-07 13:37

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
p-Terphenyl-d14	86	4-160	PASS	
Nitrobenzene-d5	79	17-137	PASS	
2-Fluorobiphenyl	74	13-127	PASS	

MSD CLIENT SAMPLE NUMBER : Matrix Spike Duplicate

INSTRUMENT: GC/MS EEE
D/T EXTRACTED: 2017-03-06 00:00
DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar009.d\07mar009.rr

ANALYZED BY: 907
D/T ANALYZED 2017-03-07 13:56

COMMENT:

COMPOUND	% REC	% REC CL	STATUS	QUALIFIERS
2-Fluorobiphenyl	78	13-127	PASS	
Nitrobenzene-d5	85	17-137	PASS	
p-Terphenyl-d14	99	4-160	PASS	

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar003.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 10:49 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 13:39 ev7p

Sample Name: MB 170306 L10 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.369	152	252996	5.000	-0.01
3)*Naphthalene-d8	(2)	4.602	136	713698	5.000	0.00
11)*Acenaphthene-d10	(3)	6.487	164	367591	5.000	0.00
17)*Phenanthrene-d10	(4)	8.084	188	1150963	5.000	0.00
31)*Perylene-d12	(6)	12.760	264	1058408	5.000	0.00
25)*Chrysene-d12	(5)	11.002	240	1128739	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.920	82	44164	0.876	0.00
SpikedAmount 1.000	Recovery = 87.613					
7)$2-Fluorobiphenyl	(3)	5.781	172	107673	0.805	0.00
SpikedAmount 1.000	Recovery = 80.531					
23)$p-Terphenyl-d14	(5)	9.880	244	171353	0.958	0.00
SpikedAmount 1.000	Recovery = 95.762					
Target Compounds					QValue	
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar003.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 10:49 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 13:39 ev7p

Sample Name: MB 170306 L10 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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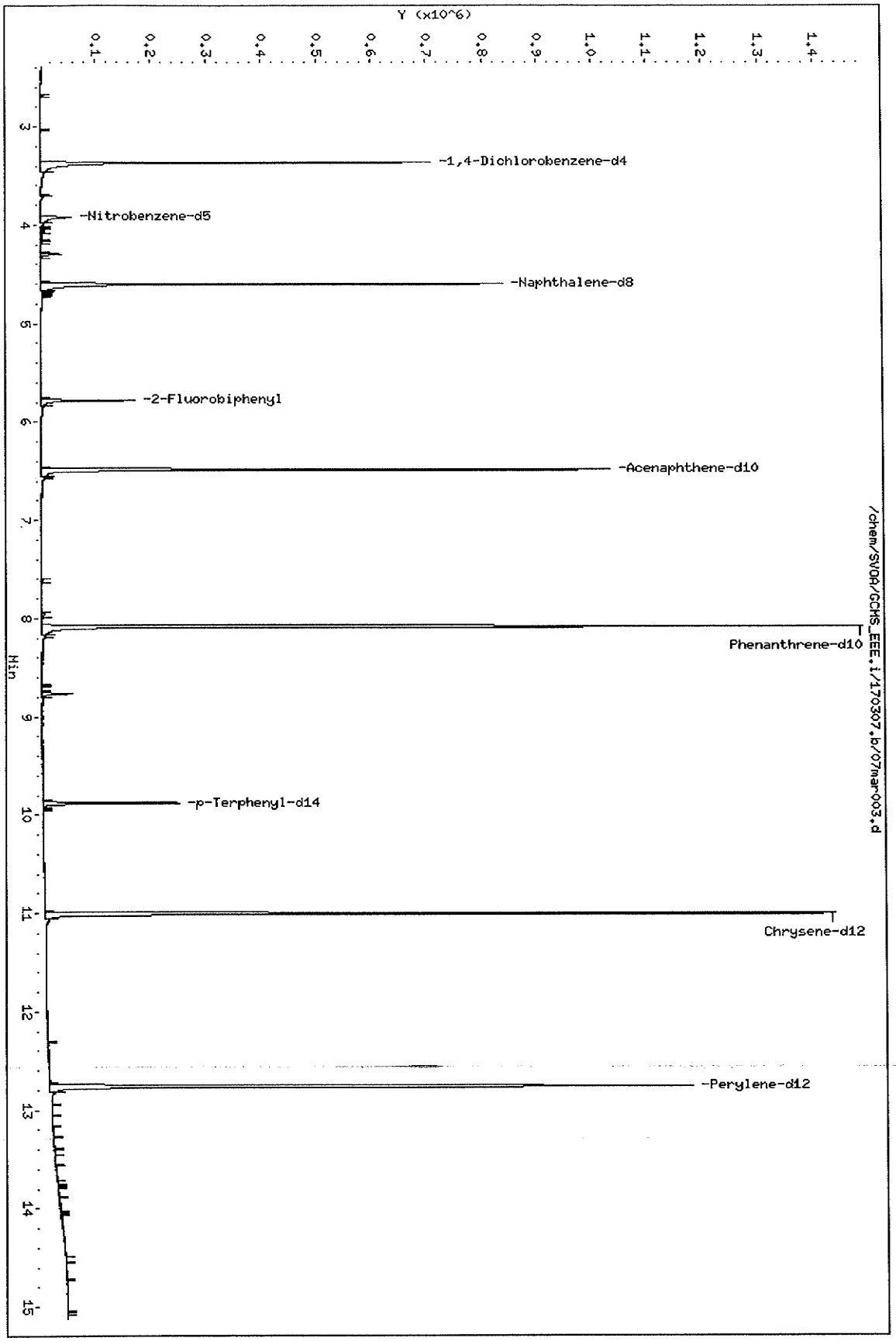

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar003.d
Date : 07-MAR-2017 10:49
Client ID:
Sample Info: MB 170306 L10
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar004.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 11:09 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 11:31 Unknown

Sample Name: LCS 170306 L10 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.368	152	232664	5.000	-0.01
3)*Naphthalene-d8	(2)	4.602	136	628644	5.000	0.00
11)*Acenaphthene-d10	(3)	6.487	164	330975	5.000	0.00
17)*Phenanthrene-d10	(4)	8.083	188	994156	5.000	0.00
31)*Perylene-d12	(6)	12.760	264	941437	5.000	0.00
25)*Chrysene-d12	(5)	11.002	240	1000851	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.915	82	40998	0.923	0.00
SpikedAmount 1.000	Recovery = 92.337					
7)$2-Fluorobiphenyl	(3)	5.780	172	100874	0.838	0.00
SpikedAmount 1.000	Recovery = 83.792					
23)$p-Terphenyl-d14	(5)	9.880	244	153850	0.970	0.00
SpikedAmount 1.000	Recovery = 96.967					
Target Compounds						QValue
4) Naphthalene	(2)	4.622	128	131828	0.933	99
5) 2-Methylnaphthalene	(2)	5.353	142	100165	1.081	100
6) 1-Methylnaphthalene	(2)	5.463	142	90418	1.019	98
10) Acenaphthylene	(3)	6.319	152	150485	0.853	99
12) Acenaphthene	(3)	6.520	153	89433	0.864	99
15) Fluorene	(3)	7.071	166	102705	0.874	100
18) Phenanthrene	(4)	8.107	178	204775	0.956	99
19) Anthracene	(4)	8.158	178	213607	0.977	100
21) Fluoranthene	(4)	9.416	202	268858	0.999	100
22) Pyrene	(5)	9.654	202	280640	0.930	100
24) Benzo (a) Anthracene	(5)	10.985	228	255780	0.967	100
26) Chrysene	(5)	11.030	228	236284	0.939	100
27) Benzo (b) Fluoranthene	(6)	12.300	252	247857	1.044	99
28) Benzo (k) Fluoranthene	(6)	12.328	252	267561	1.008	98
30) Benzo (a) Pyrene	(6)	12.691	252	246045	1.030	98
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.003	276	268721	1.078	91
34) Dibenz (a,h) Anthracene	(6)	14.028	278	207635	1.095	98
35) Benzo (g,h,i) Perylene	(6)	14.276	276	240529	1.129	99
8) Biphenyl	(3)	5.868	154	126122	0.824	99
9) 2,6-Dimethylnaphthalene	(3)	6.030	156	88850	0.823	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.950	170	88392	0.848	99
16) Dibenzothiophene	(3)	7.973	184	260124	0.806	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar004.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 11:09 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 11:31 Unknown

Sample Name: LCS 170306 L10 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.799	192	194984	0.869	99
29) Benzo (e) pyrene	(6)	12.628	252	289234	0.966	100
32) Perylene	(6)	12.788	252	275435	0.935	99
13) Dibenzofuran	(3)	6.697	168	137373	0.886	100

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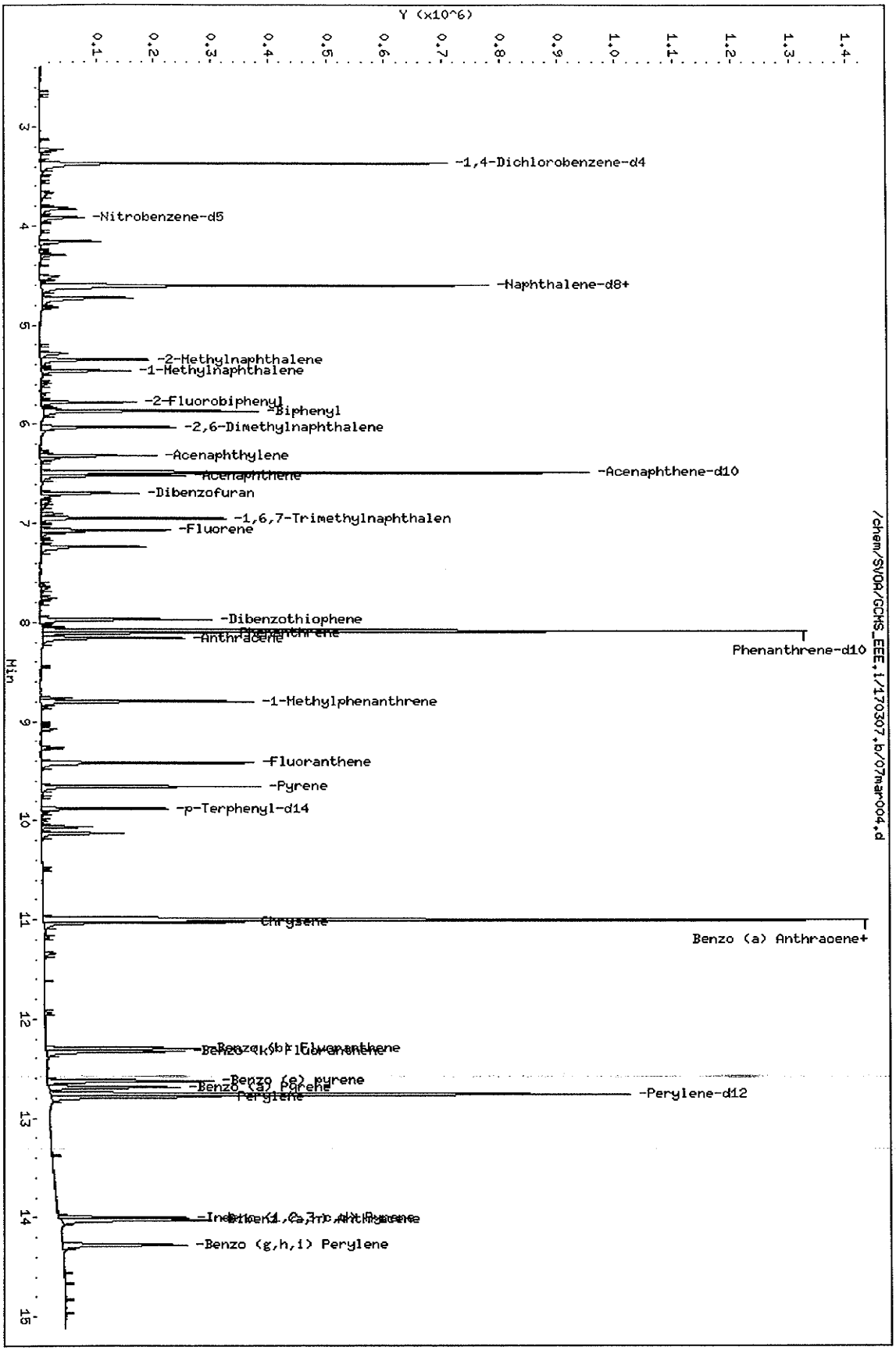

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar004.d
Date : 07-MAR-2017 11:09
Client ID:
Sample Info: LCS 170306 L10
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar008.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 13:37 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 13:59 Unknown

Sample Name: 17-03-0335-3 MS Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.367	152	270630	5.000	0.00
3)*Naphthalene-d8	(2)	4.602	136	701008	5.000	0.00
11)*Acenaphthene-d10	(3)	6.489	164	350097	5.000	0.00
17)*Phenanthrene-d10	(4)	8.086	188	1083947	5.000	0.00
31)*Perylene-d12	(6)	12.768	264	1030523	5.000	0.00
25)*Chrysene-d12	(5)	11.008	240	1088533	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.916	82	38912	0.786	0.00
SpikedAmount 1.000	Recovery = 78.593					
7)$2-Fluorobiphenyl	(3)	5.782	172	93974	0.738	0.00
SpikedAmount 1.000	Recovery = 73.797					
23)$p-Terphenyl-d14	(5)	9.884	244	147639	0.856	0.00
SpikedAmount 1.000	Recovery = 85.557					
Target Compounds						QValue
4) Naphthalene	(2)	4.623	128	123247	0.782	100
5) 2-Methylnaphthalene	(2)	5.353	142	92357	0.893	99
6) 1-Methylnaphthalene	(2)	5.466	142	78115	0.790	98
10) Acenaphthylene	(3)	6.319	152	133792	0.717	99
12) Acenaphthene	(3)	6.521	153	79960	0.730	99
15) Fluorene	(3)	7.072	166	91333	0.735	100
18) Phenanthrene	(4)	8.111	178	188199	0.806	100
19) Anthracene	(4)	8.161	178	193618	0.812	99
21) Fluoranthene	(4)	9.421	202	251170	0.856	100
22) Pyrene	(5)	9.661	202	263144	0.802	100
24) Benzo (a) Anthracene	(5)	10.992	228	240270	0.835	99
26) Chrysene	(5)	11.035	228	224696	0.821	100
27) Benzo (b) Fluoranthene	(6)	12.308	252	219034	0.843	98
28) Benzo (k) Fluoranthene	(6)	12.338	252	244884	0.843	94
30) Benzo (a) Pyrene	(6)	12.699	252	228280	0.873	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.011	276	248582	0.911	99
34) Dibenz (a,h) Anthracene	(6)	14.038	278	192520	0.928	98
35) Benzo (g,h,i) Perylene	(6)	14.286	276	221330	0.949	99
8) Biphenyl	(3)	5.871	154	112091	0.692	100
9) 2,6-Dimethylnaphthalene	(3)	6.030	156	79817	0.699	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.952	170	77431	0.703	99
16) Dibenzothiophene	(3)	7.974	184	238387	0.698	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar008.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 13:37 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 13:59 Unknown

Sample Name: 17-03-0335-3 MS Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.802	192	181783	0.745	100
29) Benzo (e) pyrene	(6)	12.636	252	265648	0.810	100
32) Perylene	(6)	12.798	252	257412	0.798	100
13) Dibenzofuran	(3)	6.700	168	122914	0.750	99

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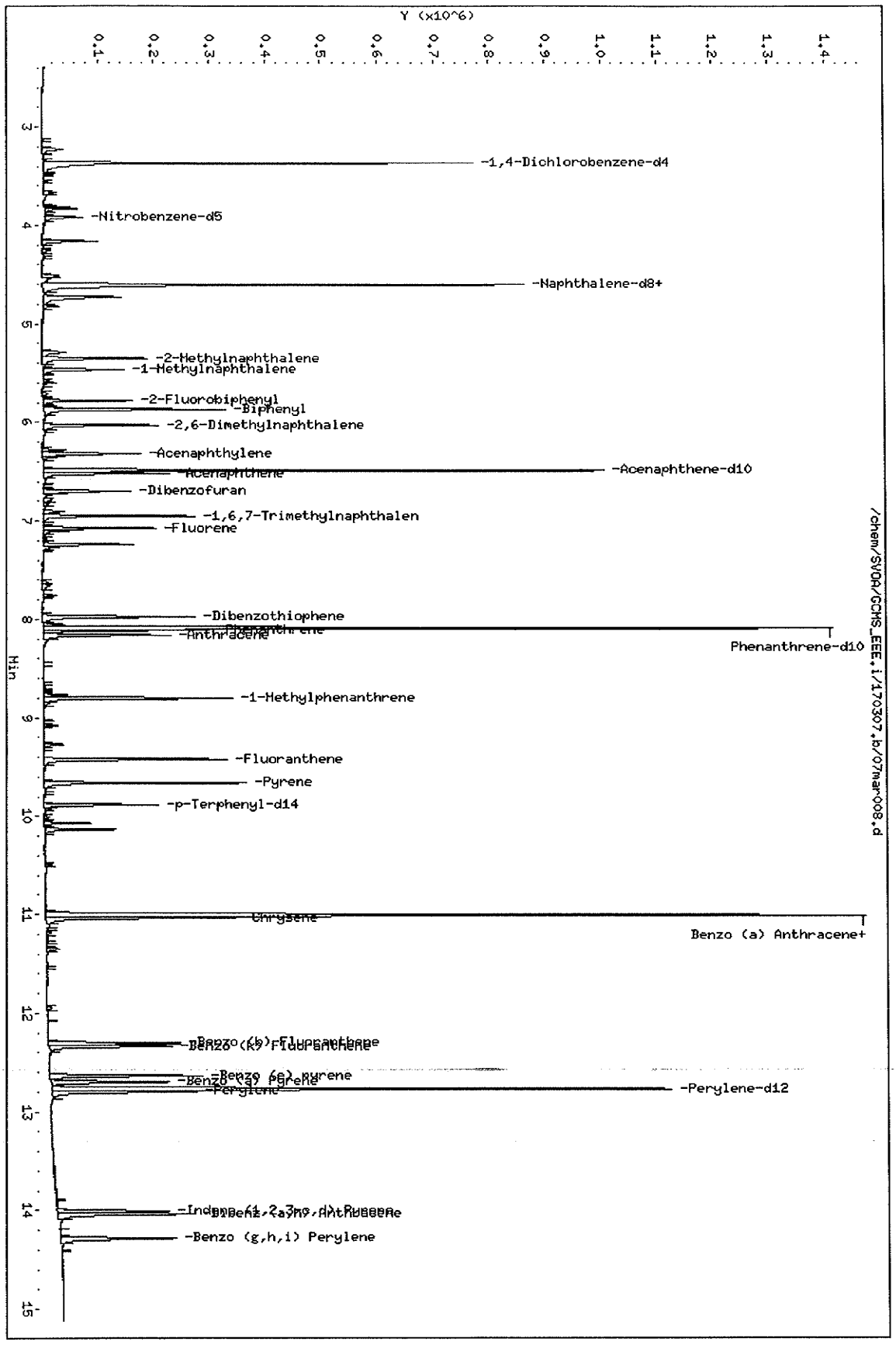

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar008.d
Date : 07-MAR-2017 13:37
Client ID:
Sample Info: 17-03-0335-3 MS
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar009.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 13:56 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 14:18 Unknown

Sample Name: 17-03-0335-3 MSD Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.367	152	247706	5.000	0.00
3)*Naphthalene-d8	(2)	4.602	136	686330	5.000	0.00
11)*Acenaphthene-d10	(3)	6.487	164	351876	5.000	0.00
17)*Phenanthrene-d10	(4)	8.084	188	1085770	5.000	0.00
31)*Perylene-d12	(6)	12.762	264	1034654	5.000	0.00
25)*Chrysene-d12	(5)	11.004	240	1086707	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.917	82	41087	0.848	0.00
SpikedAmount 1.000	Recovery = 84.759					
7)$2-Fluorobiphenyl	(3)	5.781	172	100011	0.781	0.00
SpikedAmount 1.000	Recovery = 78.141					
23)$p-Terphenyl-d14	(5)	9.880	244	169748	0.985	0.00
SpikedAmount 1.000	Recovery = 98.535					
Target Compounds						QValue
4) Naphthalene	(2)	4.622	128	122376	0.793	100
5) 2-Methylnaphthalene	(2)	5.353	142	94740	0.936	99
6) 1-Methylnaphthalene	(2)	5.465	142	82627	0.853	99
10) Acenaphthylene	(3)	6.319	152	140202	0.748	100
12) Acenaphthene	(3)	6.520	153	82592	0.751	100
15) Fluorene	(3)	7.071	166	97327	0.779	100
18) Phenanthrene	(4)	8.107	178	198451	0.849	99
19) Anthracene	(4)	8.160	178	202004	0.846	99
21) Fluoranthene	(4)	9.416	202	263462	0.896	99
22) Pyrene	(5)	9.655	202	273107	0.834	99
24) Benzo (a) Anthracene	(5)	10.986	228	248919	0.867	100
26) Chrysene	(5)	11.030	228	231010	0.846	100
27) Benzo (b) Fluoranthene	(6)	12.302	252	237740	0.911	99
28) Benzo (k) Fluoranthene	(6)	12.330	252	255342	0.875	99
30) Benzo (a) Pyrene	(6)	12.692	252	236960	0.902	98
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.004	276	256242	0.935	87
34) Dibenz (a,h) Anthracene	(6)	14.030	278	202655	0.973	96
35) Benzo (g,h,i) Perylene	(6)	14.278	276	225804	0.964	99
8) Biphenyl	(3)	5.870	154	116792	0.718	100
9) 2,6-Dimethylnaphthalene	(3)	6.030	156	82119	0.716	99
14) 1,6,7-Trimethylnaphthalene	(3)	6.951	170	82686	0.746	99
16) Dibenzothiophene	(3)	7.973	184	249149	0.726	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar009.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 13:56 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 14:18 Unknown

Sample Name: 17-03-0335-3 MSD Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.799	192	189053	0.776	99
29) Benzo (e) pyrene	(6)	12.630	252	275234	0.836	100
32) Perylene	(6)	12.790	252	265330	0.820	99
13) Dibenzofuran	(3)	6.698	168	126743	0.769	98

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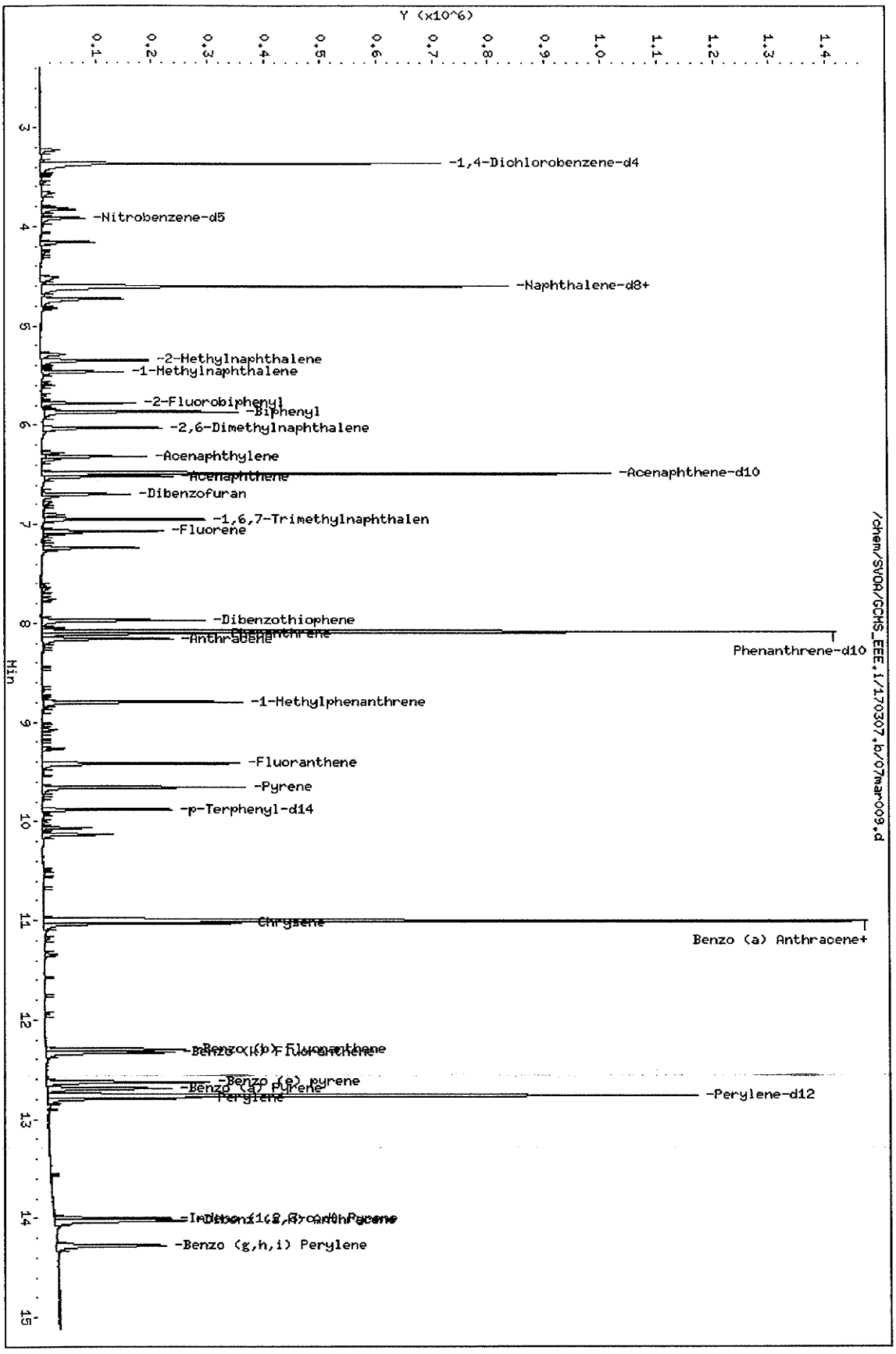

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 14:17 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 14:39 ev7p

Sample Name: 17-03-0335-3 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.369	152	249188	5.000	-0.01
3)*Naphthalene-d8	(2)	4.601	136	703775	5.000	0.00
11)*Acenaphthene-d10	(3)	6.486	164	360476	5.000	0.00
17)*Phenanthrene-d10	(4)	8.084	188	1136303	5.000	0.00
31)*Perylene-d12	(6)	12.759	264	1051686	5.000	0.00
25)*Chrysene-d12	(5)	11.002	240	1134176	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.920	82	44149	0.888	0.00
SpikedAmount 1.000	Recovery = 88.818					
7)$2-Fluorobiphenyl	(3)	5.782	172	103060	0.786	0.00
SpikedAmount 1.000	Recovery = 78.602					
23)$p-Terphenyl-d14	(5)	9.880	244	169207	0.941	0.00
SpikedAmount 1.000	Recovery = 94.110					
Target Compounds						QValue
4) Naphthalene	(2)	0.000		0	N.D.	
5) 2-Methylnaphthalene	(2)	0.000		0	N.D.	
6) 1-Methylnaphthalene	(2)	0.000		0	N.D.	
10) Acenaphthylene	(3)	0.000		0	N.D.	
12) Acenaphthene	(3)	0.000		0	N.D.	
15) Fluorene	(3)	0.000		0	N.D.	
18) Phenanthrene	(4)	0.000		0	N.D.	
19) Anthracene	(4)	0.000		0	N.D.	
21) Fluoranthene	(4)	0.000		0	N.D.	
22) Pyrene	(5)	0.000		0	N.D.	
24) Benzo (a) Anthracene	(5)	0.000		0D	N.D.	
26) Chrysene	(5)	0.000		0D	N.D.	
27) Benzo (b) Fluoranthene	(6)	0.000		0	N.D.	
28) Benzo (k) Fluoranthene	(6)	0.000		0	N.D.	
30) Benzo (a) Pyrene	(6)	0.000		0	N.D.	
33) Indeno (1,2,3-c,d) Pyrene	(6)	0.000		0	N.D.	
34) Dibenz (a,h) Anthracene	(6)	0.000		0	N.D.	
35) Benzo (g,h,i) Perylene	(6)	0.000		0	N.D.	
8) Biphenyl	(3)	0.000		0	N.D.	
9) 2,6-Dimethylnaphthalene	(3)	0.000		0	N.D.	
14) 1,6,7-Trimethylnaphthalene	(3)	0.000		0	N.D.	
16) Dibenzothiophene	(3)	0.000		0	N.D.	

D = Compound was deleted.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar010.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 14:17 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 14:39 ev7p

Sample Name: 17-03-0335-3 Misc Info: S101716B 10UL
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	0.000		0	N.D.	
29) Benzo (e) pyrene	(6)	0.000		0	N.D.	
32) Perylene	(6)	0.000		0D	N.D.	
13) Dibenzofuran	(3)	0.000		0	N.D.	

D = Compound was deleted.

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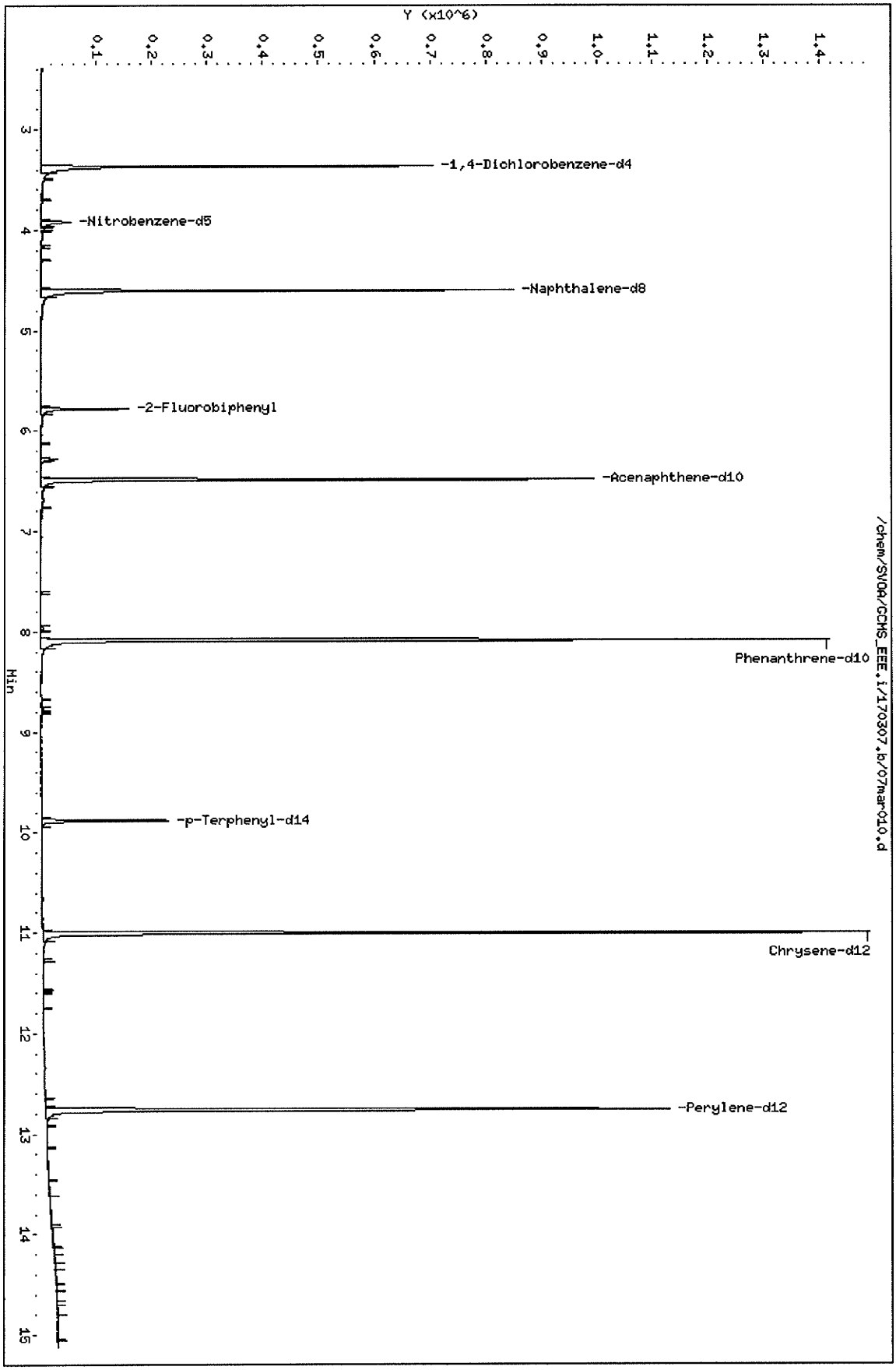

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar010.d
Date : 07-MAR-2017 14:17
Client ID:
Sample Info: 17-03-0335-3
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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EPA METHOD 8270C
PAHSIM

Continuing Calibration

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CCV ASSOCIATION SUMMARY
FOR METHOD: EPA 8270C SIM PAHs

BATCH ID: **170307A015** ANALYZED BY: 907
INSTRUMENT: GC/MS EEE

WORK ORDER: **099-06-009** REVIEWED BY: 262
MATRIX: Water D/T REVIEWED: 2017-03-07 15:10

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
4971	Daily Calibration	2017-03-07 10:28	Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar002.d\07mar002.r

WORK ORDER: **17-03-0336** REVIEWED BY:
MATRIX: Soil D/T REVIEWED:

CEL SAMPLE #	CLIENT SAMPLE ID	D/T ANALYZED	DATA FILE
3	D-DU2-S-SG-05-13S	2017-03-07 17:19	Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar019.d\07mar019.r
4	D-DU2-S-SG-05-25S	2017-03-07 17:39	Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar020.d\07mar020.r

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CONTINUING CALIBRATION VERIFICATION QUALITY CONTROL SHEET
FOR METHOD: EPA 8270C SIM PAHs

CCV WORK ORDER:	**099-06-009-4971-4741**	ANALYZED BY:	907
INSTRUMENT:	GC/MS EEE	D/T ANALYZED:	
BATCH ID:		INITIAL:	2017-02-27 13:53
INITIAL:	170227I004	CCV:	2017-03-07 10:28
CCV:	170307A015	REVIEWED BY:	262
		D/T REVIEWED:	2017-03-07 15:10

Data File: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar002.d\07mar002.rr

COMPOUND	TYPE	CALIB MODEL	MIN RF	AVG RF	CCV RF	AMOUNT	CCV CONC	CCV %D	CCV %D CL	STATUS
Naphthalene		Avg Resp	0.00	1.124	1.175			-5	0-20	PASS
2-Methylnaphthalene		Avg Resp	0.00	0.737	0.808			-10	0-20	PASS
1-Methylnaphthalene		Avg Resp	0.00	0.706	0.772			-9	0-20	PASS
Acenaphthylene		Avg Resp	0.00	2.664	2.895			-9	0-20	PASS
Acenaphthene	C	Avg Resp	0.00	1.563	1.654			-6	0-20	PASS
Fluorene		Avg Resp	0.00	1.776	1.960			-10	0-20	PASS
Phenanthrene		Avg Resp	0.00	1.077	1.128			-5	0-20	PASS
Anthracene		Avg Resp	0.00	1.099	1.076			2	0-20	PASS
Fluoranthene	C	Avg Resp	0.00	1.354	1.532			-13	0-20	PASS
Pyrene		Avg Resp	0.00	1.507	1.601			-6	0-20	PASS
Benzo (a) Anthracene		Avg Resp	0.00	1.321	1.405			-6	0-20	PASS
Chrysene		Avg Resp	0.00	1.257	1.350			-7	0-20	PASS
Benzo (k) Fluoranthene		Avg Resp	0.00	1.410	1.590			-13	0-20	PASS
Benzo (b) Fluoranthene		Avg Resp	0.00	1.261	1.430			-13	0-20	PASS
Benzo (a) Pyrene	C	Avg Resp	0.00	1.269	1.374			-8	0-20	PASS
Indeno (1,2,3-c,d) Pyrene		Avg Resp	0.00	1.324	1.584			-20	0-20	PASS
Dibenz (a,h) Anthracene		Avg Resp	0.00	1.007	1.166			-16	0-20	PASS
Benzo (g,h,i) Perylene		Avg Resp	0.00	1.132	1.321			-17	0-20	PASS

MIN RF: Method Specified Minimum Response Factor

INTERNAL STANDARD COMPOUNDS AREA REPORT
FOR METHOD: EPA 8270C SIM PAHs

ICAL BATCH ID: 170227I004 **CCV BATCH ID:** 170307A015

ICAL MIDPOINT

SAMPLE ID: 099-06-009-4954 D/T ANALYZED: 2017-02-27 13:12

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb009.d\27feb009.rr

COMPOUND	AREA	RETENTION TIME
1,4-Dichlorobenzene-d4	230068	3.42
Naphthalene-d8	612745	4.66
Acenaphthene-d10	273032	6.55
Phenanthrene-d10	925068	8.14
Chrysene-d12	878502	11.07
Perylene-d12	785261	12.84

ICV

SAMPLE ID 099-06-009-4954 D/T ANALYZED: 2017-02-27 14:13

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170227\27feb012.d\27feb012.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	189620	115034	460136	3.42	PASS
Naphthalene-d8	508161	306372	1225490	4.66	PASS
Acenaphthene-d10	231974	136516	546064	6.55	PASS
Phenanthrene-d10	785443	462534	1850136	8.14	PASS
Chrysene-d12	751334	439251	1757004	11.07	PASS
Perylene-d12	689322	392630	1570522	12.84	PASS

CCV

SAMPLE ID 099-06-009-4971 D/T ANALYZED: 2017-03-07 10:28

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar002.d\07mar002.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	234582	115034	460136	3.36	PASS
Naphthalene-d8	653040	306372	1225490	4.60	PASS
Acenaphthene-d10	297083	136516	546064	6.49	PASS
Phenanthrene-d10	980515	462534	1850136	8.09	PASS
Chrysene-d12	974576	439251	1757004	11.00	PASS
Perylene-d12	911775	392630	1570522	12.76	PASS

MB

SAMPLE ID 099-14-035-377 D/T ANALYZED: 2017-03-07 10:49

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar003.d\07mar003.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	252996	117291	469164	3.37	PASS
Naphthalene-d8	713698	326520	1306080	4.60	PASS
Acenaphthene-d10	367591	148542	594166	6.49	PASS
Phenanthrene-d10	1150963	490258	1961030	8.08	PASS
Chrysene-d12	1128739	487288	1949152	11.00	PASS
Perylene-d12	1058408	455888	1823550	12.76	PASS

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LCS

SAMPLE ID 099-14-035-377 D/T ANALYZED: 2017-03-07 11:09

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar004.d\07mar004.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	232664	117291	469164	3.37	PASS
Naphthalene-d8	628644	326520	1306080	4.60	PASS
Acenaphthene-d10	330975	148542	594166	6.49	PASS
Phenanthrene-d10	994156	490258	1961030	8.08	PASS
Chrysene-d12	1000851	487288	1949152	11.00	PASS
Perylene-d12	941437	455888	1823550	12.76	PASS

MS

SAMPLE ID 17-03-0335-3 D/T ANALYZED: 2017-03-07 13:37

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar008.d\07mar008.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	270630	117291	469164	3.37	PASS
Naphthalene-d8	701008	326520	1306080	4.60	PASS
Acenaphthene-d10	350097	148542	594166	6.49	PASS
Phenanthrene-d10	1083947	490258	1961030	8.09	PASS
Chrysene-d12	1088533	487288	1949152	11.01	PASS
Perylene-d12	1030523	455888	1823550	12.77	PASS

MSD

SAMPLE ID 17-03-0335-3 D/T ANALYZED: 2017-03-07 13:56

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar009.d\07mar009.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	247706	117291	469164	3.37	PASS
Naphthalene-d8	686330	326520	1306080	4.60	PASS
Acenaphthene-d10	351876	148542	594166	6.49	PASS
Phenanthrene-d10	1085770	490258	1961030	8.08	PASS
Chrysene-d12	1086707	487288	1949152	11.00	PASS
Perylene-d12	1034654	455888	1823550	12.76	PASS

CS

SAMPLE ID 17-03-0336-3 D/T ANALYZED: 2017-03-07 17:19

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar019.d\07mar019.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	241424	117291	469164	3.37	PASS
Naphthalene-d8	696873	326520	1306080	4.60	PASS
Acenaphthene-d10	352679	148542	594166	6.49	PASS
Phenanthrene-d10	1135288	490258	1961030	8.08	PASS
Chrysene-d12	1094838	487288	1949152	11.00	PASS
Perylene-d12	998871	455888	1823550	12.76	PASS

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CS

SAMPLE ID **17-03-0336-4** D/T ANALYZED: 2017-03-07 17:39

DATA FILE: Z:\GCMS_EEE\GCMS_EEE_data\2017\170307\07mar020.d\07mar020.rr

COMPOUND	AREA	LOWER AREA LIMIT	UPPER AREA LIMIT	RETENTION TIME	STATUS
1,4-Dichlorobenzene-d4	262092	117291	469164	3.37	PASS
Naphthalene-d8	713156	326520	1306080	4.60	PASS
Acenaphthene-d10	355089	148542	594166	6.49	PASS
Phenanthrene-d10	1172033	490258	1961030	8.08	PASS
Chrysene-d12	1149502	487288	1949152	11.00	PASS
Perylene-d12	1029967	455888	1823550	12.76	PASS

Notes:
For all samples including QC, all internal standard area responses must be within 50% to 200% of the mean area response in the initial calibration.

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Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar002.d
Report Date: 03/07/2017 14:42

Eurofins CalScience
Calibration Verification Report

Instrument ID: GCMS_EEE.i
Sample Name: CCV S010317F 1PPM
Sublist used: all.sub
Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m

Injection Date and Time: 07-MAR-2017 10:28
Initial Calibration Date(s): 03-JAN-2017 27-FEB-2017
Initial Calibration Time(s): 11:59 13:53

Target Compounds	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Naphthalene	1.124	1.175	0.00	-5	20	Averaged
2-Methylnaphthalene	0.737	0.808	0.00	-10	20	Averaged
1-Methylnaphthalene	0.706	0.772	0.00	-9	20	Averaged
Acenaphthylene	2.664	2.895	0.00	-9	20	Averaged
Acenaphthene	1.563	1.654	0.00	-6	20	Averaged
Fluorene	1.776	1.960	0.00	-10	20	Averaged
Phenanthrene	1.077	1.128	0.00	-5	20	Averaged
Anthracene	1.099	1.076	0.00	2	20	Averaged
Fluoranthene	1.354	1.532	0.00	-13	20	Averaged
Pyrene	1.507	1.601	0.00	-6	20	Averaged
Benzo (a) Anthracene	1.321	1.405	0.00	-6	20	Averaged
Chrysene	1.257	1.350	0.00	-7	20	Averaged
Benzo (b) Fluoranthene	1.261	1.430	0.00	-13	20	Averaged
Benzo (k) Fluoranthene	1.410	1.590	0.00	-13	20	Averaged
Benzo (a) Pyrene	1.269	1.374	0.00	-8	20	Averaged
Indeno (1,2,3-c,d) Pyrene	1.324	1.584	0.00	-20	20	Averaged
Dibenz (a,h) Anthracene	1.007	1.166	0.00	-16	20	Averaged
Benzo (g,h,i) Perylene	1.132	1.321	0.00	-17	20	Averaged
Biphenyl	2.312	2.516	0.00	-9	20	Averaged
2,6-Dimethylnaphthalene	1.630	1.780	0.00	-9	20	Averaged
1,6,7-Trimethylnaphthalene	1.574	1.787	0.00	-14	20	Averaged
Dibenzothiophene	4.877	5.117	0.00	-5	20	Averaged
1-Methylphenanthrene	1.121	1.180	0.00	-5	20	Averaged
Benzo (e) pyrene	1.590	1.756	0.00	-10	20	Averaged
Perylene	1.564	1.649	0.00	-5	20	Averaged
Dibenzofuran	2.341	2.581	0.00	-10	20	Averaged

Surrogate Standards	ICAL RRF or Amount	ICV RRF	Min. RRF	%D / %Drift	Max%D /Drift	Curve Type
Nitrobenzene-d5	0.353	0.357	0.00	-1	20	Averaged
2-Fluorobiphenyl	1.819	1.984	0.00	-9	20	Averaged
p-Terphenyl-d14	0.793	0.924	0.00	-17	20	Averaged

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar002.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 10:28 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 10:52 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170307A015
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	DEV(Min)
Internal Standards						
1)*1,4-Dichlorobenzene-d4	(1)	3.363	152	234582	5.000	0.00
3)*Naphthalene-d8	(2)	4.604	136	653040	5.000	0.00
11)*Acenaphthene-d10	(3)	6.487	164	297083	5.000	0.00
17)*Phenanthrene-d10	(4)	8.085	188	980515	5.000	0.00
31)*Perylene-d12	(6)	12.763	264	911775	5.000	0.00
25)*Chrysene-d12	(5)	11.004	240	974576	5.000	0.00
System Monitoring Compounds						
2)$Nitrobenzene-d5	(2)	3.918	82	46639	1.011	0.00
SpikedAmount 1.000	Recovery =	0.000				
7)$2-Fluorobiphenyl	(3)	5.782	172	117894	1.091	0.00
SpikedAmount 1.000	Recovery =	0.000				
23)$p-Terphenyl-d14	(5)	9.881	244	180039	1.165	0.00
SpikedAmount 1.000	Recovery =	0.000				
Target Compounds						QValue
4) Naphthalene	(2)	4.623	128	153432	1.046	100
5) 2-Methylnaphthalene	(2)	5.353	142	105507	1.096	100
6) 1-Methylnaphthalene	(2)	5.468	142	100803	1.094	100
10) Acenaphthylene	(3)	6.320	152	172040	1.087	100
12) Acenaphthene	(3)	6.521	153	98304	1.058	100
15) Fluorene	(3)	7.072	166	116474	1.104	100
18) Phenanthrene	(4)	8.108	178	221275	1.048	100
19) Anthracene	(4)	8.160	178	210975	0.978	100
21) Fluoranthene	(4)	9.419	202	300462	1.132	100
22) Pyrene	(5)	9.656	202	312138	1.063	100
24) Benzo (a) Anthracene	(5)	10.987	228	273839	1.063	100
26) Chrysene	(5)	11.032	228	263228	1.075	100
27) Benzo (b) Fluoranthene	(6)	12.302	252	260683	1.134	100
28) Benzo (k) Fluoranthene	(6)	12.331	252	289926	1.127	100
30) Benzo (a) Pyrene	(6)	12.692	252	250487	1.082	100
33) Indeno (1,2,3-c,d) Pyrene	(6)	14.002	276	288885	1.196	100
34) Dibenz (a,h) Anthracene	(6)	14.030	278	212633	1.158	100
35) Benzo (g,h,i) Perylene	(6)	14.280	276	240960	1.168	100
8) Biphenyl	(3)	5.870	154	149465	1.088	100
9) 2,6-Dimethylnaphthalene	(3)	6.031	156	105781	1.092	100
14) 1,6,7-Trimethylnaphthalene	(3)	6.952	170	106181	1.135	100
16) Dibenzothiophene	(3)	7.973	184	304027	1.049	100

* = Compound is an internal standard.
$ = Compound is a surrogate standard.

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Quant Report Target Revision 3.5

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar002.d Instrument ID: GCMS_EEE.i
Injection date and time: 07-MAR-2017 10:28 Analyst ID: 907

Method used: /chem/SVOA/GCMS_EEE.i/170307.b/simpah-extra.m Sublist used: all
Calibration date and time: 07-MAR-2017 10:52
Date, time and analyst ID of latest file update: 07-Mar-2017 10:52 ev7p

Sample Name: CCV S010317F 1PPM Misc Info: 170307A015
Response via Initial Calibration

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (mg/L)	QValue
20) 1-Methylphenanthrene	(5)	8.799	192	229962	1.052	100
29) Benzo (e) pyrene	(6)	12.631	252	320233	1.104	100
32) Perylene	(6)	12.792	252	300789	1.055	100
13) Dibenzofuran	(3)	6.698	168	153355	1.102	100

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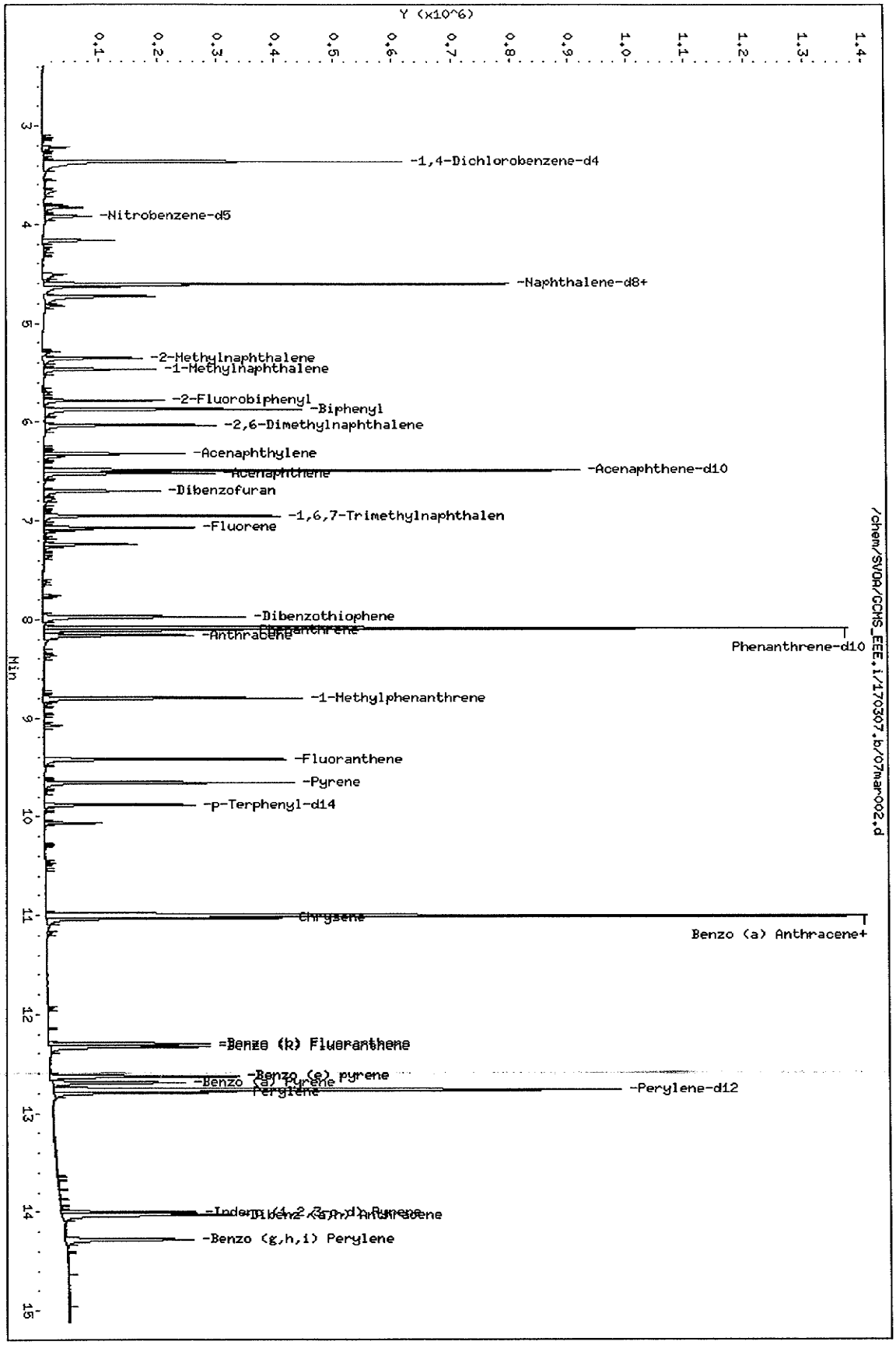

Data File: /chem/SVOA/GCMS_EEE.i/170307.b/07mar002.d
Date : 07-MAR-2017 10:28
Client ID:
Sample Info: CCV S010317F 1PPM
Column phase: J&W DB-5MS

Instrument: GCMS_EEE.i
Operator: 907
Column diameter: 0.18

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EPA METHOD 8270C
PAHSIM

Tuning Reports

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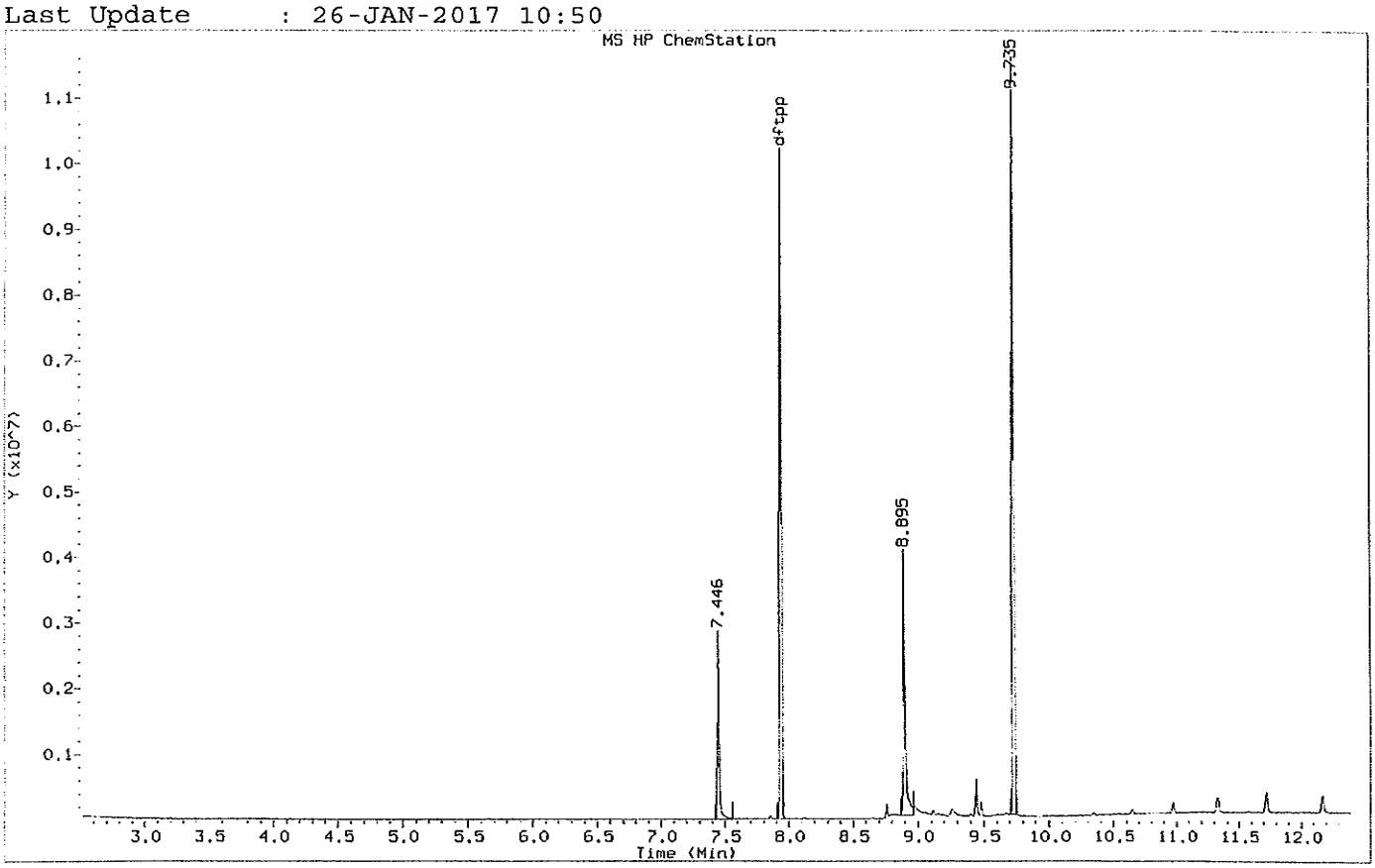
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 1
Acq on : 27-FEB-2017 11:26 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Last Update : 26-JAN-2017 10:50



Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d ,* PASSED ***

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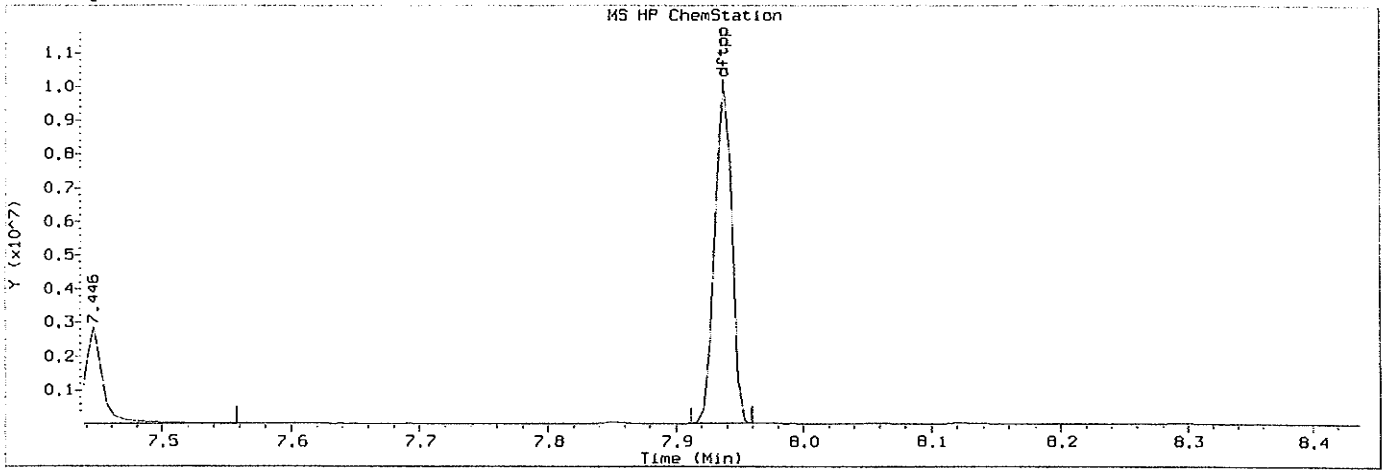
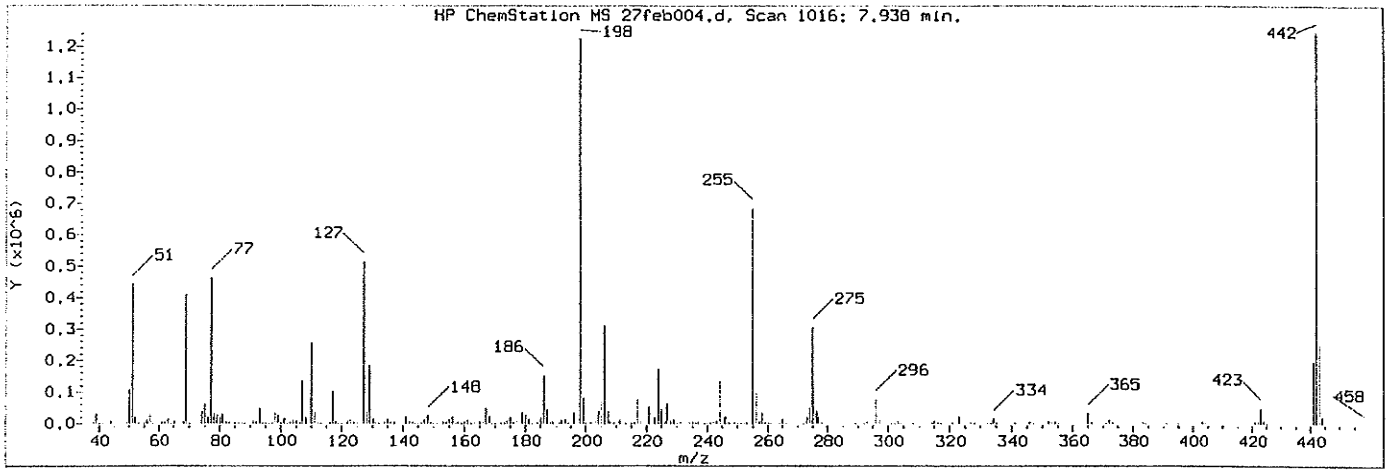
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 1
Acq on : 27-FEB-2017 11:26 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/dftpptune.m
Last Update : 26-JAN-2017 10:50





Spectrum: Avg. Scans 1015-1017 (7.94), Background Scan 1010

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	966643	PASS
51	30 - 60% of mass 198	38.23	369561	PASS
68	Less than 2% of mass 69	1.63	5375	PASS
69	Less than mass 198	34.19	330533	PASS
70	Less than 2% of mass 69	0.53	1763	PASS
127	40 - 60% of mass 198	42.36	409429	PASS
197	0 - 1% of mass 198	0.15	1450	PASS
199	5 - 9% of mass 198	6.83	66048	PASS
275	10 - 30% of mass 198	24.73	239082	PASS
365	1 - 100% of mass 198	2.85	27549	PASS
441	Present, but less than mass 443	79.77	165266	PASS
442	40 - 200% of mass 198	106.21	1026666	PASS
443	17 - 23% of mass 442	20.18	207189	PASS

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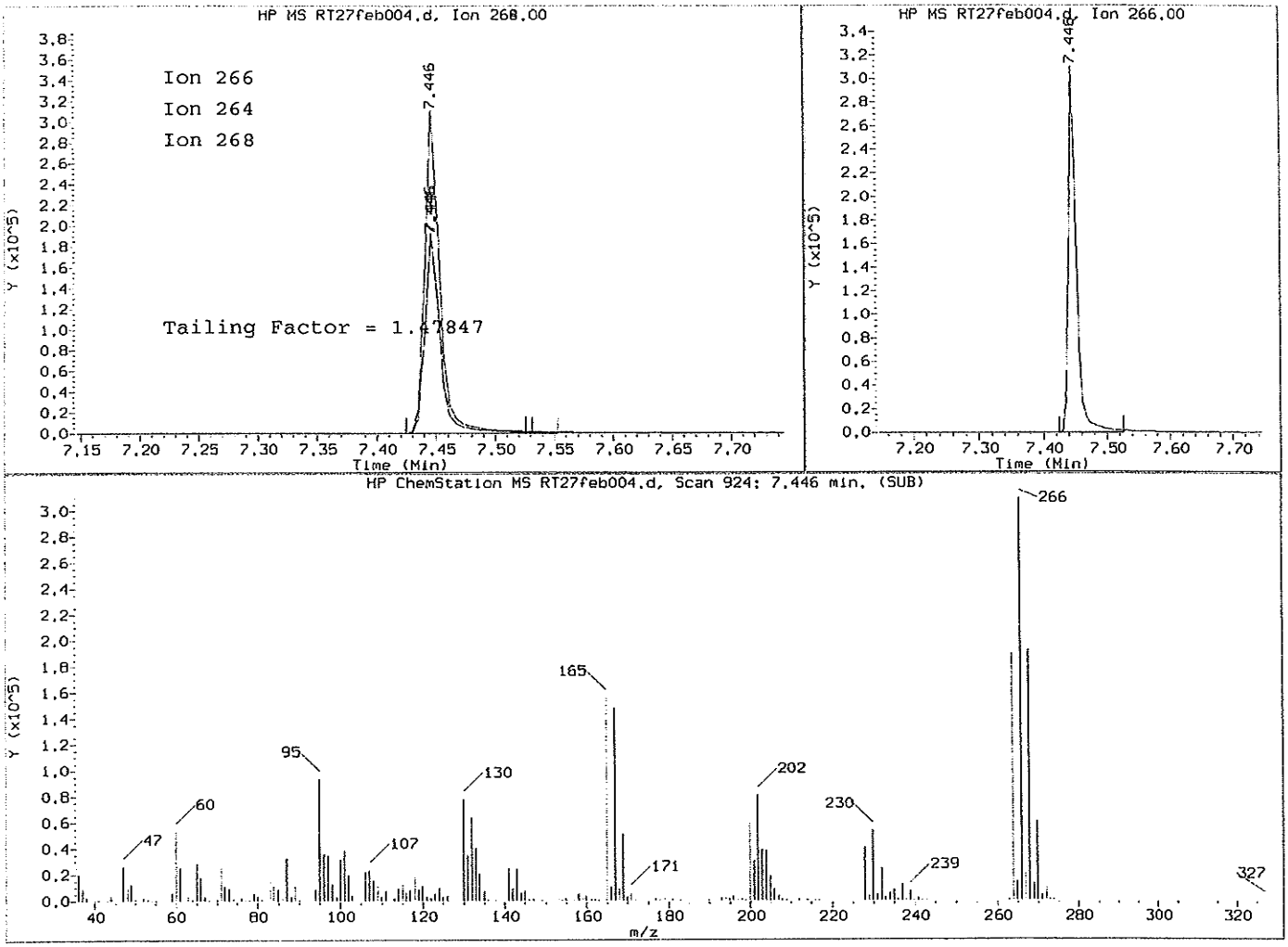
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 3
Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
Last Update : 27-FEB-2017 11:45



Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.446

Mass	Area	Ratio
266	273410	100.00
264	172232	62.99
268	172455	63.08

Peak baseline front width (sec) : 0.627
Peak baseline tail width (sec) : 0.927
Tail Factor = 0.927/ 0.627

Tailing factor for Pentachlorophenol OK

Tail Factor = 1.478 Maximum Allowed = 3.0

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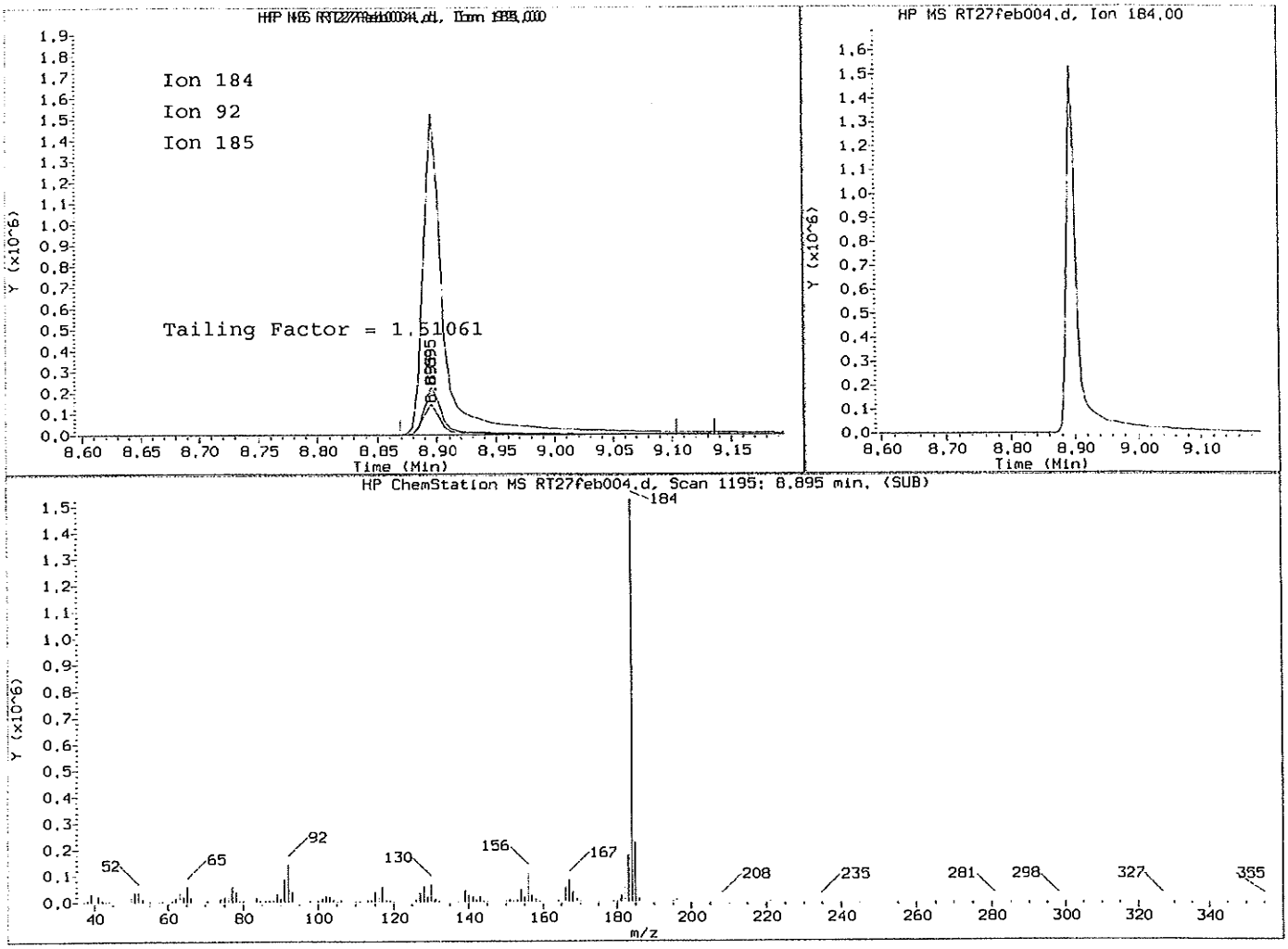
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 3
Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
Last Update : 27-FEB-2017 11:45



Benzidine
==========
Exp. RT = 8.911
Found RT = 8.895

Mass	Area	Ratio
184	1948904	100.00
92	181785	9.33
185	273612	14.04

Peak baseline front width (sec) : 0.801
Peak baseline tail width (sec) : 1.210
Tail Factor = 1.210/ 0.801

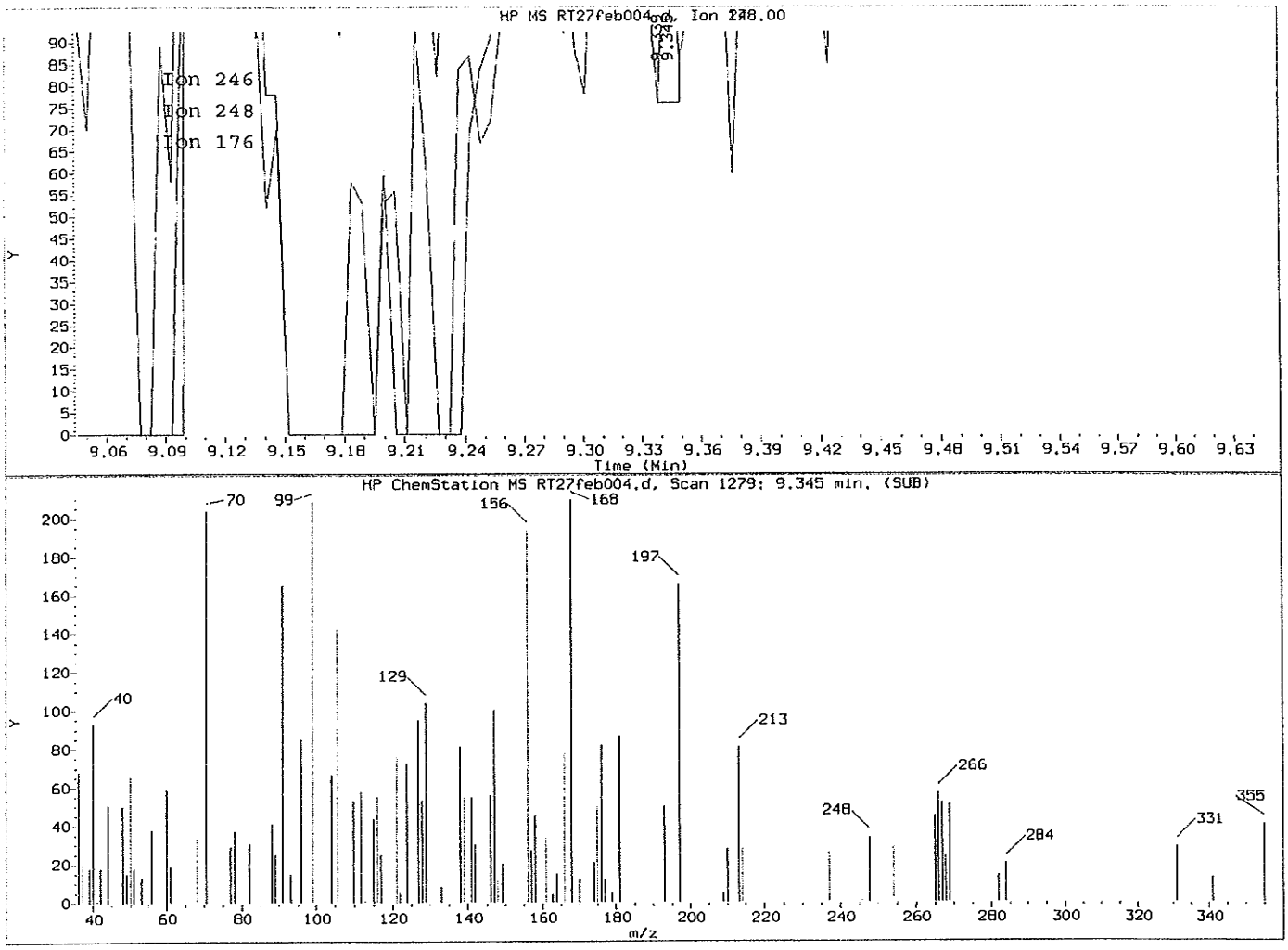
Tailing factor for Benzidine OK

Tail Factor = 1.511 Maximum Allowed = 3.0

Return to Contents

Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 3
Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
Last Update : 27-FEB-2017 11:45



4,4'-DDE
========
Exp. RT = 9.344
Found RT = 9.345

Mass	Area	Ratio
246	43	100.00
248	25	58.82
176	101	232.35

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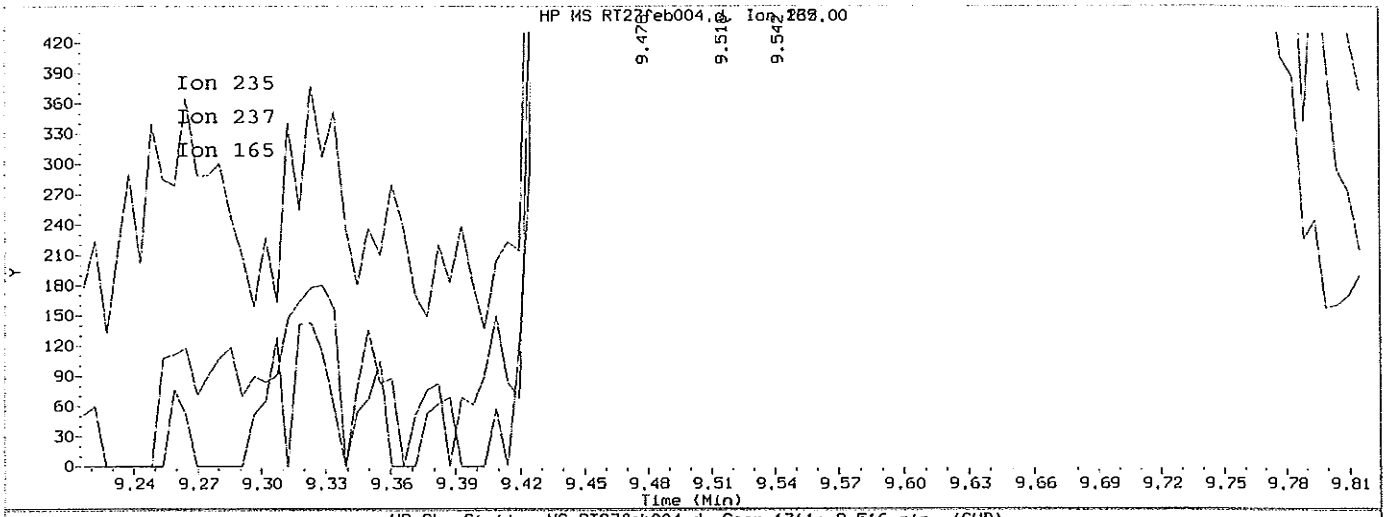
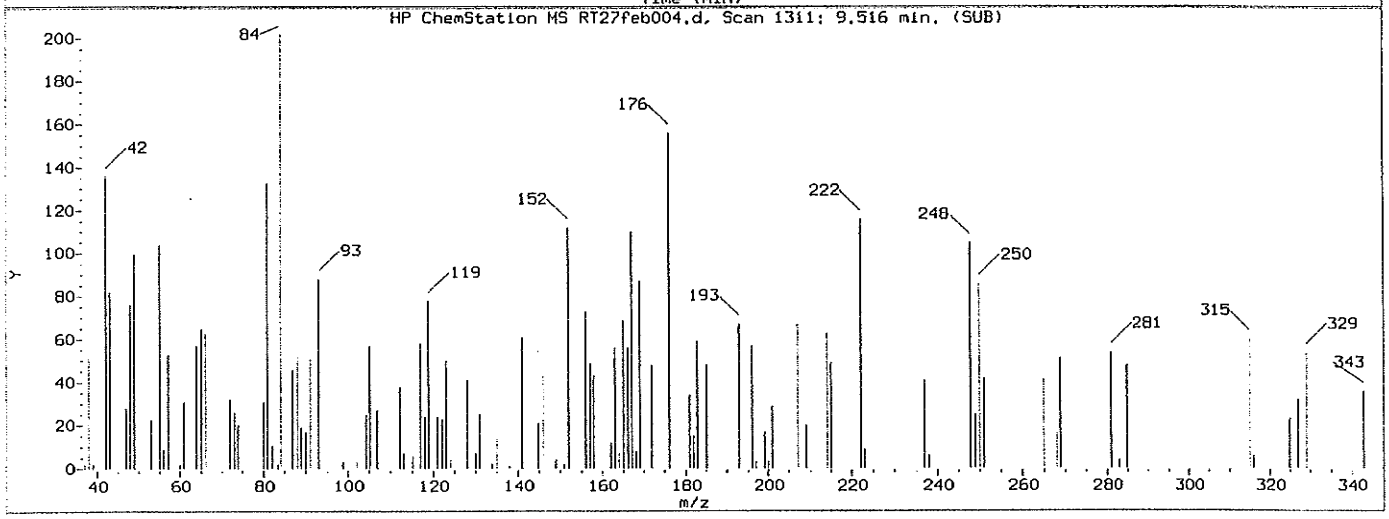
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 3
Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
Last Update : 27-FEB-2017 11:45





4,4'-DDD
========
Exp. RT = 9.499
Found RT = 9.516

Mass	Area	Ratio
235	347	100.00
237	17275	4973.85
165	183	52.87

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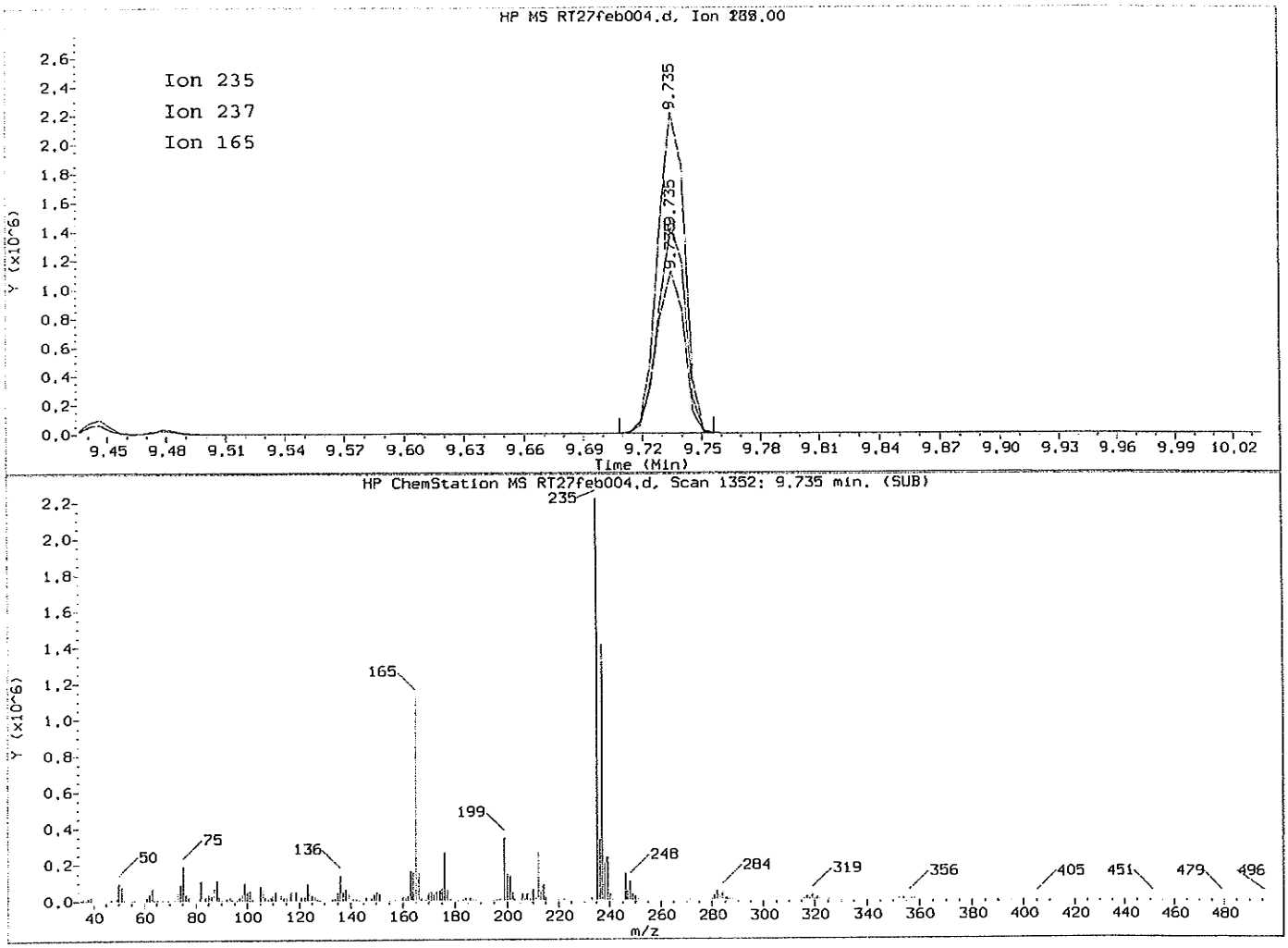
Report Generated Time Mon Feb 27 11:45:38 2017

Data File : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d
ALS Vial : 3
Acq on : 27-FEB-2017 11:26 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170227.b/27feb004.d/resolut.m
Last Update : 27-FEB-2017 11:45



4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.735

Mass	Area	Ratio
235	2098568	100.00
237	1342252	63.96
165	1084282	51.67

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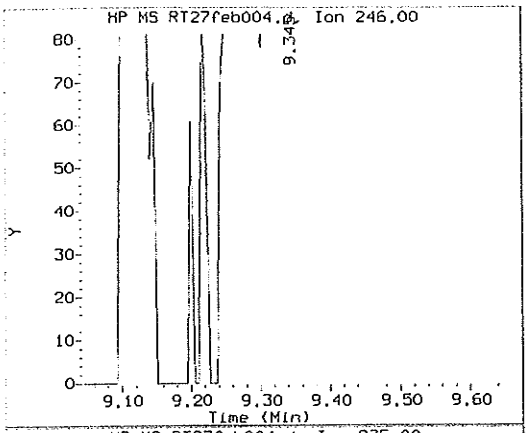
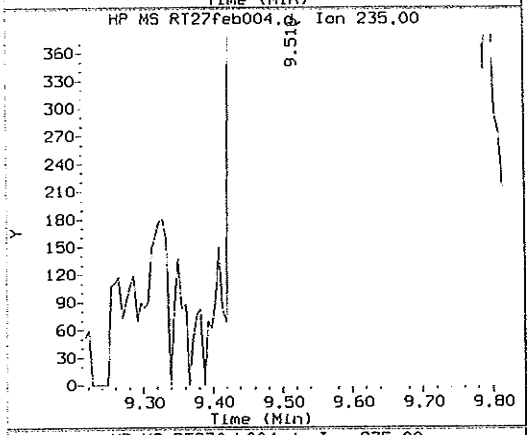
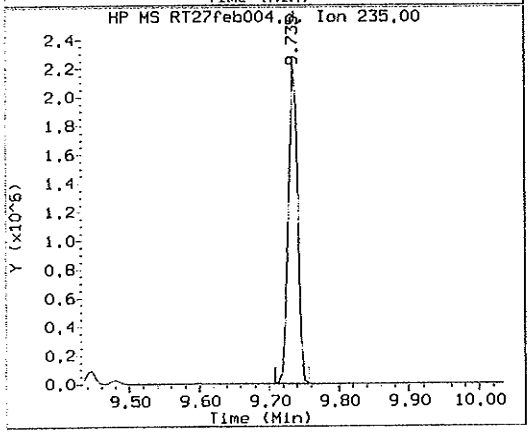


Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.345
Area: 43



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.516
Area: 347



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.735
Area: 2098568

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2098568			N/A
4,4-DDE	43	0.00	20.0	PASS
4,4-DDD	347	0.02	20.0	PASS
4,4-DDD + DDE	390	0.0	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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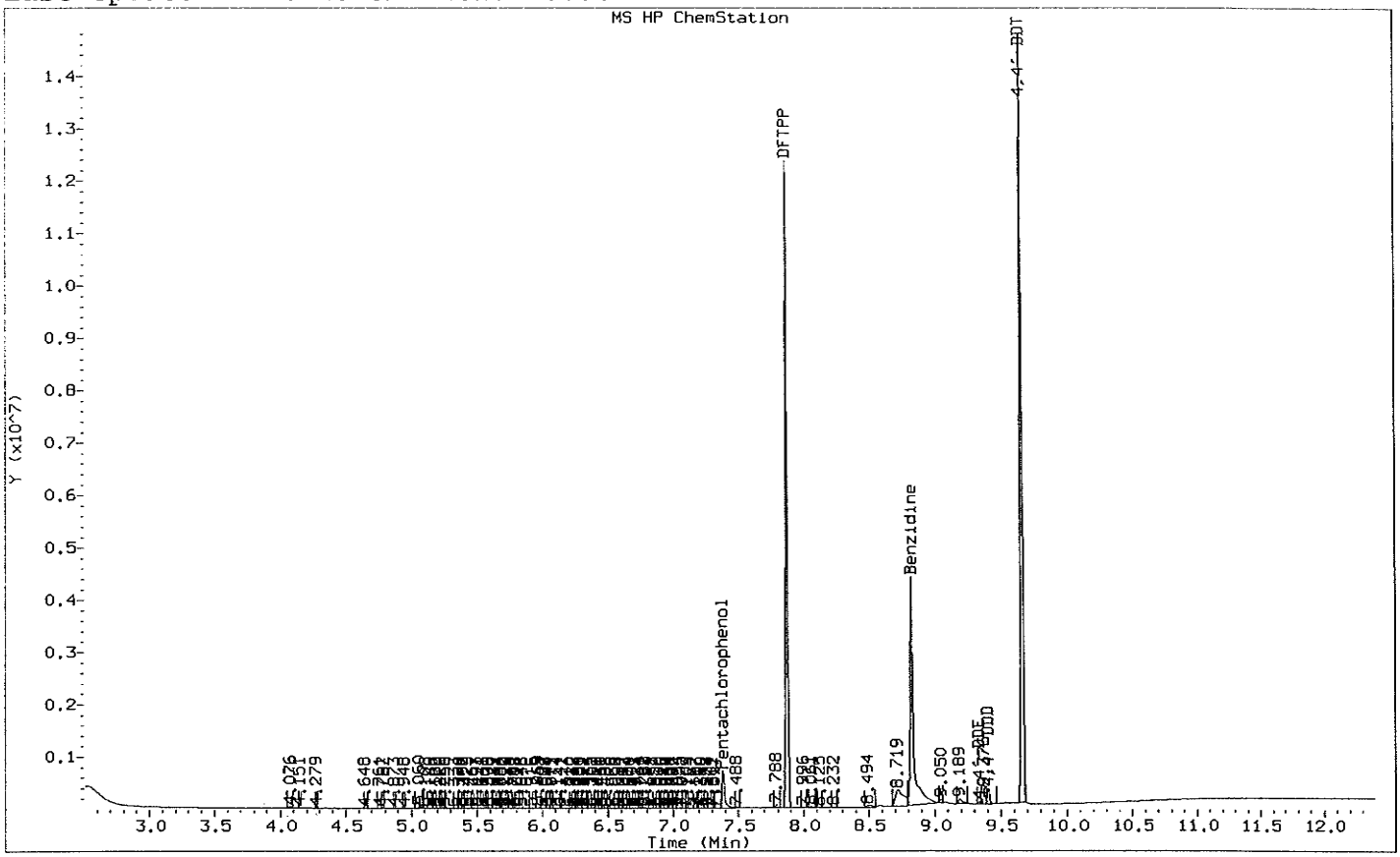
DFTPP TUNE/TAILING FACTOR/DEGRADATION SAMPLE AND GRAPHIC REPORT

Report Generated Time Tue Mar 7 10:31:15 2017

Data File : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d
ALS Vial : 21
Acq on : 07-MAR-2017 10:08 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Last Update : 26-JAN-2017 10:50



Tune	*** PASSED ***
Pentachlorophenol Tailing	*** PASSED ***
Benzidine Tailing	*** PASSED ***
DDT degradation	*** PASSED ***

Tuning Sample, /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d ,* PASSED ***

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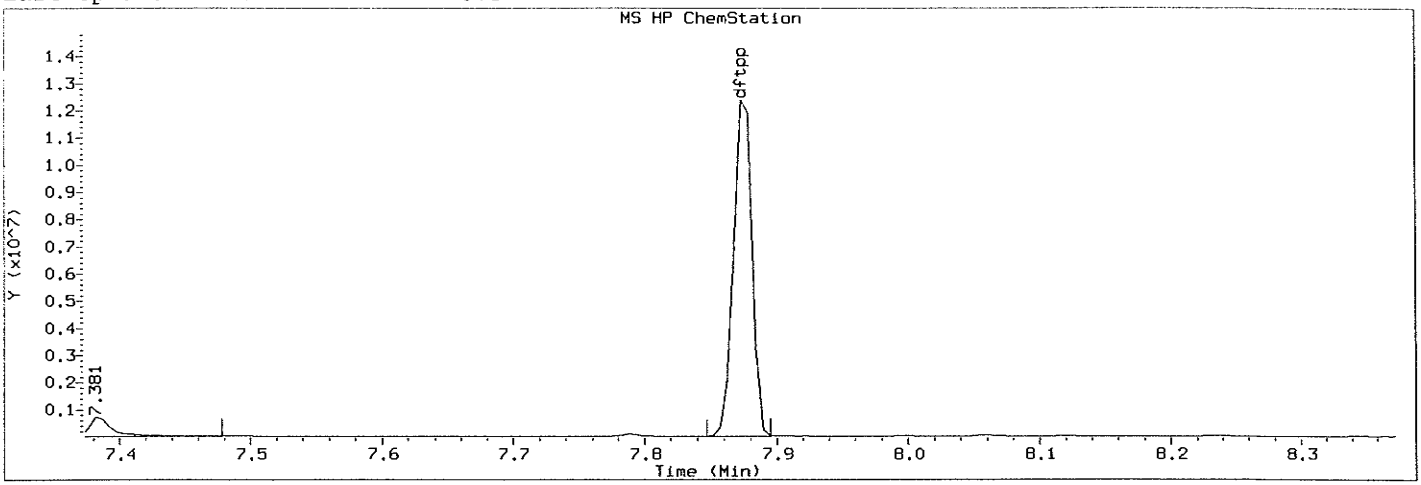
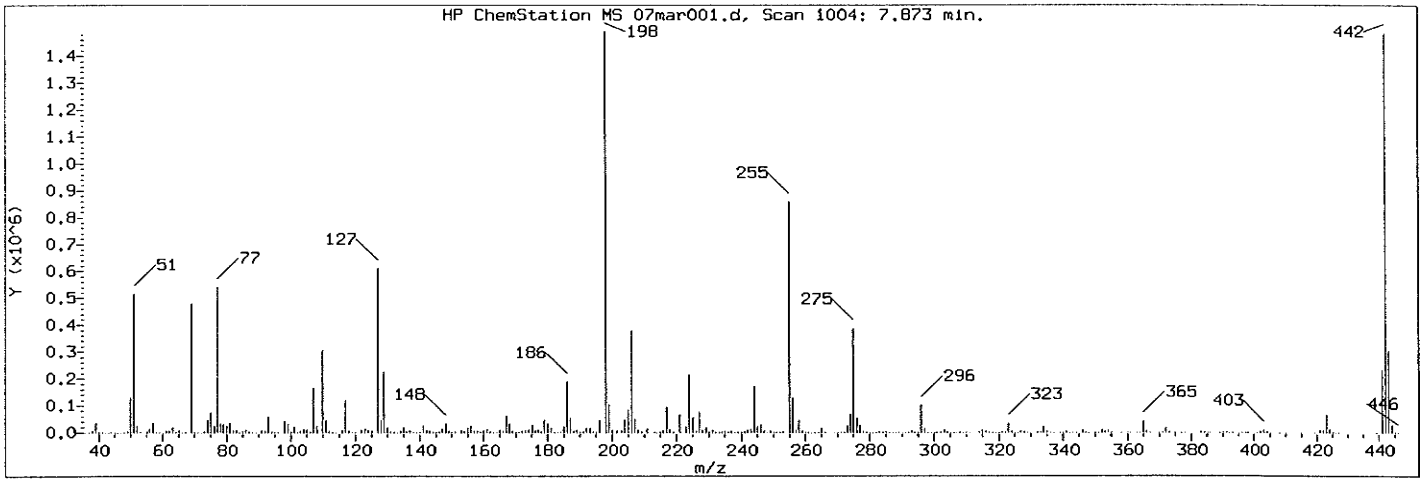
Report Generated Time Tue Mar 7 10:31:15 2017

Data File : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d
ALS Vial : 21
Acq on : 07-MAR-2017 10:08 Operator : 907
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170307.b/dftpptune.m
Last Update : 26-JAN-2017 10:50





Spectrum: Avg. Scans 1003-1005 (7.87), Background Scan 998

DFTPP Ion Abundance/Ratio Criteria Chart

Ion	Abundance Criteria	Base Peak	Response	Test
198	Base Peak, 100% relative abundance	100.00	1222378	PASS
51	30 - 60% of mass 198	36.38	444711	PASS
68	Less than 2% of mass 69	0.97	3865	PASS
69	Less than mass 198	32.47	396902	PASS
70	Less than 2% of mass 69	0.49	1926	PASS
127	40 - 60% of mass 198	41.66	509226	PASS
197	0 - 1% of mass 198	0.00	0	PASS
199	5 - 9% of mass 198	6.88	84149	PASS
275	10 - 30% of mass 198	26.13	319445	PASS
365	1 - 100% of mass 198	3.05	37282	PASS
441	Present, but less than mass 443	80.15	218453	PASS
442	40 - 200% of mass 198	110.16	1346538	PASS
443	17 - 23% of mass 442	20.24	272549	PASS

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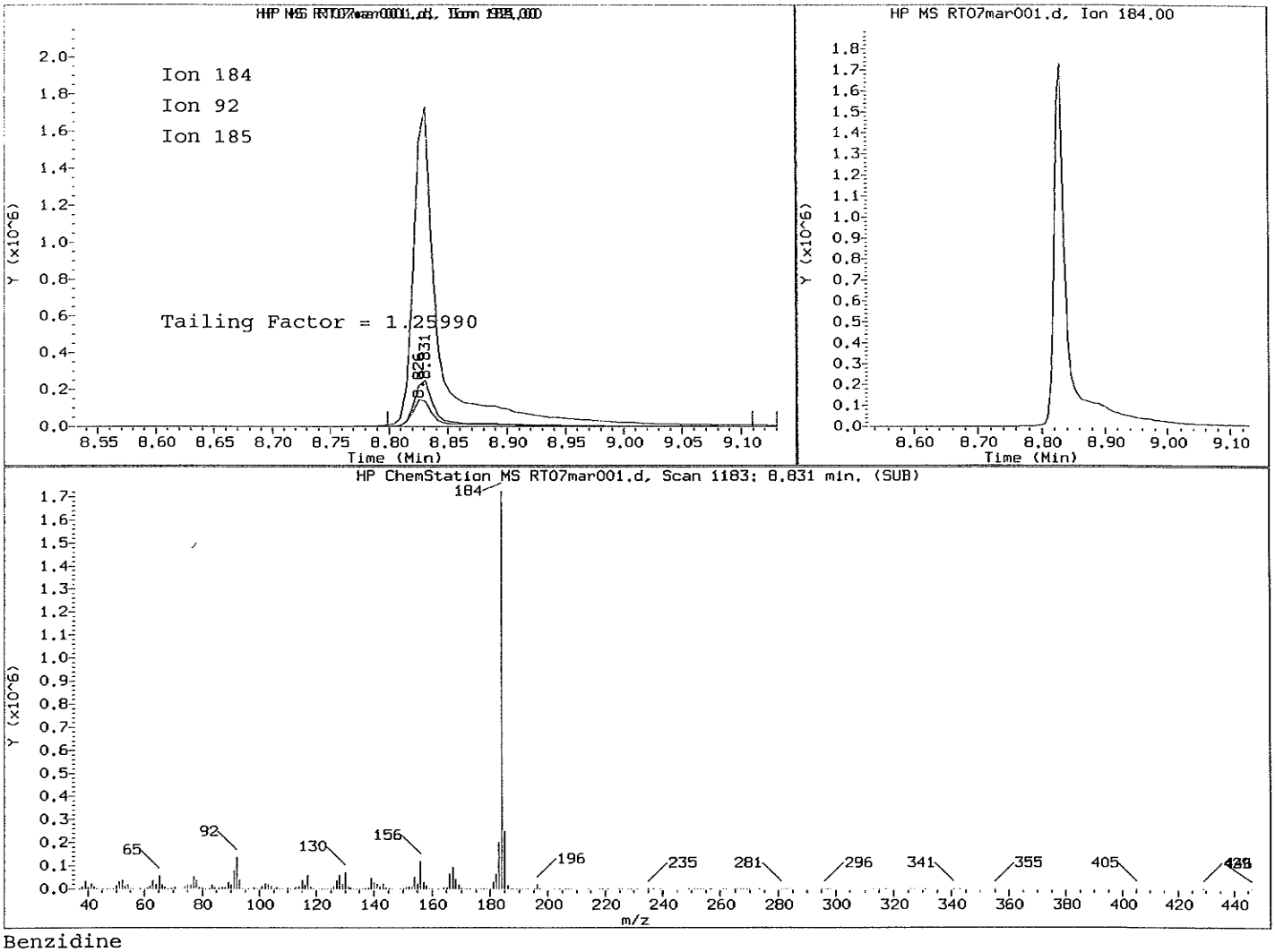
Report Generated Time Tue Mar 7 10:31:15 2017

Data File : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d
ALS Vial : 3
Acq on : 07-MAR-2017 10:08 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d/resolut.m
Last Update : 07-MAR-2017 10:27



Benzidine
=========
Exp. RT = 8.911
Found RT = 8.831

Mass	Area	Ratio
184	2580706	100.00
92	222523	8.62
185	365048	14.15

Peak baseline front width (sec) : 1.035
Peak baseline tail width (sec) : 1.304
Tail Factor = 1.304/ 1.035

Tailing factor for Benzidine OK

Tail Factor = 1.260 Maximum Allowed = 3.0

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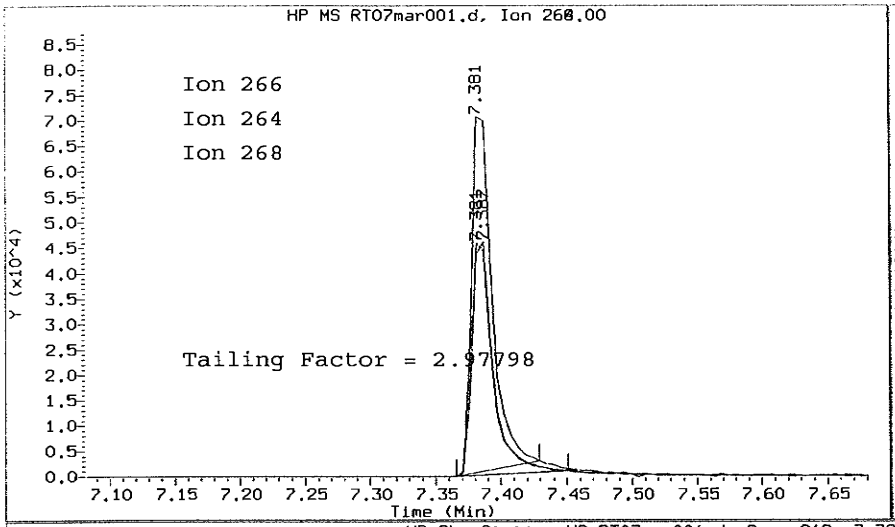
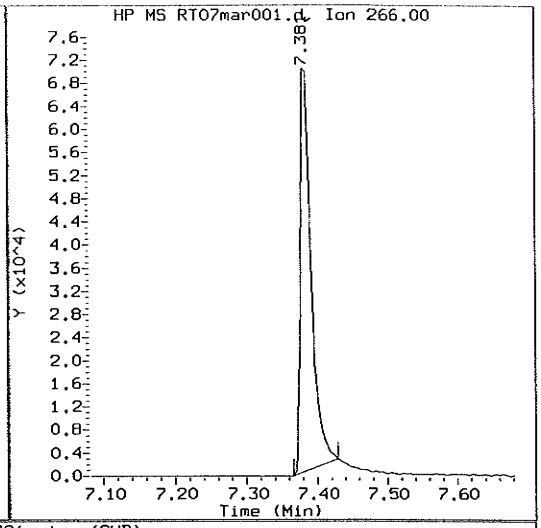
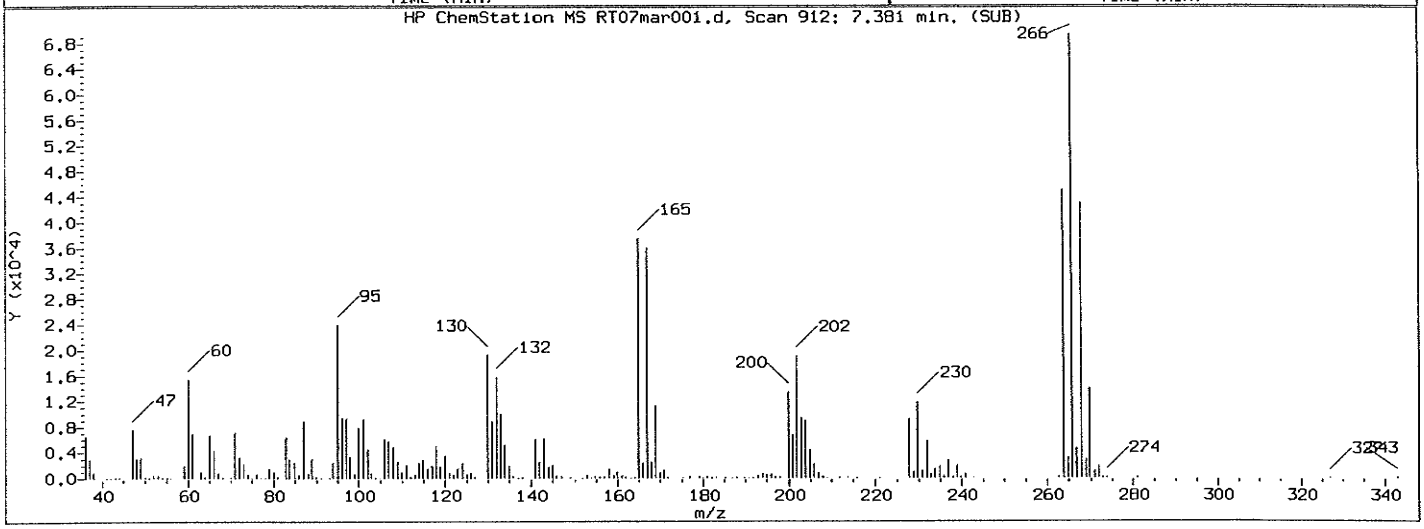
Report Generated Time Tue Mar 7 10:31:15 2017

Data File : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d
ALS Vial : 3
Acq on : 07-MAR-2017 10:08 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d/resolut.m
Last Update : 07-MAR-2017 10:27







Pentachlorophenol
==========
Exp. RT = 7.467
Found RT = 7.381

Mass	Area	Ratio
266	77587	100.00
264	52060	67.10
268	51934	66.94

Peak baseline front width (sec) : 0.545
Peak baseline tail width (sec) : 1.623
Tail Factor = 1.623/ 0.545

Tailing factor for Pentachlorophenol OK

Tail Factor = 2.978 Maximum Allowed = 3.0

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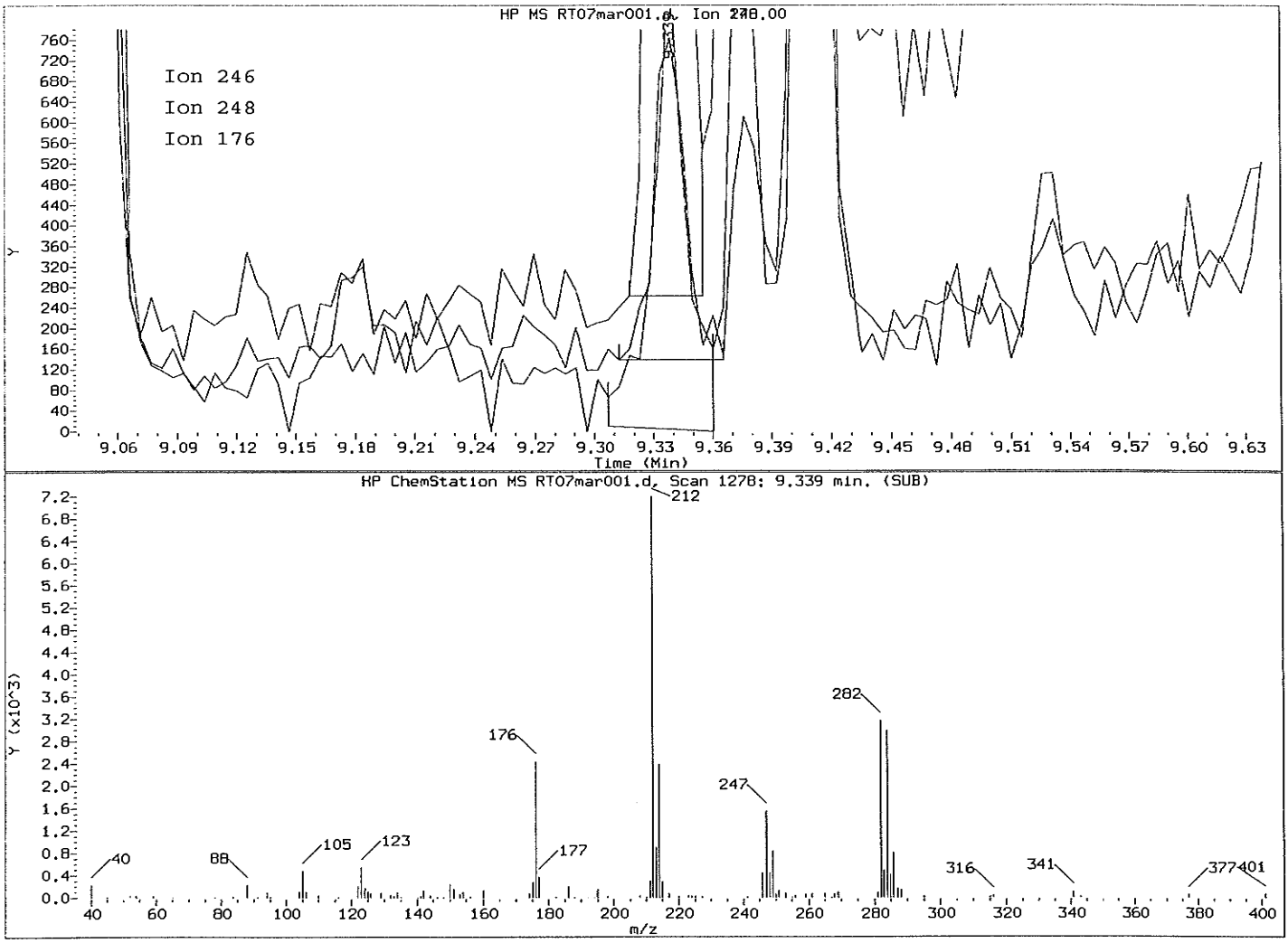
Report Generated Time Tue Mar 7 10:31:15 2017

Data File : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d
ALS Vial : 3
Acq on : 07-MAR-2017 10:08 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d/resolut.m
Last Update : 07-MAR-2017 10:27



4,4'-DDE
========
Exp. RT = 9.344
Found RT = 9.339

Mass	Area	Ratio
246	707	100.00
248	1078	152.50
176	4354	615.71

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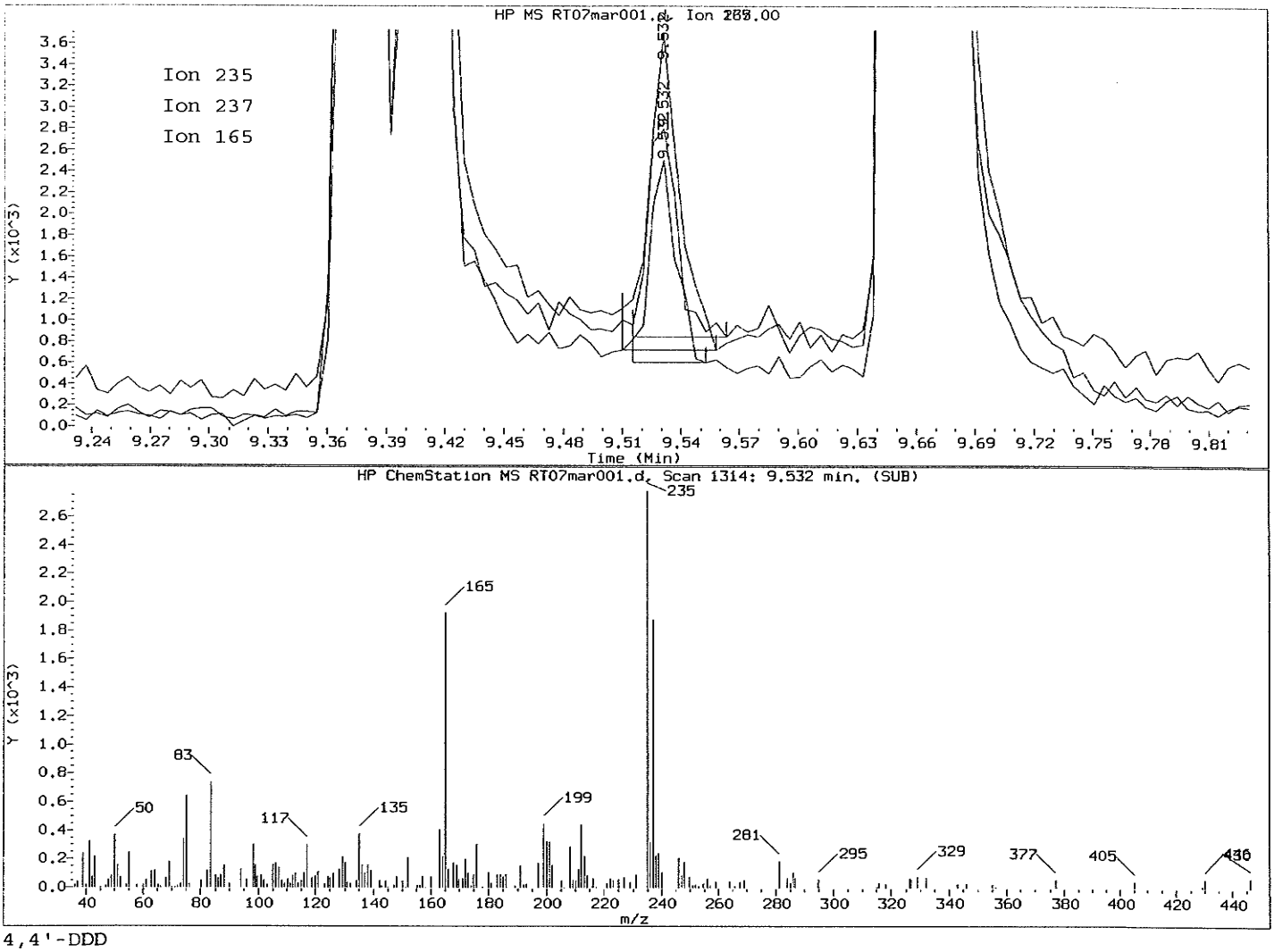
Report Generated Time Tue Mar 7 10:31:15 2017

Data File : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d
ALS Vial : 3
Acq on : 07-MAR-2017 10:08 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d/resolut.m
Last Update : 07-MAR-2017 10:27



4,4'-DDD
========
Exp. RT = 9.499
Found RT = 9.532

Mass	Area	Ratio
235	3401	100.00
237	1802	52.98
165	2100	61.74

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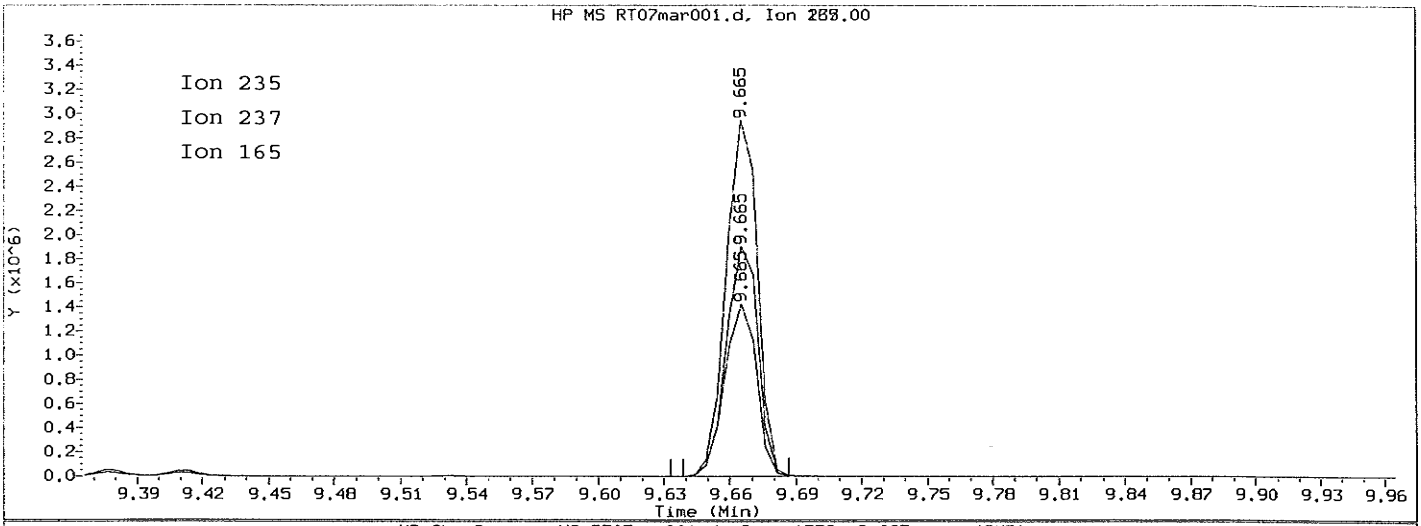
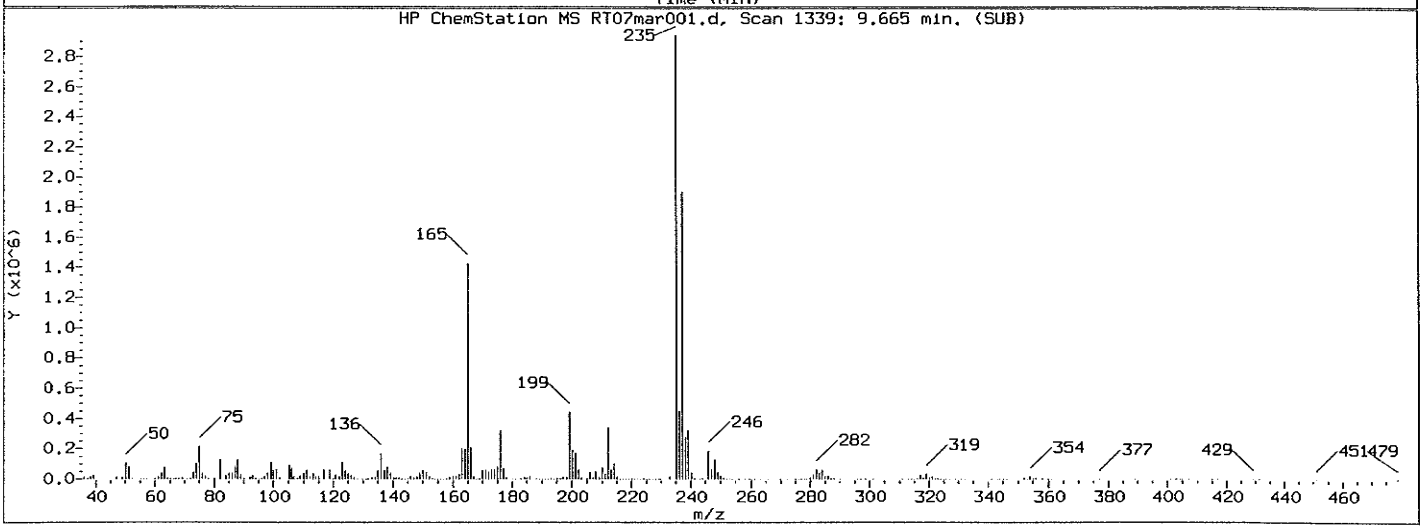
Report Generated Time Tue Mar 7 10:31:15 2017

Data File : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d
ALS Vial : 3
Acq on : 07-MAR-2017 10:08 Operator : Tim Matthews
Sample : TUNE S101716A DFTPP Inst : GCMS_EEE
Misc : Multiplier : 1
Integrator Type : HP RTE
Method : /chem/SVOA/GCMS_EEE.i/170307.b/07mar001.d/resolut.m
Last Update : 07-MAR-2017 10:27





4,4'-DDT
========
Exp. RT = 9.756
Found RT = 9.665

Mass	Area	Ratio
235	2888984	100.00
237	1880472	65.09
165	1421671	49.21

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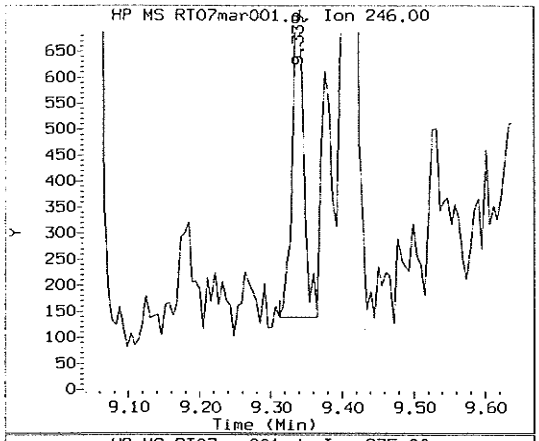
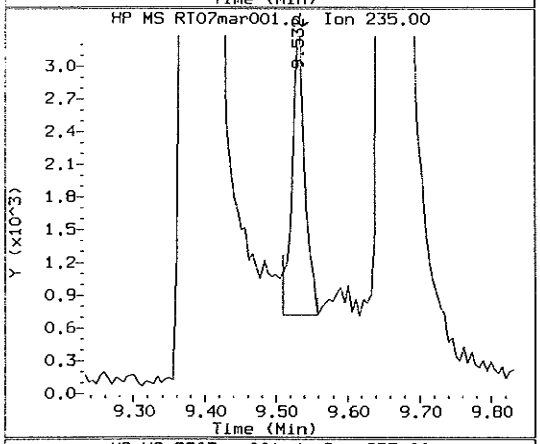
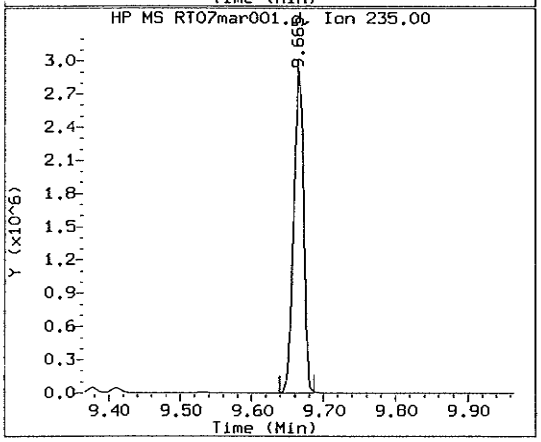


Compound: 4,4'-DDE
Quant Mass: 246
RT: 9.339
Area: 707



Compound: 4,4'-DDD
Quant Mass: 235
RT: 9.532
Area: 3401



Compound: 4,4'-DDT
Quant Mass: 235
RT: 9.665
Area: 2888984

DDT DEGRADATION BREAKDOWN ANALYSIS SUMMARY

Compound	Response	%Breakdown	Max Allowed	Test
4,4-DDT	2888984			N/A
4,4-DDE	707	0.02	20.0	PASS
4,4-DDD	3401	0.12	20.0	PASS
4,4-DDD + DDE	4108	0.1	20.0	PASS

****
TUNE SAMPLE *** PASSED *** DDT BREAKDOWN TEST
****

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EPA METHOD 8270C
PAHSIM

Run Logs

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Injection Log

Directory: W:\GCMS_EEE\GCMS_EEE_DATA\2017\170227

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	27feb001.d	1.	TUNE S101716A DFTPP		27 Feb 2017 09:48
2	2	27feb002.d	1.	CCV S010317F 1PPM] dev > 20%	170227A003	27 Feb 2017 10:07
3	2	27feb003.d	1.	CCV S010317F 1PPM]	170227A003	27 Feb 2017 10:37
4	1	27feb004.d	1.	TUNE S101716A DFTPP		27 Feb 2017 11:26
5	2	27feb005.d	1.	CCV S010317F 1PPM – dev >20%	170227A003	27 Feb 2017 11:46
6	3	27feb006.d	1.	BLANK	S101716B 10UL	27 Feb 2017 12:12
7	4	27feb007.d	1.	ICAL-1 S010317D 5PPM	170227I004	27 Feb 2017 12:32
8	5	27feb008.d	1.	ICAL-2 S010317E 2PPM		27 Feb 2017 12:52
9	6	27feb009.d	1.	ICAL-3 S010317F 1PPM		27 Feb 2017 13:12
10	7	27feb010.d	1.	ICAL-4 S010317G 0.5PPM		27 Feb 2017 13:33
11	8	27feb011.d	1.	ICAL-5 S010317H 0.1PPM		27 Feb 2017 13:53
12	9	27feb012.d	1.	ICV S010317I 1PPM		27 Feb 2017 14:13
13	10	27feb013.d	1.	CCV S010317F 1PPM	170227A034	27 Feb 2017 14:33
14	11	27feb014.d	1.	MB 170222 L03 RB	S101716B 10UL	27 Feb 2017 14:54
15	12	27feb015.d	1.	17-02-1560-2	S101716B 10UL	27 Feb 2017 15:14
16	13	27feb016.d	1.	17-02-1512-2 100X	S101716B 10UL	27 Feb 2017 15:34
17	14	27feb017.d	1.	17-02-1512-9 100X	S101716B 10UL	27 Feb 2017 15:54

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Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	21	07mar001.d	1.	TUNE S101716A DFTPP		7 Mar 2017 10:08
2	22	07mar002.d	1.	CCV S010317F 1PPM	170307A015	7 Mar 2017 10:28
3	23	07mar003.d	1.	MB 170306 L10	S101716B 10UL	7 Mar 2017 10:49
4	24	07mar004.d	1.	LCS 170306 L10	S101716B 10UL	7 Mar 2017 11:09
5	25	07mar005.d	1.	17-03-0428-1 MS	S101716B 10UL	7 Mar 2017 11:29
6	26	07mar006.d	1.	17-03-0428-1 MSD	S101716B 10UL	7 Mar 2017 11:50
7	27	07mar007.d	1.	S030717A TEST	S101716B 10UL	7 Mar 2017 12:10
8	28	07mar008.d	1.	17-03-0335-3 MS	S101716B 10UL	7 Mar 2017 13:37
9	29	07mar009.d	1.	17-03-0335-3 MSD	S101716B 10UL	7 Mar 2017 13:56
10	30	07mar010.d	1.	17-03-0335-3	S101716B 10UL	7 Mar 2017 14:17
11	40	07mar011.d	1.	17-03-0428-1	S101716B 10UL	7 Mar 2017 14:37
12	31	07mar012.d	1.	17-03-0335-4	S101716B 10UL	7 Mar 2017 14:57
13	32	07mar013.d	1.	17-03-0335-7	S101716B 10UL	7 Mar 2017 15:17
14	33	07mar014.d	1.	17-03-0335-8	S101716B 10UL	7 Mar 2017 15:38
15	34	07mar015.d	1.	17-03-0335-11	S101716B 10UL	7 Mar 2017 15:58
16	35	07mar016.d	1.	17-03-0335-12	S101716B 10UL	7 Mar 2017 16:18
17	36	07mar017.d	1.	17-03-0335-15	S101716B 10UL	7 Mar 2017 16:38
18	37	07mar018.d	1.	17-03-0335-16	S101716B 10UL	7 Mar 2017 16:58
19	38	07mar019.d	1.	17-03-0336-3	S101716B 10UL	7 Mar 2017 17:19
20	39	07mar020.d	1.	17-03-0336-4	S101716B 10UL	7 Mar 2017 17:39
21	41	07mar021.d	1.	S07-57-14/15	S101716B 10UL	7 Mar 2017 17:59

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Analysis Method (EPA Method): ☐ 608 ☐ 8081 ☐ 8082 ☐ 8141 ☐ 8310 ☐ TO-13 ☐ TO-4
☑ 8270 (☐ Soil ☐ Soil SIM SUPER ☐ PAH ☑ SIM PAH ☐ SIM Pest ☐ SIM PCB cong. ☐ SIM FL)

Extraction Method (EPA Method): ☐ 3510 ☐ 3520 ☐ 3540 ☐ 3541 ☑ 3545 ☐ 3550 ☐ 3580

Analyst ID#: Measuring Sample- 610 Start Extraction- 610/787 Blow Down- 110 Clean Up-

Matrix: ☑ Soil ☐ Aqueous ☐ Oil ☐ Wipe ☐ Filter ☐ Tissue ☐ Air

Balance ID#: 20 Filter ID#: 507-17-17 ASE ID#: 7 Soxtherm ID#: Orbit Shaker ID#: Sonicator ID#:

Ext. Start Date/Time: 03/06/17 12:00 Ext. End Date/Time: 03/06/17 16:30

Sand or Wipe ID#: 507-19-19

Drying Agent: ☑ Na_2SO_4 ☑ Diatomaceous Earth

Drying Agent(s) ID#: 507-44-18 / 507-22-03

Surrogate Std ID# & Volume Added (mL): S020117C 0.5

Spike Std ID# & Volume Added (mL): S1007 16A 0.5 Spike Added to: ☑ LCS ☐ LCSD ☑ MS ☑ MSD

Extraction Solvent: ☐ $MeCl_2$ ☐ 1:1 Hexane-Acetone ☑ 1:1 $MeCl_2$-Acetone ☐ 9:1 Hexane-Diethyl-ether ☐ Acetonitrile

Extraction Solvent ID#: 507-55-01 / 507-44-08 Exchange Solvent (☐ Hexane ☐ Acetonitrile) ID#:

Clean Up Start Date & Time: Clean Up End Date & Time:

Clean Up: ☐ 3620 Florisil ☐ 3630 SGC ☐ 3660 Sulfur ☐ 3665 Acid ☐ Other Cartridge ID#:

Clean Up Reagent ID#: Cartridge Conditioning Column Pre-Elution Reagent ID#:

MB/LCS/MS Batch #: 170306 L10

Cel ID#:	Sample W(g) / V (mL) Initial	Final	Clean Up Performed	Comments
MB	20.0	2	☐	
LCS	20.0	2	☐	
LCSD NA	—	—	☐	
MS 17-03-0335-3A	20.0	2	☐	
MSD -3A	20.0	2	☐	
-3A	20.1	2	☐	
-4A	20.1	2	☐	
-7A	20.0	2	☐	
-8A	20.2	2	☐	
-11A	20.1	2	☐	
-12A	20.0	2	☐	
-15A	20.1	2	☐	
-16A	20.1	2	☐	
17-03-0336-3A	20.0	2	☐	
-4A	20.1	2	☐	
17-03-0428-1A	20.1	2	☐	
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Peer Reviewed by: JRF Peer Reviewed Date: 03/07/17 Revision Date: 10/20/16

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